

2017

# GVSU Undergraduate and Graduate Catalog, 2017-2018

Grand Valley State University

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# GRAND VALLEY STATE UNIVERSITY

1 Campus Drive  
Allendale, MI 49401-9403  
(800) 748-0246  
[www.gvsu.edu/admissions](http://www.gvsu.edu/admissions)

## IMPORTANT GVSU LINKS

Discover more about what Grand Valley has to offer by checking out these websites:

### Academic Majors

[www.gvsu.edu/acadprograms](http://www.gvsu.edu/acadprograms)

### Admissions Criteria

[www.gvsu.edu/admissions](http://www.gvsu.edu/admissions)

### Athletics

[www.gvsu.edu/athletics](http://www.gvsu.edu/athletics)

### Campus Dining

[www.gvsufood.com](http://www.gvsufood.com)

### Campus Maps

[www.gvsu.edu/maps](http://www.gvsu.edu/maps)

### Campus Tour

[www.gvsu.edu/virtualtour](http://www.gvsu.edu/virtualtour)

### Financial Aid

[www.gvsu.edu/financialaid](http://www.gvsu.edu/financialaid)

### General Education

[www.gvsu.edu/gened](http://www.gvsu.edu/gened)

### Housing

[www.gvsu.edu/housing](http://www.gvsu.edu/housing)

### Online Catalog

[www.gvsu.edu/catalog](http://www.gvsu.edu/catalog)

### Scholarships

[www.gvsu.edu/scholarships](http://www.gvsu.edu/scholarships)

### Student Life

[www.gvsu.edu/studentlife](http://www.gvsu.edu/studentlife)

### West Michigan Information

[www.experiencegr.com](http://www.experiencegr.com)



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# UNDERGRADUATE AND GRADUATE CATALOG



2017-2018

2017-2018



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Grand Valley State University is an affirmative action, equal opportunity institution. It encourages diversity and provides equal opportunity in education, employment, all of its programs, and the use of its facilities. It is committed to protecting the constitutional and statutory civil rights of persons connected with the university.

Unlawful acts of discrimination or harassment by members of the campus community are prohibited. In addition, even if not illegal, acts are prohibited if they harass or discriminate against any university community member(s) through inappropriate limitation of access to, or participation in, educational, employment, athletic, social, cultural, or other university activities on the basis of age, color, disability, familial status, height, marital status, national origin, political affiliation, race, religion, sex/gender, sexual orientation, veteran status, or weight. Limitations are lawful if they are: directly related to a legitimate university purpose, required by law, lawfully required by a grant or contract between the university and the state or federal government, or addressing domestic partner benefits.

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## Welcome to Grand Valley State University

We're so glad you have decided to join our community of Lakers for a Lifetime.

There is a spirit at Grand Valley that bonds students, faculty members, staff members, and alumni. You'll discover it in our campus traditions. You'll find it in our classrooms and corridors. You'll carry it with you as you go through life. It is this bond, this spirit, that makes you a Laker for a Lifetime.

If you ask our alumni what it means to be a Laker, you'll consistently hear that all Lakers share traits, such as a diverse perspective and a willingness to embrace new ideas. They also have a curiosity and passion for learning, which is often inspired by working closely with a professor who became a personal mentor. You'll also hear about the value of service to others and giving back, learned as much outside the classroom as in it, through the West Michigan community, clubs or organizations, study abroad experiences, or simply engaging in campus life.

The roots of this spirit run deep, back to our founding in 1960. Grand Valley was started by visionary entrepreneurs and West Michigan citizens who wanted to make a difference in the community. Our first students were educational pioneers, willing to take a chance on a different type of college so that they could make a difference in the world.

Now it's your turn to contribute to our campus with your talents and your passions, to be fully engaged in your communities, and to care for those around you, your Laker family.

Then when it is time for you to graduate and give back, you'll be prepared to carry the torch for the students who will follow you. You'll lead by example, so that they can look to you and say, "That's what it means to be a Laker."

Thank you for choosing to be a Laker, and for your commitment to being a Laker for a Lifetime.

## About Grand Valley State University

A strong liberal education serves as the foundation for Grand Valley's wide array of undergraduate and graduate programs, fostering critical thinking, creative problem solving, and cultural understanding that prepares students for responsibility as local, national, and global citizens. Through personalized learning enhanced by active scholarship, we accomplish our mission of educating students to shape their lives, their professions, and their societies.

### Mission

Grand Valley State University educates students to shape their lives, their professions, and their societies. The university contributes to the enrichment of society through excellent teaching, active scholarship, and public service.

### Vision

Grand Valley State University demonstrates its commitment to providing an inclusive learning environment where all students can explore new directions, find their niches, and develop skills for life and productive careers. Grand Valley is known for increasingly innovative and outstanding teaching, recognized scholarship, significant community engagement, and excellent stewardship of its resources. Our university inspires and equips students to be active lifelong learners and global citizens. Grand Valley strives to be a model public university shaping leaders for success.

### Values

At Grand Valley State University, the primary focus is on the success of students. To that end, the principles of liberal education permeate all

programs and areas of study. This broad educational perspective provides students with the general knowledge and transferable skills necessary to positively influence their communities, their professions, and the broader world. The institution is characterized by and known for its superior student-centered teaching and learning. Students acquire new knowledge and explore its application through artistic expression, scholarly activity, and active engagement in a variety of communities — to students we are a big university with a small-college feel. Our mission, vision, and strategic outcomes reflect the seven core values that define students, faculty and staff members. These core values provide a foundation and framework for all of Grand Valley's decision-making processes. We use them as touchstones in developing the strategies and tactics that lead to the attainment of the institutional outcomes and strategic priority areas and objectives of our strategic plan. We translate our values into actions institution-wide; they are reflected in the policies, practices, and assessments we implement every day. These core values are described as follows:

#### Excellence

Grand Valley State University values excellence in all aspects of its enterprise. Our students' levels of performance in learning, scholarship, and community service; our stewardship of resources; our regular assessment and refinement of instructional and operational processes; and our shared dedication to excellence compel us to strive for exemplary and responsible outcomes in all that we do. Within our academic community, we individually and collectively celebrate our successes and the difference our commitment to excellence makes to individuals and communities in West Michigan, the state, the nation, and the world.

#### Integrity

Grand Valley State University values honesty, fairness, and openness in its actions, transactions, and communications. Our emphasis on integrity compels us to respect and teach the fundamental tenets of a liberal education that remain central to our identity and reputation. We moreover value the incorporation of ethics into critical thinking and decision making institution-wide. The value we place on integrity underscores our intention to be trustworthy, dependable, and adhere to legal and regulatory requirements; we aspire to set an example for others in our words and actions. Our stakeholders and the public can count on Grand Valley to make wise decisions and carry them out transparently and with fidelity to the university's mission and vision for its future. As members of the Grand Valley community we hold ourselves accountable to each other, the institution, and the broader public that we serve.

#### Inquiry

Grand Valley State University values inquiry, which encourages the lifelong pursuit of knowledge to improve the human condition and expand our understanding of the world. Consistent with our historical commitment to liberal education, we invest our resources to promote intellectual growth, creativity, scholarship, and critical thinking in our students, our faculty and staff, and the communities we serve. We promote global education and an internationalization of our curriculum that celebrates and encourages intellectual exploration, open discourse, and the unfettered expression that characterizes the academy. We celebrate and promote freedom of speech as foundational to the creation and dissemination of knowledge in every discipline. We are committed to learning as a means of preparing individuals for academic success, meaningful careers, and exemplary community service.

#### Inclusiveness

Grand Valley State University values all identities, perspectives, and backgrounds and is dedicated to incorporating multiple voices and experiences into every aspect of its operations. We believe that diversity competencies are an intellectual asset and that a range of thoughtful perspectives and a commitment to open inquiry strengthens our liberal education tradition. We recognize that the long-term viability of the institution depends upon anticipating and meeting the needs of emerging

constituent groups, especially our changing student body. Therefore, the institution seeks to include, engage, and support diverse groups of students, faculty and staff members, as well as community members. Grand Valley is committed to strengthening our living, learning, and working environment by recognizing and removing the barriers to full participation and providing a safe, inclusive, vibrant community for all.

### Community

Grand Valley State University values its connections to, participation with, and responsibility to local communities, West Michigan, the state, the nation, and the world. We value the collaboration of faculty members, staff members, and students with external partners in addressing mutual interests and community needs. The university offers the communities it serves resources and inspiration in their own lifelong pursuit of knowledge. Faculty and staff members are encouraged to contribute their expertise and service working in partnership with communities. Students are encouraged to take part in various service learning and volunteer opportunities in their communities and abroad. To foster and expand these community connections, the institution and its members promote, value, and honor diverse perspectives.

### Sustainability

Grand Valley State University values the guiding principles of sustainability in helping to meet the current needs of our faculty members, staff members, and students without compromising the needs and resources of future generations. We are committed to working with our community partners to create a sustainable future for our university, our community, our region, our state, our nation, and the world. We model applied sustainability best practices in our campus operations and administration, education for sustainable development, student involvement, and community engagement by promoting social responsibility, practicing fiscal responsibility, and encouraging environmental stewardship. We provide our students with excellence in education for sustainable development by imbedding theory, systems-oriented thinking, and service learning into our curricular and extracurricular programs.

### Innovation

Grand Valley State University encourages and appreciates innovation. We value entrepreneurship and integrative interdisciplinary collaboration that solves local, regional, and global problems and advances the common good. We strive for the development of innovative products, systems, and services that contribute to improvements in the well-being of individuals and our world. We trust that scholarship and the new knowledge it produces are worthy of our investments in their creation and proliferation. We manage our resources and structure our university to encourage new ideas, creativity in all its forms, and novel approaches to answering the most important and challenging questions of our time.

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### Notice

**All material in this catalog applies to the 2017-2018 academic year and reflects information available on the publication date. Grand Valley State University reserves the right to revise all announcements contained in this publication and, at its discretion, to make reasonable changes in requirements to improve or upgrade academic and nonacademic programs.**

### Academic Excellence

The university's highest priority is to offer outstanding teaching grounded in the liberal tradition in all of its undergraduate and graduate programs and vigorous engagement of students in the classroom and other learning environments. Grand Valley is known for excellence in student-centered teaching and learning. Ninety-three percent of regular faculty members have earned doctoral degrees or other appropriate terminal degrees. They are supported by a high-quality nonteaching professional staff and Grand Valley's exceptionally fine teaching facilities. The quality of instruction is enhanced further by small class size, individual student advising, and career counseling.

Our instructional offerings encompass more than 200 areas of study, including 88 undergraduate and 37 graduate programs that include more than 70 areas of study.

### Accreditation

Grand Valley is accredited by the Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411. Phone: (800) 621-7440. Web: [www.hlcommission.org/](http://www.hlcommission.org/).

Other accreditations and approvals include:

#### College of Community and Public Service

Health Administration (M.H.A.) candidacy accreditation

Commission on Accreditation of Healthcare Management Education (CAHME)

Legal Studies (B.A., B.S.)

American Bar Association

Police Academy

Michigan Commission on Law Enforcement Standards (MCOLES)

Public Administration (M.P.A.)

Network of Schools of Public Policy, Affairs, and Administration (NASPAA)

Social Work (B.S.W., M.S.W.)

Council on Social Work Education (CSWE)

#### College of Education

Initial Teacher Preparation and Advanced Teacher Preparation Levels

National Council for Accreditation of Teacher Education (NCATE)

Michigan Department of Education

#### College of Health Professions

Clinical Dietetics (M.S.)

Accreditation Council for Education in Nutrition and Dietetics (ACEND)

Diagnostic Medical Sonography (echo and vascular emphasis) (B.S.)

Commission on Accreditation of Allied Health Education Programs (CAAHEP)/Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT)

Diagnostic Medical Sonography (general emphasis) (B.S.)

Commission on Accreditation of Allied Health Education Programs (CAAHEP)/Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS)

Medical Dosimetry (M.S.)

Joint Review Committee on Education in Radiologic Technology (JRCERT)

Medical Laboratory Science (B.S.)

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)

Occupational Therapy (M.S.)

Accreditation Council for Occupational Therapy Education (ACOTE)

## About Grand Valley State University

### Physical Therapy (D.P.T.)

Commission on Accreditation in Physical Therapy Education (CAPTE)

### Physician Assistant Studies (M.P.A.S.)

Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)

### Public Health (M.P.H.) approved application

Council on Education of Public Health (CEPH)

### Radiation Therapy (B.S.)

Joint Review Committee on Education in Radiologic Technology (JRCERT)

### Speech Language Pathology (M.S.) candidacy accreditation

Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA)

## College of Liberal Arts and Sciences

### Art Education (B.A., B.S.)

National Association of Schools of Art and Design (NASAD)

### Art History (B.A.)

National Association of Schools of Art and Design (NASAD)

### Athletic Training (B.S.)

Commission on Accreditation of Athletic Training Education (CAATE)

### Chemistry (B.S.)

Committee on Professional Training of the American Chemical Society (ACS)

### Film and Video Production (B.A., B.S.)

National Association of Schools of Art and Design (NASAD)

### Music (B.A., B.M.E., B.M.)

National Association of Schools of Music (NASM)

### Photography (B.A., B.S.)

National Association of Schools of Art and Design (NASAD)

### Studio Art (B.A., B.F.A., B.S.)

National Association of Schools of Art and Design (NASAD)

### Regional Math and Science Center

Michigan Department of Education (MDEC)

## Kirkhof College of Nursing

### Nursing (B.S.N., M.S.N., D.N.P.)

Commission on Collegiate Nursing Education (CCNE)

Michigan Board of Nursing approval for

undergraduate, prelicensure degree programs

## Padnos College of Engineering and Computing

### Computer Science (B.S.)

Computing Accreditation Commission (CAC) of ABET

### Engineering programs (B.S.E.)

Engineering Accreditation Commission (EAC) of ABET

### Information Systems (B.S.)

Computing Accreditation Commission (CAC) of ABET

## Seidman College of Business

### Accounting (M.S.A.)

Association to Advance Collegiate Schools of Business (AACSB International)

### Business Administration (B.B.A., M.B.A.)

Association to Advance Collegiate Schools of Business (AACSB International)

### Taxation (M.S.T.)

Association to Advance Collegiate Schools of Business (AACSB International)

### Michigan SBDC (MiSBDC)

America's Small Business Development Centers (ASBDC)

## Student Services

### Children's Enrichment Center

National Association for the Education of Young Children (NAEYC)

### Doctoral Internship Program

American Psychological Association Committee on Accreditation (APA-CoA)

### University Counseling Center

International Association of Counseling Services (IACS)

## Grand Valley Equals Grand Value

At Grand Valley State University, we recognize that the more quickly students complete their degrees the less their educations will cost.

Grand Valley has a long-standing practice of supporting and helping students make regular progress toward graduation, making the excellent education they receive at Grand Valley also a "Grand Value." Nearly all of Grand Valley's undergraduate degrees can be completed in four years of full-time study.\* Full-time students who select a degree program requiring completion of 120 credit hours will be able to count on a four-year graduation when they:

- Tell their advisor that they plan to study full-time and intend to graduate in four years
- Obtain a list of prerequisites and required classes and fulfill it
- Visit regularly with their advisor to ensure their course selections are timely and correct
- Maintain the same major and minor
- Successfully complete at least 30 credit hours of course work every academic year without repeating courses

\*Some undergraduate programs, primarily in education and select professional fields, require more than 120 hours for the baccalaureate degree, usually to meet state or national accreditation requirements. Please consult our catalog for degree requirements, which are listed by department in the Academic Programs section of the catalog.

## University Facts

Visit [www.gvsu.edu/quickfacts](http://www.gvsu.edu/quickfacts) for facts about Grand Valley State University.

## Visiting the Campuses

Prospective students are always welcome to visit the campus and talk with staff members in Admissions or Financial Aid. The Admissions Office is happy to make arrangements for you to tour the campus and meet with an admissions counselor.

The Admissions Office is open Monday through Thursday from 8 a.m. to 6 p.m. and on Fridays from 8 a.m. to 5 p.m. from September through April. Appointments are available on Saturdays from 9 a.m. to 4 p.m. during Grand Valley's academic year. Summer hours are from 8 a.m. to 5 p.m. Monday through Friday.

Prospective students should make an appointment with the Admissions Office, especially for Saturday visits, by contacting:

### Admissions

Grand Valley State University

300 Student Services Building

Allendale, Michigan 49401-9403

Telephone: (616) 331-2025

Toll free: (800) 748-0246 (for Admissions, Financial Aid, Housing, and Records)

Email: [admissions@gvsu.edu](mailto:admissions@gvsu.edu)

### Allendale Campus

The 1,322-acre Allendale Campus is located 12 miles west of Grand Rapids and is home to state-of-the-art facilities that include 134 classrooms, 158 research laboratories, 15 teaching labs, 20 lab prep rooms, 23 computer labs, and the Mary Idema Pew Library Learning and Information Commons. The university currently has 6,660 beds, the majority of them on the Allendale Campus. For detailed information regarding these locations, please see the Campuses section of the online catalog.

### Robert C. Pew Grand Rapids Campus

The 69-acre Pew Grand Rapids Campus is comprised of three separate sites with a total of 14 buildings and three leased spaces in downtown Grand Rapids. The principal buildings are the Richard M. DeVos Center, the L.V. Eberhard Center, the L. William Seidman Center, and the

Cook-DeVos Center for Health Sciences. These state-of-the-art facilities include 57 classrooms, 78 research laboratories, 23 lab prep rooms, 11 computer labs, and the Steelcase library. For detailed information regarding these locations, please see the Campuses section of the online catalog.

#### Regional Centers:

##### Meijer Campus in Holland

The Holland Campus, located at 515 Waverly Road, has 16 classrooms and labs, including a science lab, two computer labs, and an interactive television room. The state-of-the-art facility offers full services, including registration, advising, and library access, and is completely integrated into the university's computer network. In 2008, Grand Valley partnered with Grand Rapids Community College to expand program offerings in Holland. Classes offered in Holland include those necessary to fulfill the general education requirements, as well as courses in business administration, education, and public administration. For more information on the Holland campus, contact us by phone (616) 331-3910 or email at [Holland@gvsu.edu](mailto:Holland@gvsu.edu).

##### Muskegon Campus

The Robert B. Annis Water Resources Institute, which is housed in Lake Michigan Center located on Muskegon Lake, conducts research with a primary focus on the water quality of Michigan and the region. The Muskegon Innovation Hub, located in the Muskegon Lakeshore SmartZone on Muskegon Lake, is a business innovation center that provides coaching, funding, networking, and a synergistic work environment to help businesses and entrepreneurs.

Through facilities at the Stevenson Center for Higher Education on the campus of Muskegon Community College and the **Regional Center in Traverse City** located at Northwestern Michigan College University Center, Grand Valley offers graduate and undergraduate programs and provides on-site student services. Admission and registration information, academic advising, bookstore services, tuition payment, library resources, and computer technology are all available in each of the Grand Valley centers. For more information, please contact our Muskegon office at 221 S. Quarterline Road or by phone at (231) 777-0505. The Traverse City office is located at 2200 Dendrin Drive and can be reached by calling (231) 995-1785.

The **Detroit Center** located at 163 Madison St. in downtown Detroit contains classrooms, offices, and support spaces used primarily by the GVSU Charter Schools Office and the College of Education.

## Academic Calendar

### Fall Semester 2017

Convocation	August 25
Classes begin	August 28
Labor Day recess	September 3 – 5
Thanksgiving Day recess	November 22 – 26
Classes end	December 9
Commencement	December 9
Examinations	December 11 – 16
Semester ends	December 16
Grades due	December 19

### Winter Semester 2018

Classes begin	January 8
Martin Luther King Jr. Day recess	January 15
Spring break	March 4 – 11
Classes end	April 21
Examinations	April 23 – 28
Semester ends	April 28
Commencement	April 28
Grades due	May 1

### Spring/Summer Sessions 2018

Classes begin first 6 and 12 weeks	May 7
Memorial Day recess	May 28
Classes end first 6 weeks	June 18
Examinations first 6 weeks	June 19 – 20
Classes begin second 6 weeks	June 25
Independence Day recess	July 4
Classes end second 6 and 12 weeks	August 3
Examinations second 6 and 12 weeks	August 6 – 7
Session ends	August 7

### Fall Semester 2018

Convocation	August 24
Classes begin	August 27
Labor Day recess	September 2 – 4
Thanksgiving Day recess	November 21 – 25
Classes end	December 8
Commencement	December 8
Examinations	December 10 – 15
Semester ends	December 15
Grades due	December 18

### Winter Semester 2019

Classes begin	January 7
Martin Luther King Jr. Day recess	January 21
Spring break	March 3 – 10
Classes end	April 20
Examinations	April 22 – 27
Semester ends	April 27
Commencement	April 27
Grades due	April 30

### Spring/Summer Session 2019

Classes begin first 6 and 12 weeks	May 6
Memorial Day recess	May 27
Classes end first 6 weeks	June 17
Examinations first 6 weeks	June 18 – 19
Classes begin second 6 weeks	June 24
Independence Day recess	July 4
Classes end second 6 and 12 weeks	August 2
Examinations second 6 and 12 weeks	August 5 – 6
Session ends	August 6

### Fall Semester 2019

Convocation	August 23
Classes begin	August 26
Labor Day recess	September 1 – 3
Thanksgiving Day recess	November 27 – December 1
Classes end	December 7
Commencement	December 7
Examinations	December 9 – 14
Semester ends	December 14
Grades due	December 17

### Winter Semester 2020

Classes begin	January 6
Martin Luther King Jr. Day recess	January 20
Spring break	March 1 – 8
Classes end	April 18
Examinations	April 20 – 25
Semester ends	April 25
Commencement	April 25
Grades due	April 28

## College of Community and Public Service

### Spring/Summer Session 2020

Classes begin first 6 and 12 weeks . . . . .	May 4
Memorial Day recess . . . . .	May 25
Classes end first 6 weeks . . . . .	June 15
Examinations first 6 weeks . . . . .	June 16 – 17
Classes begin second 6 weeks . . . . .	June 22
Independence Day recess . . . . .	July 3
Classes end second 6 and 12 weeks . . . . .	July 31
Examinations second 6 and 12 weeks . . . . .	August 3 – 4
Session ends . . . . .	August 4

### Fall Semester 2020

Convocation . . . . .	August 28
Classes begin . . . . .	August 31
Labor Day recess . . . . .	September 6 – 8
Thanksgiving Day recess . . . . .	November 25 – 29
Classes end . . . . .	December 12
Commencement . . . . .	December 12
Examinations . . . . .	December 14 – 19
Semester ends . . . . .	December 19
Grades due . . . . .	December 22

## College of Community and Public Service

### Administration

Dean: Grant  
Associate Dean: P. Stansbie  
Associate Dean: Hoffman

### Website

[www.gvsu.edu/ccps](http://www.gvsu.edu/ccps)

### Mission

The mission of the College of Community and Public Service (CCPS) is to educate students for professional careers through excellent teaching, learning, scholarship, and service that promote just and democratic communities, and ethical and effective leadership.

We value: liberal education and academic excellence in learning, teaching, and research; contemporary applied learning and critical thinking; a passion to provide ethical and compassionate services to diverse local, national, and global communities and populations in need; a culture of collegiality and collaboration: diversity, community, and social justice; empowered graduates with professional practice skills.

### Program Information

#### Department of Hospitality/Tourism Management:

Hospitality and Tourism Management, B.S., Minor  
Adventure Tourism Management, Minor

#### School of Criminal Justice:

Criminal Justice, B.A., B.S., M.S., Minor  
Legal Studies, B.A., B.S., Minor  
Juvenile Justice, Minor

Police Academy approved by the Michigan Commission on Law Enforcement Standards (MCOLES)

#### School of Public, Nonprofit, and Health Administration:

Public and Nonprofit Administration, B.A., B.S., Minor  
Master of Philanthropy and Nonprofit Leadership (M.P.N.L.)  
Master of Public Administration (M.P.A.)  
Master of Health Administration (M.H.A.)  
Nonprofit Leadership graduate certificate

#### School of Social Work:

Social Work, B.S.W., M.S.W.

## Units

### Academic

School of Criminal Justice  
School of Public, Nonprofit and Health Administration  
School of Social Work  
Department of Hospitality/Tourism Management

### Nonacademic

Dorothy A. Johnson Center for Philanthropy

### Accreditation

Legal Studies Program: American Bar Association  
Master of Public Administration: National Association of Schools of Public Affairs and Administration (NASPAA).  
Social Work Program: Council on Social Work Education (CSWE); Educational Policy and Accreditation Standards (EPAS).  
School of Criminal Justice: Police academy approved by the Michigan Commission on Law Enforcement Standards (MCOLES)

### Graduate Admission

See appropriate Academic Program description for information on the graduate admission.

### Secondary Admission for Undergraduates

There is a secondary admission to the Bachelor of Social Work program. See the Social Work Academic Program section of the catalog for more information.

### Dorothy A. Johnson Center for Philanthropy

Community Research Institute  
The Grantmaking School  
Nonprofit Services  
The Foundation Review  
Frey Chair for Family Foundations and Philanthropy  
AIM Alliance  
(See specific Academic Programs for detailed information.)

### Student Services

#### College of Community and Public Service Undergraduate Advising Center

321C DEV, (616) 331-6890, [ccpsadvisor@gvsu.edu](mailto:ccpsadvisor@gvsu.edu)

Undergraduate academic advising within the College of Community and Public Service (CCPS) is a collaborative partnership between students, faculty members, and staff members committed to developing meaningful educational plans aligned with students' values, goals, and interests. We engage students as active participants in their educational experience and empower them to successfully navigate the university in pursuit of their personal, academic, and professional goals.

The College of Community and Public Service Undergraduate Advising Center provides advising assistance and information for the following undergraduate programs.

- Criminal justice
- Hospitality and tourism management
- Legal studies
- Public and nonprofit administration
- Social work

Here are some of the ways the CCPS-UAC can help you achieve your degree goals:

- **Degree planning.** Academic advisors help students make informed choices about degree and graduation requirements. They can help clarify curriculum, course content, and optimal course sequences. Advisors will also enhance student awareness of diverse educational experiences to further enrich the academic plan.
- **Goal setting.** Academic advisors can assist students with the clarification of career and life goals; development of decision-making

skills; reinforcement of self-direction; and evaluation of student progress toward established goals.

- **Outreach and support.** Academic advisors can assist students with academic support needs through individual sessions, group workshops, and connections with educational resources across the university.
- **Policies and procedures.** Students are responsible for their role in the academic process and navigating the university system. Academic advisors can help clarify university policies and procedures to enhance the student's ability to participate in the academic process.
- **Referrals.** Academic advisors can refer students to faculty mentors, other campus services and student success resources.

## Graduate Assistantships

Graduate assistantships exist in the Undergraduate Advising Center, the School of Criminal Justice, Hospitality and Tourism Management, the School of Public, Nonprofit and Health Administration, the School of Social Work, as well as the Johnson Center for Philanthropy.

**Undergraduate Advising:** This position is open for a College Student Affairs Leadership or Adult and Higher Education program student interested in gaining experience in the academic advising profession. The position assists the staff of the CCPS Advising Center in answering questions via phone or electronic communication, meeting with students one-on-one and in groups, reviewing degree requirements, developing academic plans, assisting with registration, and other academic support projects.

Graduate assistants in SCJ, HTM, and SPNHA provide support to faculty with their teaching responsibilities, research and grant activities, and also provide departmental support.

Social work graduate assistants assist with both the B.S.W. and M.S.W. programs as well as community projects. Graduate assistants at the Johnson Center are Community Research Institute and Nonprofit Services research assistants.

## College of Education

### Administration

Dean: Kanpol

Associate Dean: King

### Website

[www.gvsu.edu/coe](http://www.gvsu.edu/coe)

### Mission, Philosophy, Values

**Mission:** Teaching, leading, and learning in a democratic society.

**Philosophy:** Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values:** The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

### Program Information

The College of Education offers programs leading to initial certification (Michigan provisional certification) both at the undergraduate and graduate level. Certification is available at the undergraduate level in elementary and secondary general education and special education. Candidates complete a teachable major in one of the content areas and a second major in education. The graduate-level initial certification

program, graduate teacher certification (GTC), is for candidates who already possess an approved baccalaureate degree.

The teacher preparation program reflects a belief in strong backgrounds in the liberal arts, familiarity with learning theory, and practical experience in diverse settings. Faculty members from education teach courses and seminars in educational philosophy and psychology, methods and materials, school organization and management, and technology and assessment. Faculty members from the liberal arts teach content areas.

Graduate level programs offer the Master of Education degree (M.Ed.), Michigan provisional, administrator certification, school counseling license and endorsement, certification renewal, and programs leading to approvals, endorsements, and professional development.

The major function of the graduate program is to create opportunities for professional renewal and development. The graduate program attempts to increase knowledge and understanding of the learning process and the repertoire of teaching methods and skills. The graduate program offers the M.Ed. degree in seven major areas: educational technology, higher education, instruction and curriculum, educational leadership, literacy studies, school counseling, and special education.

Beyond the graduate program, the College of Education offers the Educational Specialist degree in leadership (Ed.S.). This degree program builds on the master's degree and develops leadership practitioners for school and/or central office administrative positions. The program provides district leaders with meaningful clinical experiences, case methods of teaching, and pragmatic curriculum geared to the specific knowledge and skills required by district leaders and superintendents at different career stages. (See the Education section under Academic Programs in this catalog for specific program requirements.)

## Units

### Academic Departments

Educational Foundations  
Educational Leadership and Counseling  
Literacy and Technology  
Teaching and Learning

### Administrative Departments

Administrative Services  
Dean's Office  
Center for Educational Partnerships  
Student Information and Services Center

### TRIO

Educational Talent Search  
Teacher Preparation Student Support Services  
Upward Bound

All offices are located at the Richard M. DeVos Center on the Robert C. Pew Grand Rapids Campus, with the exception of the Educational Talent Search office which is located at the Depot on the Robert C. Pew Grand Rapids Campus.

## Accreditation

The College of Education is an upper-division and graduate unit. Programs are approved by the Michigan Department of Education and follow the Council for the Accreditation of Educator Preparation (CAEP) guidelines.

## Graduate Admission

For specific graduate College of Education admission requirements, see the Graduate Teacher Education Program Description.

## Secondary Admission for Undergraduates

For specific undergraduate College of Education initial certification admission requirements, see the Undergraduate Teacher Education Program Description.

## College of Health Professions

### Student Services

The College of Education Student Information and Services Center (SISC) provides advising and information that supports undergraduate and graduate students through a variety of transitions within the College of Education. The service center offers centralized services for admissions, placement, advising, and certification. A full service professional staff is available for advising and assistance. Contact coeserve@gvsu.edu or phone (616) 331-6650.

### Graduate Assistantships

Graduate assistant positions are available in the College of Education to assist with research, writing, data collection and analysis, grant proposal development, student services, computer projects, and serving on graduate committees.

Refer to [www.gvsu.edu/gs/policies-and-procedures-58.htm](http://www.gvsu.edu/gs/policies-and-procedures-58.htm) or The Graduate School section in this catalog for additional information on Graduate Assistantships.

### Scholarships

Each year, the College of Education assists students through the generosity of individuals and organizations dedicated to the preparation of educators. All awards require formal admission to the College of Education. Please refer to the university's scholarship website at [www.gvsu.edu/scholarships](http://www.gvsu.edu/scholarships) for more information or to apply through myScholarships, our online application database.

- Baldwin Foundation Scholarship Endowment Fund
- Greta and Arthur DeLong Scholarship for Teacher Education
- Kenneth and Irene Fridsma Endowed Special Education Scholarship
- Faculty Teaching and Learning Center Scholarship for Minority Students in Education
- Mack-Jackson African American Teacher Scholarship
- Joe E. Reid Memorial Scholarship
- Telephone Pioneers of America Scholarship
- J. Patrick Sandro Education Scholarship
- Graduate Teacher Certification Scholarship
- The David G. and Mary L. Annis Education Scholarship
- Paul '81 and Pamela '80 Schweitzer Scholarship
- College of Education Future Teacher Scholarship
- PNC Early Childhood Education Scholarship

Refer to [www.gvsu.edu/financialaid](http://www.gvsu.edu/financialaid) or the Costs and Financial Aid section in this catalog for scholarship details.

### Student Organizations

Student Chapter of the National Science Teachers Association (NSTA) - The Grand Valley NSTA Student Chapter provides professional opportunities for students wishing to pursue careers in K-12 science education.

Phi Delta Kappa is Teachers of Tomorrow (TOT) – The Grand Valley Student Chapter is under the umbrella of Phi Delta Kappa's Future Educators Association. Monthly meetings concentrate on topics of interest for future educators and service-learning/volunteer opportunities. Membership is recognized as a Phi Delta Kappa International member with all the opportunities afforded by that organization.

## College of Health Professions

### Administration

Dean: Olsson

Senior Associate Dean for Graduate Studies: Beck

Associate Dean for Research: Bacon-Baguley

Assistant Dean for Undergraduate Studies: Hall

### Website

[www.gvsu.edu/chp](http://www.gvsu.edu/chp)

### Mission

The College of Health Professions strives to be a model of excellence in health care education in the 21st century. The mission of the college is to prepare reflective professionals with the foundation necessary to serve and guide health care.

### Program Information

The College of Health Professions houses 20 majors and programs in the following 13 disciplines:

#### Clinical Doctorate Degree

Physical Therapy

#### Master's Degrees

Clinical Dietetics

Medical Dosimetry

Occupational Therapy

Physician Assistant Studies

Public Health

Speech-Language Pathology

#### Baccalaureate Degrees

Allied Health Sciences with selection of an emphasis

American Sign Language Interpreting

General Allied Health Science (minor required)

Health Professional Degree Completion

Histotechnology

Prehealth Physical Therapy

Prehealth Physician Assistant Studies

Prehealth Speech Language Pathology

Respiratory Care

Cardiovascular Sonography

Diagnostic Medical Sonography

Abdominal and OB/GYN

Health Information Management

Medical Laboratory Science

Radiation Therapy

Therapeutic Recreation

#### Graduate Certificate

Clinical Research Trial Management

### Accreditation

The medical laboratory science program is accredited by the National Accrediting Agency for Clinical Laboratory Science. The radiation therapy program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The cardiovascular sonography program is accredited under the Commission on Accreditation of Allied Health Education Program (CAAHEP) and programmatically through the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT). The diagnostic medical sonography program is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS). The occupational therapy program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA). The physician assistant studies program is accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). The physical therapy program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association. The speech-language pathology M.S. program is a candidate for accreditation by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of the American Speech-Language-Hearing Association. The clinical dietetics program is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND), which is the accrediting agency for the Academy of Nutrition and Dietetics (AND). The public health program is undergoing accreditation by the Council on Education for Public Health (CEPH).

## Undergraduate Secondary Admission

Four undergraduate majors in the College of Health Professions require a selective secondary admissions/application process: medical laboratory science, therapeutic recreation, health information management, and allied health sciences in the following emphases: histotechnology, respiratory care, American Sign Language interpreting, prehealth professional dosimetry, and prehealth speech-language pathology. See the Academic Programs section of the catalog for details.

Admission into diagnostic medical sonography, cardiovascular sonography, and radiation therapy involves a competitive secondary admissions/application process. See appropriate Academic Program description for detailed information on undergraduate admission.

## Graduate Admissions

The clinical doctorate of physical therapy, the master's degree programs in clinical dietetics, medical dosimetry, occupational therapy, physician assistant studies, public health, and speech-language pathology require completion of a baccalaureate degree and submission of a graduate application and corresponding materials; admission into these programs is competitive. See appropriate Academic Program description for detailed information on the admission requirements.

## Student Services

The CHP Student Services Office (CHPSS) is a key resource for academic advising services and admissions to GVSU's CHP programs and majors. GVSU students who declare a major within the College of Health Professions are each assigned to a professional academic advisor and encouraged to meet with their advisor at a minimum once per year but preferably each semester. The majority of programs in CHP are competitive; it is in the student's best interest to get academic advising throughout the college career.

Prospective and admitted students can expect to receive the following services and support from the CHP Student Services director, admissions coordinator, office coordinator, and four academic advisors:

- Academic Plans – development of achievable academic plans and access to resources for parallel plans.
- Admissions – invitation for prospective students to visit the Cook Devos Center for Health Sciences (CHS) and learn about the CHP programs.
- Advisor Access – academic advisors are available to students at both campuses: GVSU's Allendale campus, and in Grand Rapids at the Cook DeVos Center for Health Sciences.
- Program Application – navigation through CHP's undergraduate secondary admissions process and graduate program applications.
- Orientation – academic advising during freshmen and transfer orientation.
- Policies and Procedures – clarification of university policies that pertain to and support degree completion.
- Referrals – introduction to and utilization of GVSU's campus resources, student success services, and faculty support.

The College of Health Professions encourages students to consider participation in any one of the following clubs as it pertains to program interest and eligibility:

American Sign Language Interpreting Club  
 Doctorate of Physical Therapy Organization  
 National Student Speech Language Hearing Association  
 Preoccupational Therapy Club  
 Prephysician Assistant Club  
 Prephysical Therapy Club  
 Preradiologic and Imaging Sciences Student Organization  
 Public Health Society  
 Radiologic and Imaging Sciences Student Organization  
 Student Occupational Therapy Association  
 Therapeutic Recreation Student Organization

## Scholarship Resources

Numerous scholarship opportunities are available to students in their respective programs. Information regarding scholarships is available through the College of Health Profession's program websites, or through Grand Valley State University's Financial Aid Office at [www.gvsu.edu/financialaid/](http://www.gvsu.edu/financialaid/).

## Brooks College of Interdisciplinary Studies

### Administration

Dean: Hiskes

Associate Dean: Schendel

### Website

[www.gvsu.edu/brooks](http://www.gvsu.edu/brooks)

### Mission

The Brooks College of Interdisciplinary Studies provides Grand Valley and the community with experiences, expertise, and programming that deepens our understanding of the world around us. The college does this through its innovative curriculum and by providing students with high impact learning experiences like service-learning projects, study abroad opportunities, internships, living and learning communities, and intensive writing and research opportunities. The mission of the Brooks College is: cultivating engaged global citizens through innovative interdisciplinary programs and diverse community partnerships.

### Program Information

The Brooks College of Interdisciplinary Studies challenges students to tackle the important issues of the day by integrating the perspectives, knowledge, and methodologies of multiple fields of study. The college offers majors in Chinese studies, liberal studies, religious studies, and women, gender and sexuality studies; and minors in African/African American studies, East Asian studies, environmental studies, human rights, Latin American and Latino/a studies, Middle East studies, religious studies, and women, gender, and sexuality studies. The college also offers certificate programs in LGBTQ studies, sustainable food systems, Latino/a studies, and intercultural training. Most of these academic programs have social justice components to them.

The centers, initiatives, service units, and university-wide programs in Brooks College provide the expertise of highly qualified faculty and staff to Grand Valley and the West Michigan communities, helping people to become more skilled and experienced with internationalism, intercultural communication, sustainability, local history, social justice, and the goals of a liberal education.

What is interdisciplinarity? Interdisciplinarity is the integration of knowledge and methodologies from across the university to better understand the world around us. The most complex issues of the world, environmental stewardship, human rights, poverty, and the migration of people, to name a few, can only be addressed effectively if we pose questions, test hypotheses, and apply knowledge from different perspectives. In an interdisciplinary program, the focus is on improving critical thinking skills by prompting students to integrate knowledge from among the humanities, social sciences, natural sciences, performing arts, and the professional programs. The interdisciplinary courses and programs in Brooks College are taught by faculty whose own research is interdisciplinary as well as by teams of faculty from across the disciplines who are skilled at helping students see different fields of study as parts of a whole. The goals of our classes and programs are to help students integrate perspectives from a variety of disciplines in order to problem-solve in a global context, take action in their communities, and connect learning to their future professions.

## Center for Adult and Continuing Studies

The Center for Adult and Continuing Studies provides programs and services that link the needs of lifelong learners with the resources of the university. The Center for Adult and Continuing Studies coordinates academic programs and services at regional sites and locations throughout Michigan, as well as through professional development and community engagement opportunities. Information regarding professional development and Grand Forum can be found in the Community Resources section of the catalog. Information regarding nontraditional student assistance, programs, and locations can be found in the Center for Adult and Continuing Studies section of the catalog.

## Frederik Meijer Honors College

The Frederik Meijer Honors College provides academically talented students from all majors with the opportunity to work with excellent teaching faculty in a small college environment. The mission of the honors college is to provide a challenging interdisciplinary liberal education and a living/learning environment that prepares students to be intellectually curious, lifelong learners and leaders in their communities and a changing world. Additional honors college information is available in the honors college section of the catalog. Honors courses are team-taught, blocked sequentially, and offer an interdisciplinary approach to general education.

## Barbara and Stuart Padnos International Center

The Padnos International Center (PIC) serves as the university clearinghouse for study abroad opportunities for students from all academic programs. Students can choose to take faculty-led classes abroad, spend a semester abroad, or intern at an international site. In addition, grants are available for faculty and staff to travel abroad to aid in the internationalization of GVSU and its curriculum. PIC hosts international scholars as well as incoming international students.

## Office of Integrative Learning and Advising

Integrative Learning and Advising offers a variety of programs and resources to fully engage students in their lifelong educational journeys and assist them in making connections between school, work, and other spheres of their everyday lives.

Some of the hallmark programs of the Office of Integrative Learning and Advising are:

- **Brooks College Advising Support Services** coordinates and assists in providing services and resources supporting academic advising for students majoring or minoring in Brooks College academic programs.
- **Brooks Professional Series** offers students the opportunity to connect their academic program to professional skills and opportunities. Students will learn how to articulate their majors, develop a professional “brand,” and make connections through networking events.

## Office of Sustainability Practices

The Office of Sustainability Practices provides the necessary skills, analytical tools, and resources to address global, national, regional, and local sustainability issues. Sustainability relates to the preservation of society for future generations by addressing the approach of social responsibility, cultural values, economic prosperity, and environmental stewardship. Sustainability practices connects faculty, staff, students, and community stakeholders to address campus needs as well as community needs. The office provides support and input for course development, campus programming, internships, and activities that promote awareness about sustainable development and the application of sustainable best practices.

## Global Institute for Big History

The Global Institute for Big History (GIBH), located at 148 LMH, is the headquarters for the International Big History Association (IBHA). Big history emerged as a field in the late 1980s and is related to but

different from world history. The IBHA has a formal definition of the field: “Big history seeks to understand the integrated history of the cosmos, earth, life, and humanity, using the best available empirical evidence and scholarly methods.” Visit [www.Ibhanet.org](http://www.Ibhanet.org). Big history is currently taught at hundreds of universities and high schools around the world. The GIBH is responsible for the coordination of all association endeavors – membership, conference organization, grant writing, research and education – and functions as a clearing house and organizational mechanism for the IBHA’s many activities.

Office coordinator for the GIBH is Ms. Donna Tew. For more information contact the office at (616) 331-8035, or [ibha@gvsu.edu](mailto:ibha@gvsu.edu). IBHA Treasurer Professor Craig Benjamin can be reached at [benjamic@gvsu.edu](mailto:benjamic@gvsu.edu).

## Institute for Intercultural Teaching and Learning

The Institute for Intercultural Teaching and Learning (IITL) was created in 2012. Housed in Brooks College, IITL is part of an intentional effort by GVSU to create and facilitate cultural awareness and sensitivity among the residents of West Michigan. Both real and perceived inequality and lack of appreciation for diversity are obstacles to the progress of West Michigan residents on personal, professional, and community levels. IITL allows for GVSU to work with community affiliates to become even stronger stakeholders in making West Michigan more inclusive and socially just.

## Kutsche Office of Local History

The Kutsche Office of Local History fosters dialogue, understanding, and empowerment through local history. Guided by its mission, “giving voice to diverse communities through history,” the Kutsche office leads interdisciplinary research and teaching initiatives, places undergraduate and graduate student interns in opportunities both on and off campus, supports collaborative grant writing and training, and teaches oral history methods, digital and physical preservation techniques, and seminars focused on topics related to its mission. Some of our current programs include the annual Local History Roundtable, Youth Leadership Initiative, and Histories of Student Activism at GVSU. Information about our programs and upcoming events can be found on the Kutsche office website, [www.gvsu.edu/kutsche/](http://www.gvsu.edu/kutsche/).

## Sustainable Agriculture Project

The Sustainable Agriculture Project is a collaborative Brooks College initiative involving students, faculty, administration, facilities, and the Office of Sustainability Practices. It seeks to create a challenging learning and research environment by fostering sustainable farming and agriculture best practices that promote environmental stewardship, food literacy, and food justice, both on campus and in the community. The farm strives to implement intensive agricultural practices that are ecologically durable, socially responsible, and economically viable through the sale of produce.

## Lake Michigan Writing Project

The Lake Michigan Writing Project (LMWP) is an organization of, by, and for teachers of writing at all grade levels and in all disciplines, dedicated to improving the teaching and uses of writing through a variety of programs.

## Academic Units

### Liberal Studies

The Liberal Studies Department at Grand Valley State University provides students with the opportunity to design programs that suit their specific interests, talents, and career aspirations utilizing courses throughout the university. The program begins with a core of required courses. Then, with the help of a faculty advisor, students develop a major area of study based on a specific theme, issue, problem, or career interest. Students interested in exploring the liberal studies option might begin by taking one of the core courses in conjunction with the Grand Valley State University general education requirement or one of the integrative or interdisciplinary electives. Students may also wish to write or make an appointment with

any one of the members of the liberal studies committee. The Liberal Studies Department also offers the Intercultural Training Certificate program, which gives students skills to interact effectively with diverse peoples.

### Religious Studies

Housed within the Liberal Studies Department, religious studies offers both a major and a minor. The religious studies major provides core courses along with flexibility. Students have the option of focusing on particular religious traditions through electives in a range of global traditions and disciplinary perspectives. Students are encouraged to work closely with their advisor to determine the electives portion of the major. Close collaboration with faculty in the program through advising, student-centered coursework, and independent study opportunities is an important part of the religious studies major. A religious studies major is a good foundation for careers such as in law, business, journalism, public policy, international development, and humanitarian services. Understanding religious issues enhances one's preparation for careers in such fields as criminal justice, international relations, education, and government.

### Women, Gender, and Sexuality Studies

The Women, Gender, and Sexuality Studies (WGS) Department at Grand Valley State University offers an interdisciplinary major and minor based on the study of women, gender, and sexuality, as well as a minor in LGBTQ studies. WGS has close relationships with the Liberal Studies Department and the African/African American, Middle Eastern, Latin American and Latino/a, and East Asian programs. The WGS Department works closely with the Gayle R. Davis Center for Women and Gender Equity, Milton E. Ford LGBT Resource Center, and Office of Multicultural Affairs to cosponsor a variety of speakers, events, and internships. For students selecting the major or minor in women, gender, and sexuality studies, there are more than 30 courses that fulfill the required 21 hours. More than 40 faculty members across the campus support WGS through teaching, research, and service. The department offers a major and minor in women, gender, and sexuality studies, as well as a minor in LGBTQ studies.

### Area Studies

Area studies focus on the interdisciplinary study of the culture and issues of a particular world region. The unit offers the following programs:

- African/African American studies (minor)
- Middle East studies (minor)
- Latin American and Latino/a studies (minor) and a Latino/a studies certificate
- East Asian studies (minor)
- Chinese studies (major)

### Environmental Studies

The environmental studies program offers a minor that draws ideas and information from a wide array of fields such as anthropology, public policy, political science, economics, geography, geology, history, philosophy, psychology, sociology, biology, engineering, health science, and chemistry.

The environmental studies minor is designed to provide a broad interdisciplinary understanding of environmental issues for students in any major. Courses in the program will prepare students to develop effective, practical ways to address sustainability and environmental concerns. The program also offers a sustainable food systems certificate that focuses more specifically on global agriculture, food distribution, the relationship of food and culture, and food justice.

### Student Services and Campus-wide Programs

#### Fred Meijer Center for Writing and Michigan Authors

The Fred Meijer Center for Writing and Michigan Authors provides all university writers with the resources and services they need to meet their writing goals. Students, faculty, and staff can receive feedback on any

writing project, at any stage of the writing process. The center's well-trained peer consultants can help brainstorm ideas, organize content, integrate research, and/or polish a draft. The goal of these writing consultations is to help writers help themselves – not just with that single piece of writing, but also to become better writers overall. Information regarding writing center services can be found in the Undergraduate Information section of the catalog or online at [gvsu.edu/wc/](http://gvsu.edu/wc/).

#### Frederik Meijer Office of Fellowships

The Frederik Meijer Office of Fellowships, located in 230 Mary Idema Pew Library Learning and Information Commons, assists Grand Valley students who show extraordinary potential in disciplines all across campus in preparing and applying for nationally competitive scholarships and fellowships. Those include the Boren, Fulbright, Gates Cambridge, Gilman, Goldwater, Marshall, Rhodes, Truman, Udall, and more. The staff matches opportunities with students' strengths, interests, and ambitions; helps students design a plan to attain their goals; and provides support throughout the application process. To learn more, visit [www.gvsu.edu/fellowships/](http://www.gvsu.edu/fellowships/).

#### Supplemental Writing Skills Program

The Supplemental Writing Skills (SWS) program is a pedagogical component of the GVSU general-education requirements. SWS courses are writing-intensive, meaning that writing quality is a major component of both the classroom requirement as well as the grade. GVSU requires that students complete two SWS courses to graduate. Specific courses are listed as SWS. Additional information regarding SWS requirements can be found under Academic Policies and Regulations.

#### Community Reading Project

The Community Reading Project is a campus-wide and community initiative designed to form reading communities that focus on a single, annual reading. Community groups, classes, faculty, and alumni are invited to join the groups.

Since its inception in 2005, the Community Reading Project (CRP) carries on the tradition of providing the GVSU and surrounding community with the opportunity to engage in reading and discussing a selected text. Special events related to the topics and themes addressed in the CRP book selection are offered throughout the academic calendar, which culminates near the end of the winter semester, when the CRP book selection author or another distinguished lecturer is brought to campus to speak.

### Awards, Scholarships, and Scholarship Events

Arend D. and Nancy Lubbers Honors College Scholarship  
 Barbara H. Padnos International Scholarship  
 CEA Scholarship (Cultural Experiences Abroad)  
 Dave Feenstra Sustainable Agriculture Project Internship Fund  
 Empowering Haiti Through Education Scholarship  
 Grand Forum Scholarship for Continuing Education  
 GVSU LGBT Scholarship Fund  
 Jean Enright Scholarship (Women, Gender, and Sexuality Studies)  
 Mark A. Elizabeth C. Murray Study Abroad Scholarship  
 Nichols Sustainability Scholarship  
 Peace and Justice Advocacy Award  
 West Shore Aware LGBT Scholarship Fund

### Graduate Assistantships

Graduate assistants work with Brooks College faculty and staff. Qualified candidates are selected on the basis of aptitude, interest, and background. Brooks College offers graduate assistantships in the following:

- Adult and continuing studies
- General education
- Integrative learning and advising
- Padnos International Center
- Sustainability practices
- Writing Center

## Advisory Boards

Latin American and Latino/a Studies  
Office of Sustainability Practices  
Women, Gender, and Sexuality Studies  
Kutsche Office of Local History

## Community Resources

Grand Forum  
Professional Development  
Professional Development Partnership Program (for education and social work professionals)  
Office of Sustainability Practices

Refer to the Community Resources section of the catalog for more information.

# College of Liberal Arts and Sciences

## Administration

Dean: Antczak  
Associate Dean: Menon  
Associate Dean: Galbraith  
Associate Dean: Tutt

## Website

[www.gvsu.edu/clas](http://www.gvsu.edu/clas)

## Mission

The College of Liberal Arts and Sciences (CLAS) is a student-centered and diverse learning community that engages in critical inquiry extending knowledge to enrich and enliven individual and public life.

## Program Information

Created in July 2004, CLAS is the largest of GVSU's colleges and offers more than 50 bachelor's degrees (and a growing number of advanced degrees) in the natural and mathematical sciences, the humanities, the fine and performing arts, and the social sciences.

All GVSU undergraduates build the foundation for their major studies in general education courses offered by our college.

## Advertising and Public Relations

Advertising and Public Relations, B.A., B.S.  
Advertising and Public Relations (minor)

## Aging and Adult Life

Aging and Adult Life (minor)

## Anthropology

Anthropology, B.A., B.S.  
Anthropology (minor)

## Arabic

Arabic (minor)

## Archaeology

Archaeology (minor)

## Art and Design

Art Education (K-12) B.A., B.S.  
Art History, B.A.  
Art History (minor)  
Studio Art, B.A., B.S.  
Studio Art, B.F.A.  
Ceramics  
Graphic Design  
Illustration  
Jewelry/Metalsmithing  
Painting  
Printmaking  
Sculpture  
Visual Studies  
Studio Art (minor)

## Athletic Training

Athletic Training, B.S.

## Behavioral Neuroscience

Behavioral Neuroscience, B.A., B.S.

## Biochemistry

Biochemistry, B.S.

## Biology

Biology, B.A., B.S.  
Biomolecular Processes  
Ecology and Evolutionary Biology  
General  
Preveterinary Medicine  
Secondary Education  
Biology, M.S.  
Aquatic Sciences  
Natural Resources  
Biology (minor)

## Biomedical Sciences

Biomedical Sciences, B.S.  
Microbiology  
Nutritional Science  
Biomedical Sciences, M.H.S.

## Biostatistics

Biostatistics, M.S.

## Cell and Molecular Biology

Cell and Molecular Biology, B.S.  
Cell and Molecular Biology, M.S.  
Biotechnology  
Research

## Chemistry

Chemistry, B.S.  
Secondary Education  
Chemistry (minor)  
Green Chemistry (certificate)

## Chinese

Chinese Language (minor)

## Classics

Classics, B.A.  
Classical Languages Emphasis  
Classical Studies  
Latin Secondary Education Emphasis

## Communication Studies

Communication Studies, B.A., B.S.  
Communications, M.S.

## Comprehensive Science and Arts for Teaching (CSAT)

Comprehensive Science and Arts for Teaching, B.A., B.S.  
Special Education  
Spanish – Elementary Education

## Dance

Dance, B.A.  
Dance (minor)

## Earth Science

Earth Science, B.S.  
Secondary Education

Earth Science (minor)

## English

Applied Linguistics, M.A.  
Applied Linguistics (minor)  
English, B.A.  
Language and Literature  
Language Arts (Elementary Education)  
Secondary Education  
English, M.A.  
English (minor)  
General  
ESL

**Exercise Science**

Exercise Science, B.S.  
 Clinical Exercise Science  
 Health Fitness Instruction

**Film and Video Production**

Film and Video Production, B.A., B.S.

**French**

French, B.A.  
 Civilization  
 Linguistics  
 Literature  
 Secondary Education  
 French (minor)  
 French Secondary Education (minor)

**Geography and Sustainable Planning**

Geography, B.A., B.S.  
 General  
 Geospatial Technology  
 Urban and Regional Planning  
 Environment and Global Development  
 Geography – Secondary Teacher Certification (minor)  
 Geographic Techniques (minor)  
 Sustainable Urban and Regional Planning (minor)  
 Geographic Information Systems Technology (certificate)  
 Sustainable Urban and Regional Planning (certificate)

**Geology**

Geology, B.S.  
 Environmental  
 Geology (minor)

**Geology – Chemistry**

Geology – Chemistry, B.S.

**German**

German, B.A.  
 Secondary Education  
 German (minor)  
 German Secondary Education (minor)

**Health Communication**

Health Communication, B.A., B.S.

**History**

History, B.A., B.S.  
 Secondary Education  
 History (minor)  
 History Secondary Education (minor)

**History of Science**

History of Science (minor)

**Integrated Science**

Integrated Science, B.S.

**International Relations**

International Relations, B.A.  
 International Relations (minor)

**Mathematics**

Mathematics, B.A., B.S.  
 Elementary Education  
 Secondary Education  
 Mathematics (minor)

**Medical and Bioinformatics**

Medical and Bioinformatics, M.S.

**Movement Science**

Athletic Training, B.S.  
 Exercise Science, B.S.  
 Physical Education, B.S.  
 Sport Coaching (certificate)

**Multimedia Journalism**

Multimedia Journalism, B.A., B.S.

**Music**

Music, B.A.  
 Music, B.M.  
 Instrumental  
 Keyboard  
 Vocal  
 Music (minor)  
 Music Education, B.M.E.  
 Instrumental  
 Vocal/Choral  
 Piano Pedagogy (certificate)

**Natural Resources Management**

Natural Resources Management, B.S.  
 Natural Resources Management (minor)

**Philosophy**

Philosophy, B.A.  
 Philosophy (minor)

**Photography**

Photography, B.A., B.S.  
 Photography (minor)

**Physical Education**

Physical Education, B.S.  
 Professional Instruction (K-12)  
 Sports Leadership, Coaching  
 Sports Leadership, Sports Management  
 Physical Education (minor)  
 School Health Education (minor)  
 Sport Coaching (certificate)

**Physics**

Physics, B.S.  
 Secondary Education  
 Physics (minor)

**Political Science**

Political Science, B.A., B.S.  
 Legal Education Admission Program (LEAP)  
 Political Science (minor)  
 Political Science and Law, B.A./J.D.  
 Political Science and Law, B.S./J.D.

**Preprofessional Studies**

Predental Studies  
 Prelaw  
 Premedical Studies  
 Prepharmacy  
 Preveterinary Medicine

**Psychology**

Applied Behavior Analysis (certificate)  
 Psychology, B.A., B.S.  
 Psychology (minor)

**School Psychology**

School Psychology, M.S. & Psy.S.

**Sociology**

Sociology, B.A., B.S.  
 Sociology (minor)

**Spanish**

Spanish, B.A.  
 Secondary Education  
 Spanish (minor)  
 Spanish Elementary Education (minor, in conjunction with a  
 CSAT major)  
 Spanish Secondary Education (minor)

**Statistics**

Statistics, B.A., B.S.  
 Actuarial Sciences  
 Applied Statistics (minor)  
 Data Science (minor)  
 Mathematical Statistics (minor)

## College of Liberal Arts and Sciences

### Theatre

Theatre, B.A., B.S.  
Theatre (minor)

### Writing

Writing, B.A., B.S.  
Writing (minor)

## Academic Units

Annis Water Resources Institute  
Anthropology  
Biology  
Biomedical Sciences  
Cell and Molecular Biology  
Chemistry  
Classics  
English  
Geography and Sustainable Planning  
Geology  
History  
Mathematics  
Modern Languages and Literatures  
Movement Science  
Music, Theatre, and Dance  
Philosophy  
Physics  
Political Science  
Psychology  
School of Communications  
Sociology  
Statistics  
Visual and Media Arts  
Writing

## Accreditation

See individual unit or program sections for information.

Art Education (B.A., B.S.)  
National Association of Schools of Art and Design (NASAD)  
Athletic Training program (B.S.)  
Commission on Accreditation of Athletic Training Education (CAATE)  
Chemistry (B.S.)  
Committee on Professional Training of the American Chemical Society (ACS)  
Film and Video Production (B.A., B.S.)  
National Association of Schools of Art and Design (NASAD)  
Music (B.A., B.M., B.M.E.)  
National Association of Schools of Music (NASM)  
Photography (B.A., B.S.)  
National Association of Schools of Art and Design (NASAD)  
Studio Art (B.A., B.S., B.F.A.)  
National Association of Schools of Art and Design (NASAD)

## Secondary Admission for Undergraduates

The following programs require audition, portfolio review, and/or prerequisites and separate application:

- Art and design – Studio art and art education
- Athletic training
- Dance
- Film and video production
- Music

## Graduate Admission

See appropriate Academic Program description for information on graduate admission.

## Student Services

**College of Liberal Arts and Sciences Academic Advising Center**  
The CLAS Academic Advising Center serves as a key resource for

students pursuing majors and/or minors in the College of Liberal Arts and Sciences. The goal is to complement faculty advising with professional advising services and serve students by

- providing initial academic advising through freshman, transfer, and international student orientations;
- assisting in the development of an achievable academic plan;
- disseminating Grand Valley policies and procedures as they pertain to degree completion in the College of Liberal Arts and Sciences;
- offering a central location for students seeking information on preprofessional programs such as premedical, pre dental, prepharmacy studies, and many other postbaccalaureate programs;
- assisting students interested in attaining teacher certification through the undergraduate programs or the graduate teacher certification program, as well as current teachers seeking an additional endorsement in a CLAS-related area; and
- providing support for nontraditional students and students returning to Grand Valley after an absence.

The CLAS Academic Advising Center's location is C-1-140 Mackinac Hall and can be reached by calling (616) 331-8585 or via email at [advstu@gvsu.edu](mailto:advstu@gvsu.edu). Additional information also can be found on the center's website at [www.gvsu.edu/clasadvising/](http://www.gvsu.edu/clasadvising/).

Mathematics Tutoring Center  
Science Success Center  
Statistical Consulting Center  
Statistics Tutoring Center

## Honors Organizations

Program-specific honors programs are described under each unit's description.

## Scholarships

The eligibility criteria for each scholarship can be found in the Costs and Financial Aid section of the catalog.

Eric A. Andres Live, Laugh, Love, Learn Scholarships  
Alex Aninos Music Education Scholarship  
John T. Batchelder Political Science Scholarship  
Edith I. Blodgett Endowed Piano Scholarship  
William J. and Margaret G. Branstrom Fine Arts Scholarship  
Breen Scholarship  
Dr. Andrew M.C. Brown Memorial English Scholarship  
Alexander Calder Honor Scholarship  
Robert L. Chamberlain Scholarship  
College of Liberal Arts and Sciences Alumni Scholarship  
College of Liberal Arts and Sciences Endowed Scholarship  
Gilbert R. and Patricia K. Davis Endowed Merit Scholarship for Full- or Part-time English Majors  
Gilbert R. and Patricia K. Davis Endowed Theatre Scholarship: Remembering Shakespeare  
Greta and Arthur DeLong Psychology Scholarship  
Aaron M. DesRocher Memorial Chemistry Scholarship  
Pamella and Daniel G. DeVos Musical Theater Scholarship  
DeWitt Barrels Inc. Environmental Science and Natural Resources Scholarship  
Ann M. Dilly Jewelry/Metalsmithing Scholarship  
Mary Jane Dockeray Scholarship  
Leslie Eitzen Voice Scholarship  
English Faculty Endowed Scholarship for New Majors  
Shelby Fazio '13 Memorial Endowed Scholarship  
Richard E. Flanders Scholarship  
Barbara L. Flaschenreim Endowed Classics Scholarship  
Geology Field Studies Scholarship  
Norman and Helen Gibson Geology Field Study Scholarship  
Edward Tremba Geology Scholarship  
Charlotte A. Gierst and Salome C. Egeler Trust Fund

Tom and Marcia Haas and Family Laker Marching Band Scholarship  
 Paul B. Henry Congressional Internship  
 Arthur C. Hills Music Scholarship  
 Prof. Paul A. Huizenga Biology Education Scholarship  
 Paul and Dianna Johnson STEM Pathway Endowed Scholarship  
 Jurries Family Scholarship  
 Frances Anne Kelleher Memorial Scholarship  
 Marlene Kenneway Love of Dance Scholarship  
 Prof. Charles Knop Chemistry Scholarship  
 Walton B. Koch Memorial Scholarship  
 Albert S. and Ella D. Koeze Art Scholarship  
 MaryBeth Koeze Art Scholarship Endowment  
 Dirk Koning Film and Video Scholarship  
 Kulesza Family Healthcare Pathway Scholarship  
 Marney Houseman MacAdam Endowed Voice Scholarship  
 Dr. Nancy K. Mack & Katherine Klemmit Mack Memorial Scholarship  
 The Malinoski Family Pre-Dental Scholarship  
 Mathematics Endowment Fund  
 Michigan Garden Club Scholarship  
 Upper Division Music Department Scholarship  
 Arlene Treanor Natie Plants Internship  
 Glenn A. and Betty J. Niemeyer History Scholarship  
 Nedra J. Otis Art Scholarship  
 Ross W. Perry Bachelor of Science Scholarship  
 Elizabeth Platek '89 Communication Scholarship  
 Dr. Margaret Proctor School of Communications Scholarship  
 Dr. George I. and Helen Z. Quimby Scholarship  
 Warren Reynolds Endowed Scholarship  
 Robert and Linda '89 Rynbrandt Endowed Sociology Scholarship  
 Hugo Salazar Memorial Scholarship  
 John Salski Memorial Fund  
 Ilene I. Schooley Biomedical Science Scholarship  
 School of Communications Scholarship  
 Mary and Wilhelm Seeger Scholarship  
 Shakespeare Festival Alumni Scholarship  
 John J. and Marjorie E. Shephard Communications Scholarship  
 John Shontz Native Plants Biology Scholarship  
 Statistics Book Scholarship  
 Statistics Endowment  
 George and Marianne Stein Endowed Memorial Scholarship  
 Howard and Rose Stein Endowed Biology Scholarship  
 Duke Tanka Jr. Anatomy Scholarship  
 Edward L. Tremba Scholarship  
 Donald and Barbara VanderJagt Mathematics and Athletics Scholarship  
 Ada Council for the Arts Rebecca Vogelsang Memorial Scholarship  
 Margaret F. Ward Art and Design Scholarship  
 Margaret F. Ward Music Scholarship  
 Dr. Ronald W. Ward Scholarship  
 Wayland Street Films Scholarship for the Arts in Memory of BrownHill  
 Holliday Willey Psychology Scholarship for the Study of Pervasive  
 Development Disorders  
 Bill and Diana Wipperfurth Annis Water Resources Institute Student  
 Research Scholarship  
 Writing Major Scholarship  
 Doug and Linda Woods Athletic Training Scholarship  
 Barbara Waddell Native Plants Research Scholarship  
 Barbara Waddell Integrated Science Academic Excellence Award  
 Mark A. Warren Memorial Scholarship

## Community Resources

- Annis Water Resources Institute
- Autism Education Center
- Regional Math and Science Center

Refer to the Community Resources section of this catalog for more information.

# Kirkhof College of Nursing

## Administration

Dean: McCurren  
 Associate Dean, Graduate Programs: Burritt  
 Associate Dean, Undergraduate Programs: Winter  
 Associate Dean for Research and Scholarship: Spoelstra  
 Assistant Dean for Practice: Thomas

## Website

[www.gvsu.edu/kcon](http://www.gvsu.edu/kcon)

## Mission

The mission of the Kirkhof College of Nursing is to provide quality nursing education to a diverse population of students. The Kirkhof College of Nursing strives to improve the well-being of people through leadership in nursing education, professional practice, and scholarship.

## Kirkhof Legacy

The Kirkhof College of Nursing was named in recognition of Russel Kirkhof, a self-taught electrician. His avid interest in finding solutions to manufacturing problems through the application of electricity developed into an international business enterprise. His life paralleled the American dream of becoming a self-made millionaire through the virtues of hard work, talent, and personal determination. Kirkhof was a humble man who conducted his life without fanfare and he was happiest when he was working with his hands. Today, his life story serves as an inspiration to others in making meaningful contributions to their communities. KCON embodies the values espoused by Kirkhof through professional education that teaches the importance of making significant contributions as nurses to surrounding communities and society-at-large.

## Program Information

Bachelor of Science in Nursing (B.S.N.): Traditional  
 Bachelor of Science in Nursing (B.S.N.): Second Degree (for students with degrees in other disciplines)  
 Bachelor of Science in Nursing (B.S.N.): RN to B.S.N. (for students who have their A.D.N. or A.A.S. in nursing)  
 Master of Science in Nursing (M.S.N.): Advanced Generalist  
 Doctor of Nursing Practice (D.N.P.): Adult/Older Adult Nurse Practitioner; Child/Adolescent Nurse Practitioner; Health Systems Leadership  
 Interprofessional Palliative and Hospice Care (certificate)

## Accreditation

All nursing degree programs offered by Grand Valley State University Kirkhof College of Nursing (KCON) are accredited by the Commission on Collegiate Nursing Education (<http://www.aacn.nche.edu/ccne-accreditation>). The baccalaureate program is also approved by the Michigan Board of Nursing, P.O. Box 30193, Lansing, MI 48909; Telephone: (517) 335-0918. KCON is recognized for outstanding teaching, scholarship, and service. KCON is located in the Cook-DeVos Center for Health Sciences in downtown Grand Rapids, Michigan.

Graduates of the KCON traditional or second degree Bachelor of Science Degree in nursing (B.S.N.) programs are prepared to take the National Council Licensure Examination RN (NCLEX-RN) to obtain licensure to practice as a registered nurse. Students completing the advanced generalist Master's of Science in nursing (M.S.N.) degree will be eligible for national certification as a clinical nurse leader. Students completing the Doctor of Nursing Practice (D.N.P.) degree in one of the Nurse Practitioner tracks will be prepared for national primary care specialty certification in either pediatrics or adult-gerontology. Students completing the D.N.P. Health Systems Leadership track will be eligible for and encouraged to sit for national certification as a nurse executive.

## Admissions Information

Information regarding undergraduate and graduate admissions is outlined under their respective academic program section of the catalog. For questions or clarification, please call the Kirkhof College of Nursing at (616) 331-7160.

## Graduate Assistantships

The Kirkhof College of Nursing employs graduate students in full- and part-time assistantships to support student engagement in faculty scholarship, teaching, and academic activities. Assistantships provide tuition and stipend support for graduate education. For more information, please contact KCON at (616) 331-3558.

## Honors Organizations

Membership in Sigma Theta Tau International (STTI) Honor Society of Nursing is offered to baccalaureate and graduate nursing students who demonstrate academic excellence. The mission of STTI is advancing world health and celebrating nursing excellence in scholarship, leadership, and service. The Kappa Epsilon Chapter-at-Large is comprised of four nursing programs: Grand Valley State University, Calvin College, Ferris State University, and Hope College.

## Scholarships

Numerous scholarship opportunities are available to undergraduate and graduate nursing students. Information regarding specific scholarships is available through the Kirkhof College of Nursing website at [www.gvsu.edu/kcon](http://www.gvsu.edu/kcon) and the Grand Valley State University Office of Financial Aid website at [www.gvsu.edu/financialaid/](http://www.gvsu.edu/financialaid/).

## Student Organizations

The Kirkhof College of Nursing is proud to hold the All College Membership status within the National Student Nurses' Association (NSNA). All students are strongly encouraged to actively participate in the Grand Valley State University chapter of the NSNA during the clinical portion of the curriculum. The benefits of joining the SNA include opportunities for leadership, networking, and volunteering in your community. Additional information about the SNA is available at [www.gvsusna.com/](http://www.gvsusna.com/).

Students taking prerequisite courses are encouraged to join the Prenursing Association (PNA). This organization is also student-run and is open to all pre-nursing students. The benefits of membership include leadership, networking, social connections, and opportunities to learn more about the nursing profession. Additional information about PNA is available through the Student Life Office.

The Graduate Student Organization is a university-wide student organization dedicated to GVSU graduate students. Its goals include intellectual, professional, and social development while fostering interprofessional communication, collaboration, and community. Because this organization represents all graduate students, M.S.N. and D.N.P. students are encouraged to participate. The annual meeting schedule is posted on the GSA Blackboard site in September of each year.

## Student Services

The mission of the Kirkhof College of Nursing Office of Student Services (OSS) is to recognize individuality and establish collaborative partnerships with students. To do this, OSS advisors engage in intentional and holistic advising through proactive outreach toward students seeking a nursing degree at GVSU. They strive to promote diversity and foster student connections within KCON, GVSU, the broader community, and the nursing profession. The OSS provides a wide range of services to support undergraduate nursing students, including degree-planning in consideration of general education and major or minor requirements as well as development and review of degree-progress plans to promote academic success. Undergraduate students are assigned to a professional advisor once they declare nursing as their intended major. In addition to

undergraduate student advising, the OSS offers advising that is specific to prospective and current KCON graduate nursing students in need of academic advisement and guidance related to the M.S.N. and D.N.P. programs. For individual and group appointments, students may call the Kirkhof College of Nursing Office of Student Services at (616) 331-7160.

## Seidman College of Business

### Administration

Dean: Lawson

### Website

[www.gvsu.edu/seidman](http://www.gvsu.edu/seidman)

### Mission

Seidman develops business talent that contributes to the economic growth of West Michigan and the Great Lakes region. Through the exchange and application of knowledge with a global perspective, our students learn to make informed decisions, act ethically, and take initiative. Our distinctiveness is grounded in strong community collaborations, applied scholarly contributions, innovative approaches to learning, and a supportive environment.

### The Legacy of Seidman

The Seidman College of Business was named in honor of the late Frank Edward Seidman, who for more than 50 years was a distinguished member of the Grand Rapids business community and a partner in the national accounting firm of BDO/Seidman. He was nationally recognized as a business and civic leader, an economist, and a philanthropist. For many years, he wrote a newspaper column on business and economics and contributed to numerous professional journals. He was also the co-author of three technical books, including *Legislative History of the Federal Income Tax Law*, *Financing the War*, and *Accounting Handbook*.

Seidman worked for both his bachelor's and master's degrees in commercial science by attending night classes at New York University. He placed a high value on education and was devoted to improving educational opportunities for people from all backgrounds. He was especially dedicated to improving the level of competence in the business and public sectors, not only in his own firm, but also in all of the organizations it audited.

He was, in every sense, a creative businessman. His own competence and remarkable qualities of leadership were reflected in the many honors bestowed upon him. He was chairman of the Citizens' Advisory Committee on the Michigan Tax Study and of the Michigan State Board of Accountancy. He was a director of the Grand Rapids Community Chest and the Community Services of Kent County for 25 years and was a long-time director of the Grand Rapids Foundation, the largest philanthropic organization of its kind in the area. As a trustee of the Thomas Erler Seidman Foundation, named for a deceased son, he was instrumental in providing youth-building and educational opportunities for thousands of young people in the Grand Rapids area, as well as providing funds for the Seidman House at Grand Valley.

In establishing the Seidman College, Grand Valley intended to embody the philosophy, ideas, and spirit of Seidman and to provide a place to gain an education in business and administration in West Michigan.

Just as quality was the hallmark of Seidman's efforts, so, too, is quality in education the touchstone of Seidman College. Grand Valley's purpose has been to honor the man not merely by affixing his name to the college, but by perpetuating the high ideals to which he personally dedicated himself.

### Program Information

The Seidman College of Business offers programs in business and economics leading to a Bachelor of Business Administration (B.B.A.), a Master of Business Administration (M.B.A.), a Master of Science in

accounting (M.S.A.), and a Master of Science in taxation (M.S.T.). The Seidman College in partnership with Michigan State University College of Law also offers the opportunity to participate in a “3+3” legal education admission program leading to a B.B.A. and J.D. in approximately six years. For a description of the B.S. and B.A. economics program, see economics. Please contact the Seidman Student Academic Services Office for additional information.

Through these programs, the college helps students learn to gather the information upon which effective management is based, make rational decisions on the basis of that information, plan for the effective implementation of those decisions, and monitor their consequences. Students develop an understanding of the functional areas of business, the dynamics of competitive and cooperative group process, formal and informal organizational behavior, and the culture of business.

Students also gain knowledge of the external environment of business, developing a perspective on contemporary global business through historical and international comparisons. Students understand the ways in which business and management are responding to current social, economic, political, international, and technological challenges.

Undergraduate students may major in accounting, business economics, finance, general business, general management, human resources management, international business, entrepreneurship, supply chain management, operations management, and marketing. An emphasis in management information systems is available in the management program. Emphases in general marketing, distribution and logistics, and sales are available in the marketing program. There are also opportunities for students who do not wish to enter a degree program to take courses that apply to their professional interests.

The college makes every effort to accommodate the varying needs of its students. People employed full-time, for example, can enroll in many evening classes. Those who are not employed can gain valuable experience through internships with area businesses and government agencies.

Graduate students may pursue master’s degrees in accounting, business administration, or taxation. For the traditional part-time master in business administration, it is possible (but not required) for students to pursue an emphasis in finance, health sector management, or innovation and technology management.

## Academic Units

School of Accounting  
Economics Department  
Finance Department  
Management Department  
Marketing Department

## Seidman Business Services

Richard M. and Helen DeVos Center for Entrepreneurship and Innovation  
Family Owned Business Institute  
Koeze Business Ethics Initiative  
Michigan-Small Business Development Center – West Michigan  
Michigan-Small Business Development Center State Headquarters  
Seidman Financial Planning Certificate Program  
U.S. Department of Commerce Export Assistance Center  
Van Andel Global Trade Center

Refer to the Community Resources section of this catalog for descriptions of the previously listed centers, institutes, and initiatives.

## Secondary Admission for Undergraduates

**Direct admission:** The Seidman College admits a select few students directly into the business college as freshmen each year. This honor is reserved for students who have a 26 or higher composite score on the ACT and a 3.5 or higher high school GPA. In order to continue early-admitted

status, students must maintain an overall GPA of 2.5 and complete the six courses: ACC 212, BUS 201, ECO 210, ECO 211, MGT 268, and STA 215 with a combined GPA of 2.5 prior to reaching 55 credits. Students who fail either of these measures must be readmitted using the same admission criteria and procedures as all other students and will need to meet the criteria to be readmitted to Seidman College as juniors.

**Secondary admission:** For students not admitted as freshmen, Seidman’s admission criteria require students to have

1. completed at least 55 semester hours (junior status);
2. achieved a 2.5 or higher overall GPA; and
3. completed the following courses with a 2.5 or higher combined GPA. Transfer student grades for comparable classes being transferred into Grand Valley will be used to calculate this combined GPA.

ACC 212

BUS 201

ECO 210

ECO 211

MGT 268

STA 215

ECO 200 can be used to replace the combination of ECO 210 and ECO 211

After completing these three steps, students are admitted to the Seidman College of Business and are eligible to enroll in 300/400-level business classes. MGT 268 can be completed concurrently with the first semester of upper-division programs provided the other five classes have a combined 2.5 GPA. If completion of MGT 268 causes the combined GPA to fall below a 2.5, then the student is not eligible for new 300/400-level business courses until the GPA requirement has been met. Nonbusiness students must have earned 55 credit hours with a minimum 2.5 GPA to be eligible to enroll in upper-division business and economics courses.

Any student with guest student status (a degree-seeking student at another college or university who is taking classes at Grand Valley for one semester) must meet the criteria set for all nonbusiness students at Grand Valley State University. Accordingly, a guest student must be a student in good standing at his or her home institution to enroll in any 300- or 400-level courses at the Seidman College of Business. An unofficial transcript from each college/university attended is required to assess registration access to 300/400-level business courses.

## General Education

All business students must complete the general education requirements (see section on General Education). This program will develop a base of general education upon which business administration education will rest. Included is a broad spectrum of liberal arts, mathematics, and science courses. During their junior and senior years, students will take a variety of business administration courses in different areas to give them a strong general business and administration background. Additionally, they will complete courses applicable to one of the specific majors offered.

## Graduate Admission

The graduate business programs are open to qualified individuals with a bachelor’s degree from accredited colleges and universities.

No particular undergraduate major is necessary for students selecting the M.B.A., M.S.A., or M.S.T. programs, although candidates may be required to complete background coursework in business subjects before attempting advanced work. It is recommended that M.S.T. students have a background in accounting or law.

Candidates are admitted to the master’s degree programs in business administration, accounting, or taxation based on criteria that have been shown to predict success in graduate business programs, including performance on the Graduate Management Admission Test (GMAT) of 500, (see the following for scholastic index criteria), previous undergraduate and graduate academic performance, and evidence of

## Seidman College of Business

other competencies related to academic program and workplace success. A TOEFL score of at least 80 (IBT) is also required of applicants whose first language is not English.

The Graduate Admissions Committee considers a scholastic index for traditional and full-time M.B.A., M.S.A., and M.S.T. program applicants, computed as follows: (GPA for last 60 semester hours of undergraduate coursework x 200) + GMAT score. For example, an applicant with a 3.0 GPA and 500 GMAT has a scholastic index of 1100. Further consideration is given to the quantitative, qualitative, and writing scores of the GMAT and grades earned in courses determined to be relevant to the graduate curriculum. Using the scholastic index and other information, the committee implements the policies and practices described as follows.

EMBA (Executive Masters of Business Administration) applicants are evaluated on prior academic performance, leadership potential, professional experience, and employer recommendation.

An applicant for the traditional M.B.A., M.S.A. or M.S.T. program with a scholastic index of 1100, including a GMAT score of at least 500, is generally admitted without further committee review. Applications with scholastic indexes of 1100, including GMAT scores between 450 and 490 are examined by the committee for evidence predictive of success. The committee's analysis may result in the applicant being required to score higher on the GMAT or to upgrade his or her undergraduate record by completing background coursework with acceptable performance prior to the admission decision. While work experience is not required, it is preferred and may be a deciding factor for the M.B.A.

Applicants for the M.S.T. are not required to submit a GMAT score if they have an M.B.A. or M.S.A. from an AACSB-accredited school or a J.D. with at least a 3.0 GPA, or if they are certified public accountants in the State of Michigan. Applicants for the M.S.A. may request a GMAT waiver if they have earned a B.B.A. in accounting from an AACSB-accredited school with superior grades in select accounting courses. Inquiries should be made of the assistant dean for Seidman Student Services.

Applicants will be given an admission decision for any academic semester for which they apply, provided their applications are completed at least one month before the semester begins.

Individuals not yet admitted to the traditional M.B.A., M.S.A., or M.S.T. programs may enroll in graduate foundation courses with permission of the assistant dean for Seidman Student Academic Services. Enrollment in 600-level courses is generally restricted to students admitted to the respective program who also have completed the appropriate prerequisite courses. The exception to this policy is Seidman College accounting students with senior standing who meet all other admissions criteria. With the permission of the assistant dean for Seidman Student Academic Services, such students may enroll for as many as three 600-level Seidman courses that will be applied toward the graduate degree once they are admitted.

### Graduate Independent Study

Individualized study may be available for candidates interested in pursuing relevant special interests in areas in which regular courses are not offered. These may consist of research projects, theses, problem-solving projects, or other appropriate endeavors related to the candidate's current job and intellectual or career interests.

No independent study or individualized courses will be allowed in areas in which courses exist and are taught at least once per year.

Only graduate degree-seeking candidates who have completed the core requirements or have special permission from the program director may take individualized graduate courses or conduct graduate-level independent projects.

All independent study topics and the amount of credit to be earned must be approved by the faculty member who agrees to supervise the project. A maximum of three hours of credit can be granted for independent study.

The conditions, meeting times, workload, and subject matter concerned with the project are mutually agreed to by the initiating candidate and the assenting faculty member, consistent with standards of quality education. Request forms can be obtained from the assistant dean for Seidman Student Services.

### Graduate Study Abroad

Seidman College of Business offers special topic business courses that generally include a two-week summer study abroad session.

### Washington Campus Program

Seventeen universities have recognized the importance of training private sector managers and leaders in the art of working with the federal government and have established the Washington Campus Program. These colleges and universities are Grand Valley State University, Arizona State University, University of California at Berkeley, Colorado State University, Emory University, Georgetown University, Howard University, Indiana University, University of Michigan, University of New Mexico, University of North Carolina at Chapel Hill, Northeastern University, The Ohio State University, Purdue University, Rice University, University of Texas at Austin, and Texas A&M University.

The Washington Campus Program offers a unique opportunity for current and future leaders in business and government to gain a basic understanding of how to deal with the problems inherent in business/government relationships by working with policy makers, politicians, regulatory agency personnel, and others who make up the teaching staff and resource persons for the programs.

Participating graduate students spend a week in Washington, D.C., where they hear from Washington insiders, visit government and public policy institutions, and engage in real-world case studies on the interaction of business, politics, and public policy. Participants earn three credit hours and a certificate of completion from the Washington Campus Program. For additional information, graduate students can contact the assistant dean for Seidman Student Services.

### Student Services

#### Practice Interviews

To assist students in preparing for career placement, the Seidman College of Business collaborates with Career Services to offer mock interview opportunities for Seidman College juniors and seniors who meet the college's minimum grade point average requirements. The primary purpose of mock interviews is to give students a chance to practice their interviewing skills and build self-confidence. Students are matched with companies so that they interview with and receive feedback from business professionals in their major areas of study.

### Awards and Scholarships

#### Accounting Awards

The Beene Garter Institute of Management Accountants, Ernst and Young Accounting Senior Excellence Award, and Clipper Belt Lacer accounting awards are presented at the annual spring accounting awards dinner. These awards honor outstanding academic and leadership excellence.

#### Delta Sigma Pi Scholarship Key

Each year, the international fraternity of Delta Sigma Pi awards the Delta Sigma Pi Scholarship Key to the graduating student with the highest academic average for the four years of study in business administration. All business students are eligible for this award.

#### Scholarships

Accounting Alumni Scholarship  
American Photo Marketing Entrepreneurship Scholarship  
American Production and Inventory Control Society (APICS) Scholarship  
BDO USA International Accounting Scholarship  
Becker CPA Course Scholarship  
Fred A. Bell Business Scholarship  
Barry Castro Business Ethics Scholarship

Johnny C. Burton Memorial Scholarship  
 Campbell Williams Business Scholarship  
 Colliers International Scholarship  
 Crowe Horwath, LLP Outstanding Accounting Student Scholarship  
 Marvin G. DeVries Endowed Scholarship  
 Gregg K. Dimkoff Finance Scholarship  
 Economics Department Faculty Scholarship  
 Ernst & Young Senior Accounting Excellence Scholarship  
 Excel Business Scholarship  
 Finance Department Advisory Board Scholarship  
 Finance Department Faculty Scholarship  
 Doug and Christen Fox Scholarship  
 The Four Ps of Marketing Scholarship  
 Matt and Kendra Gibson Accounting and Finance Scholarship  
 Richard H. Giles Memorial Scholarship  
 Dr. Earl Harper Management Scholarship  
 Hilda C. Holder Scholarship for Women in Business  
 J.C. Huizenga Business Scholarship  
 Hungerford Nichols CPAs+ Advisors Accounting Scholarship  
 Jad Abou-Maarouf '05, '08 and Selene Lacayo '06 Scholarship  
 Michael and Sue Jandernoa Scholarship  
 Dr. Donald J. Kline, Sr. Graduate Scholarship in Accounting  
 Kaufman Family Scholarship Honoring L. William Seidman  
 The A. Scott and Ruth P. Koeze Graduate Business Scholarship  
 Jack J. Korff Seidman College of Business Finance Scholarship  
 L.V. Eberhard Business Scholarship  
 Lacks Enterprises Scholarship  
 May Group Realtors w/ReMax of Grand Rapids Scholarship  
 Mithilesch and Jitendra Mishra Foreign Student and Faculty Scholarship  
 NAI Wisinski of West Michigan Commercial Real Estate Scholarship  
 Don and Diane Paton Family Entrepreneurship Scholarship  
 Dr. William F. Pickard Business Scholarship  
 Randy and Debbie Price Scholarship  
 Redfield Financial Group Business and Baseball Scholarship  
 Plante Moran Accounting Scholarship  
 John W. and Virginia M. Reifel Economics Scholarship  
 School of Accounting Faculty Endowed Scholarship  
 Seidman College of Business Study Abroad Scholarship  
 Seidman Dean's Advisory Board Scholarship  
 Marilyn and Budge Sherwood Seidman College of Business Scholarship for Nontraditional Students  
 Paul '87 and Sue Spindler Accounting Study Abroad Scholarship  
 Steelcase Inc. Seidman College of Business Diversity Scholarship  
 Supply Chain Management Related Scholarships  
 Tax Executives Institute Accounting/Tax Scholarship  
 The Right Place/MMTC-West Manufacturers Council Scholarship  
 VanderZwaag Business Scholarship  
 Richard E. Veazey Graduate Academic Scholarship in Accounting  
 Philip P. and Joyce Versluis Supply Chain Management Scholarship  
 Vetter Family Marketing Scholarship  
 The Kathleen B. Vogelsang Seidman College of Business Scholarship for Non-Traditional Students  
 Don Williams Sr. Dean Emeritus Multicultural Business Education (MBEC) Scholarship  
 H. James Williams Endowed Scholarship  
 Windstream Enterprise Resource Planning Scholarship  
 Robert H. and Barbara Wood Entrepreneurship Scholarship

Refer to the Seidman College of Business website at [www.gvsu.edu/seidman](http://www.gvsu.edu/seidman) for scholarship details.

## Graduate Assistantships

Graduate assistants work with Seidman College faculty and staff members. Qualified full-time candidates are selected on the basis of aptitude, interest, and background.

## Advisory Boards and Associations

### Seidman Dean's Advisory Board

The Seidman Dean's Advisory Board, composed of the dean and three dozen leaders from local, national, and international companies, serves to create and sustain a partnership between the Seidman College and the business community. The board meets to advise the Seidman College of Business on goals, curriculum, and other matters that are of benefit to the continued enhancement of the student body, the college, and the business and public communities.

### The Seidman College of Business Alumni Association Board

The Seidman Alumni Association Board consists of up to 30 graduates of the Seidman College who represent the alumni of the college. The board's purpose is to promote, assist, and perpetuate the aims and objectives of the college.

### Accounting Advisory Board

The Accounting Advisory Board is composed of accountants and meets as needed to advise the college on all matters pertaining to the accounting curriculum and alumni events. Representatives of national, regional, and local accounting firms, presidents of local accounting associations, and corporate accountants are members of this board.

### Accounting Alumni and Friends Advisory Board

The Accounting Alumni and Friends Advisory Board provides a way for alumni to interact with accounting faculty members and students. Upon graduation, accounting students are encouraged to join this advisory board.

### Business Ethics Center Advisory Board

The Business Ethics Center (BEC) Advisory Board consults with the director on matters of expansion, programming, community relations, and budget. Board members also act as advocates for the BEC in the community and nationally.

### Economics Department Advisory Board

The Economics Department Advisory Board is comprised of local leaders from a broad range of sectors, including banking, manufacturing, real estate, and nonprofit and government organizations. The board provides feedback and support for department initiatives.

### Finance Department Advisory Board

The Finance Department Advisory Board is comprised of 15 representatives from the areas of investment, corporate finance, banking, and financial planning. The board's main goals are to facilitate collaboration with the finance industry and to receive input on curriculum and related issues.

### Human Resource Management Advisory Board

The purpose of the Seidman Human Resource Management Advisory Board is to develop, maintain, and promote a working relationship between human resources professionals and the stakeholders of the Management Department of the Seidman College of Business, including current students, faculty members, and alumni.

### International Business Advisory Board

The International Business Advisory Board consists of business leaders of local and international companies who want to support international business education at Seidman College.

### Marketing Advisory Board

The Marketing Advisory Board was formed to help align the interests of the students, faculty members, alumni, and communities Seidman College serves. The board meets routinely with marketing faculty members. Board members are from diverse, prestigious firms, including Amway, Axios Inc., Bissell Homecare Inc., Cynthia Kay & Co. Media Production, Daymon Worldwide, Gordon Food Service, Holton Research, Meijer, SoundOff Signal, Stryker Medical, and TransCorr.

## Seymour and Esther Padnos College of Engineering and Computing

### M.S.T. Advisory Board

The M.S.T. Advisory Board is comprised of attorneys and accountants from the professional community who actively support, teach in, and refer students to the M.S.T. program.

### Seidman Graduate Student Advisory Board

The Graduate Student Advisory Board consists of at least eight graduate business students. New members are elected by the current board each year. The purpose of the board is to support the mission and vision of the Seidman College. The board also promotes a closer relationship and enhances communication between students, faculty and staff members, and administration. Members serve as ambassadors for the Seidman graduate programs and provide input to the dean and the director of the graduate business programs.

### Supply Chain Management Advisory Board

The purpose of the Seidman Supply Chain Management Advisory Board is to develop, maintain, and promote a working relationship between supply chain/logistics professionals and the stakeholders of the Management Department of the Seidman College of Business, including current students, faculty, and alumni.

## Endowed Chairs

### The L. William Seidman Accounting Chair

The L. William Seidman Chair in Accounting was established to provide financial support to one distinguished accounting faculty member who would advance the accounting profession through teaching, research, and professional outreach activities.

This endowed chair was established to recognize and honor L. William Seidman, who was the former chairman of the Federal Deposit Insurance Corp. (FDIC). Seidman received his undergraduate degree from Dartmouth, his law degree from Harvard Law School, and his M.B.A. from the University of Michigan. He was also a C.P.A. and a noted author. He served as dean of the College of Business at Arizona State University, as vice chairman of Phelps Dodge Corporation, and as an assistant to the president of the United States for economic affairs.

### The Esther Seidman Chair

The Esther Seidman Chair was established to provide financial support to one distinguished faculty member who would advance the initiatives and goals of the Seidman College of Business. This endowed chair was established to recognize and honor the late Esther Seidman who, along with her husband Frank Edward Seidman, was a distinguished member of the Grand Rapids business and civic community.

## Seymour and Esther Padnos College of Engineering and Computing

### Administration

Dean: Plotkowski  
Associate Dean: Standridge  
Assistant Dean: Lindale

### Website

[www.gvsu.edu/pceec](http://www.gvsu.edu/pceec)

### Mission

The mission of the Seymour and Esther Padnos College of Engineering and Computing is to prepare undergraduate and graduate students in engineering, computing, and occupational safety and health to become accomplished professionals; to contribute to our professions through active scholarship in all of its forms; and to support the university and society with expertise, leadership, and service.

To achieve our mission, we

- prepare students to compete in today's global economy by emphasizing experiential learning in a contemporary technical environment;

- prepare students for the future by emphasizing sound principles;
- emphasize a strong technical background enhanced by effective communication skills;
- provide working professionals with the opportunity for continuous professional development;
- imbue students with a strong sense of "the public good" and their own professional responsibility to the public good; and
- strive to be an example and an inspiration to develop competence, courage, and compassion with unquestioned integrity.

## The Padnos Legacy

Grand Valley State University has named the Padnos College of Engineering and Computing in honor of Seymour and Esther Padnos to recognize their commitment to creating an environment where students and faculty can reach their full potential in the fields of engineering, computing, and occupational safety and health. It is the aim of the university to inspire these future professionals to live up to the personal and professional ideals of the Padnos family.

## Program Information

The college offers undergraduate programs in computer engineering, electrical engineering, interdisciplinary engineering, mechanical engineering, product design and manufacturing engineering, computer science, information systems, and occupational safety and health management. Master's degree programs are offered in medical and bioinformatics, computer information systems, biomedical engineering, electrical and computer engineering, product design and manufacturing engineering, manufacturing operations, and mechanical engineering.

The college also provides courses in support of nonengineering and computing students through minor programs in computer science, computer engineering, engineering science, information systems, information technology, health care information systems, and occupational safety and health management, as well as general education and service course offerings.

Specific information on admission, curriculum, and graduation requirements can be found in each program section.

## Experiential Learning

The Padnos College is committed to the role of experiential learning in preparing professionals for careers in engineering, computing, and occupational safety and health management. All students completing undergraduate degrees in engineering complete the integrated cooperative education program. All students completing undergraduate degrees in computer science, information systems, and occupational safety and health management as well as students in the professional science master's programs complete the integrated internship program. Internship opportunities are available, but not required, of students in the Master of Science in engineering program and the Master of Science in computer information systems program.

## Academic Units

School of Computing and Information Systems: [www.cis.gvsu.edu](http://www.cis.gvsu.edu)  
School of Engineering: [www.gvsu.edu/engineering](http://www.gvsu.edu/engineering)  
Department of Occupational Safety and Health: [www.gvsu.edu/osh](http://www.gvsu.edu/osh)  
Professional Science Master's (coordination function): [www.gvsu.edu/psm](http://www.gvsu.edu/psm)

## Accreditation

- The **Computer Science Major** is accredited under the General Criteria and Computer Science Criteria by the Computing Accreditation Commission of ABET, 415 N. Charles St., Baltimore, MD 21201. Telephone: (410) 347-7700, [www.abet.org/](http://www.abet.org/).
- The **Information Systems Major** is accredited under the General Criteria and Information Systems Criteria by the Computing Accreditation Commission of ABET, 415 N. Charles St., Baltimore, MD 21201. Telephone: (410) 347-7700, [www.abet.org/](http://www.abet.org/).

- The **Computer Engineering Major** is accredited under the General Criteria and Computer Engineering Criteria by the Engineering Accreditation Commission of ABET, 415 N. Charles St., Baltimore, MD 21201. Telephone: (410) 347-7700, [www.abet.org/](http://www.abet.org/).
- The **Electrical Engineering Major** is accredited under the General Criteria and Electrical Engineering Criteria by the Engineering Accreditation Commission of ABET, 415 N. Charles St., Baltimore, MD 21201. Telephone: (410) 347-7700, [www.abet.org/](http://www.abet.org/).
- The **Interdisciplinary Engineering Major** is accredited under the General Criteria by the Engineering Accreditation Commission of ABET, 415 N. Charles St., Baltimore, MD 21201. Telephone (410) 347-7700, [www.abet.org/](http://www.abet.org/).
- The **Mechanical Engineering Major** is accredited under the General Criteria and Mechanical Engineering Criteria by the Engineering Accreditation Commission of ABET, 415 N. Charles St., Baltimore, MD 21201. Telephone: (410) 347-7700, [www.abet.org/](http://www.abet.org/).
- The **Product Design & Manufacturing Engineering Major** is accredited under the General Criteria and Manufacturing Engineering Criteria by the Engineering Accreditation Commission of ABET, 415 N. Charles St., Baltimore, MD 21201. Telephone (410) 347-7700, [www.abet.org/](http://www.abet.org/).

## Secondary Admission for Undergraduates

All undergraduate programs require secondary admission as described in their specific academic program information.

## Graduate Admission

See appropriate academic program description for information on graduate admission.

## Advising Center

Academic advising, including major selection, meeting secondary admission requirements, career direction, and course scheduling, is provided by the professional staff of the advising center on both the Pew Campus in Grand Rapids and the Allendale Campus. Advisors work primarily with presecondary admission undergraduate students. Inquiries from prospective students are welcome. See [www.gvsu.edu/pcec/advising](http://www.gvsu.edu/pcec/advising) for additional information.

## Outreach

K-12 outreach strives to attract the next generation of students to the computing, engineering, and occupational safety and health professions. Staff direct summer campus, provide building tours to prospective students, and support curricular and co-curricular activities for students both at GVSU and in schools. See [www.gvsu.edu/pcec/outreach](http://www.gvsu.edu/pcec/outreach) for more information.

## Professional Society Student Chapters

ACM – Association for Computing Machinery  
 ASME – American Society of Mechanical Engineers  
 ASSE – American Society of Safety Engineers  
 IEEE – Institute of Electrical and Electronic Engineers  
 NSBE – National Society of Black Engineers  
 SAE – Society of Automotive Engineers  
 SME – Society of Manufacturing Engineers  
 SWE – Society of Women Engineers

## Honor Societies

Tau Beta Pi National Engineering Honors Society  
 Upsilon Pi Epsilon Int'l Honor Society for Computing and Information Disciplines

## Scholarships

Joseph E. Appelt, P.E. Engineering Scholarship  
 AITP (Association of Information Technology Professional(s) Scholarship  
 Atomic Object Scholarship

NN Autocam Precision Components Group Engineering Scholarship  
 Autocam Medical Engineering Scholarship  
 Robert Bosch Fuel Systems Engineering Scholarship  
 Scott M. Dykstra/Oliver Products Company Engineering Scholarship  
 FIRST Robotics Engineering Scholarship  
 FTC&H Engineering Endowed Scholarship  
 General Dynamics Land Systems Engineering Scholarships  
 Eric Jon Gillette Memorial Scholarship  
 Initech Global Advancing Technology Scholarship  
 Fred M. and Bernedine Keller Engineering Diversity Scholarship  
 Kirkhof Engineering Scholarship  
 Lacks Enterprises Scholarship  
 Eric Maino Community Technology Award  
 Occupational Safety and Health Management Scholarship  
 Seymour and Esther Padnos Engineering Scholarship  
 Lt. James W. Parmelee Memorial Scholarship  
 Price-Heneveld Engineering Scholarship  
 GVSU/Padnos/MSPE Engineering Scholarship  
 GVSU/Padnos/SAE Engineering Scholarship  
 Right Place Manufacturing Engineering Scholarship  
 The Joseph Spruit Engineering Scholarship  
 SPX Corporation Foundation Engineering Scholarship  
 George & Marianne Stein Memorial Scholarship  
 TowerPinkster Engineering Scholarship  
 Trans-Matic Engineering Scholarship  
 Whitney Young Outreach Engineering Scholarship  
 Windstream Technology Scholarship (previously PAETEC Technology Scholarship)  
 Thomas and Joyce Wisner Engineering Scholarship  
 School of Computing and Information Systems Freshman Scholarship  
 School of Computing and Information Systems Study Abroad Scholarship  
 School of Computing and Information Systems Academic Scholarship

## Graduate Fellowships and Assistantships

Qualified full-time fellowship and assistantship candidates are selected on the basis of aptitude, interest, and background.

Industry graduate fellows gain practical experience by working closely with a local company to solve practical problems related to the chosen area of graduate study.

Graduate assistants work with appropriate school faculty and staff. Graduate assistant positions are available to assist in the Padnos College with research, writing, data collection and analysis, and student services.

Graduate assistantships are typically available in support of the following areas:

- Medical and bioinformatics
- All engineering disciplines
- Computer information systems
- Occupational safety and health management
- FIRST Robotics
- K-12 outreach

## Advisory Boards

The advisory boards for the Padnos College and each academic program are composed of the dean and many leaders from local, national, and international companies, who serve to create and sustain an active partnership between the college, schools and industry. The boards provide advice concerning goals, curriculum, and other matters that strengthen the student experience. The advisory boards also work to strengthen the partnerships that benefit industry and the broader community.

# Frederik Meijer Honors College

## Website

[www.gvsu.edu/honor](http://www.gvsu.edu/honor)

## Mission

The mission of the Frederik Meijer Honors College is to inspire and empower motivated students to be intellectually curious lifelong learners who contribute to a body of knowledge, and serve as capable leaders and active global citizens.

## Program Information

The Meijer Honors College at Grand Valley State University is intended for students who, in their previous academic work, have demonstrated a distinctly high level of motivation, creativity, and academic achievement. Drawing from all the undergraduate departments, the Meijer Honors College provides its students a program with special academic opportunities and challenges.

Designed to enhance and integrate the intellectual curiosity of students, Meijer Honors College courses help students expand their worldviews and promote personal development. The designation “Meijer Honors College Graduate” on a Grand Valley diploma and transcript recognizes the distinctive work of the students in the program.

The Meijer Honors College curriculum, with its emphasis on interdisciplinary learning, offers a distinctive way to fulfill most of the general education requirements of the university. Meijer Honors College courses, normally limited to 25 or fewer students, are uniquely structured in content and instruction for active learning and critical thinking. Sharing specially designed classes with other students of outstanding potential and motivation creates a special atmosphere in which important questions and student ideas are treated seriously. Uniquely qualified and carefully selected faculty members drawn from many disciplines teach Meijer Honors College courses; in fact, many classes are team-taught, offering students significant individualized attention. Working with a faculty mentor, Meijer Honors College students design and complete an independent project in their senior year.

The greater student-faculty interaction, as well as classes that are specially designed to foster advanced writing and speaking skills, critical thinking, and analysis, prepare students to be competitive for graduate and professional programs. Our students develop high levels of proficiency in research, writing, critical thinking, synthesizing material from multiple disciplines, and applying critical skills to primary sources. Because of these advanced skills, honors students have more opportunities to participate in and present research as undergraduates at Student Scholars Day, regional honors conferences, the National Collegiate Honors Council annual meeting, and other professional meetings.

The Meijer Honors College encourages its students to engage in extracurricular activities to develop leadership skills and an appreciation of the richness and diversity of university life. Honors students frequently engage in service and volunteer projects at the university or in the community. They also have unique cultural experiences and travel opportunities such as subsidized museum visits and faculty-led trips to places like Chicago, Toledo, New York City, out west, and Washington, D.C. Trips for credit are offered to various international destinations such as Germany and Nicaragua, and there are annual summer service-learning programs to Ghana. Students are also encouraged to take advantage of the other study abroad opportunities offered by the university.

Completion of the Meijer Honors College program should not be confused with “Graduation with Honors,” which is determined strictly by final grade point average. The Meijer Honors College requires not only a high grade point average but also successful completion of a special series of challenging courses. Completion of all Meijer Honors College requirements results in the “Meijer Honors College Graduate” designation

on both the baccalaureate diploma and the college transcript. Graduates are eligible to wear a special medallion and stole at Commencement.

## Academic Standing

To remain in good standing in the Meijer Honors College, a student must maintain a 3.2 grade point average. Failure to do so will result in the student being placed on probationary status and given two consecutive semesters to bring his or her GPA back up to a 3.2. Honors courses may be repeated only with the consent of both the director and the faculty member involved. Students may voluntarily withdraw from honors but will be responsible for completing the regular General Education Program of the university if they do so.

## Learning and Living Community

One of the hallmarks of the Meijer Honors College is its rich learning and living community. For this reason, honors students – especially freshmen – are encouraged to live in one of the two honors housing centers, so that they strengthen the bonds of community and reinforce each other’s commitment to academic excellence.

**The Glenn A. Niemeyer Learning and Living Center** is a state-of-the-art residential and academic center with two and four bedroom apartments, lounges and study areas, and a computer lab. Most honors classrooms are also in the building.

**The Holton-Hooker Learning and Living Center** is a brand new residential and academic center which provides optimal housing for first-year honors students because it builds rich and deep community.

## Frederik Meijer Office of Fellowships

The Frederik Meijer Office of Fellowships, adjacent to the honors offices in the Niemeyer Learning and Living Center, assists Grand Valley students who show extraordinary potential in disciplines all across campus in preparing and applying for nationally competitive scholarships and fellowships including the Boren, Fulbright, Gates Cambridge, Gilman, Goldwater, Marshall, Rhodes, Truman, Udall, and more. The staff matches opportunities with students’ strengths, interests, and ambitions; helps students design a plan to attain their goals; and provides support throughout the application process. To learn more, visit [www.gvsu.edu/fellowships/](http://www.gvsu.edu/fellowships/).

## Accreditation

There is no accrediting body for honors, though the National Collegiate Honors Council sets guidelines and offers resources for honors programs. Grand Valley is an active member of the National Collegiate Honors Council.

## Admission

Applicants must first be accepted to Grand Valley before they apply to the Meijer Honors College. The normal qualifications for the program are a 3.5 high school GPA and ACT score of 28, but other factors (such as quality of essay, paper sample, and honors/leadership activities) are considered for entrance, and all these criteria are weighed to assess academic motivation and potential for success in the program. Transfer students and those already enrolled at Grand Valley who wish to enter the Meijer Honors College may apply for admission if they have a 3.5 college grade point average. The application is available at [www.gvsu.edu/honors/](http://www.gvsu.edu/honors/).

## Student Organizations

### A.N.C.H.O.R. Honors Student Council

A.N.C.H.O.R. (Alumni, Niemeyer, Calder, Hills, and Honors Residents) is the student group responsible for contributing to Meijer Honors College governance and provides all honors students, not just those living in honors living centers, opportunities to be heard. A.N.C.H.O.R. provides input to the university, develops programming and student activities, and assists in supervision of the mentorship program for new students. It is an

excellent place for honors students to make a difference in and outside of honors, and to develop leadership skills and experience.

### Peer Mentor Program

Upperclass honors students may apply to be peer mentors to incoming freshmen. Mentors assist freshmen with the transition to the Meijer Honors College and university life in general, and act as ambassadors for the Meijer Honors College.

### Scholarships

**Arend D. and Nancy Lubbers Scholarship.** Those who are awarded Presidential Scholarships are eligible for a prestigious honors-only scholarship – the Lubbers Scholarship. This award can add as much as \$2,000 onto merit-based scholarships, and is renewable for up to 10 semesters. It is a significant honor to receive this scholarship, **but a student is only eligible for this award if he or she has qualified for and participated in the scholarship competition and has applied to and been accepted by the Meijer Honors College prior to the last scholarship competition of the year.**

### Frederik Meijer First Generation Honors College Student

**Scholarship.** This is a full-tuition scholarship for a select number of extraordinary freshmen who are the first in their immediate family to pursue a college degree. Candidates must be eligible to participate in the scholarship competition, must have been accepted to the university and the Meijer Honors College, and must enroll full-time as a degree-seeking student. The scholarship is renewable up to a maximum of eight semesters. Recipients must stay in good standing in the Meijer Honors College to renew this scholarship.

**Felix V. and Gladys A. Zukaitis Honors Scholarship.** Those who are awarded Presidential or Faculty Scholarships are eligible for a prestigious honors-only scholarship – the Zukaitis Honors Scholarship. This award can add as much as \$1,000 onto merit-based scholarships, and is renewable for up to eight semesters. It is a significant honor to receive this scholarship, but a student is only eligible for this award if he or she has qualified for and participated in the scholarship competition and has applied to and been accepted by the Meijer Honors College prior to the last scholarship competition of the year.

**Ruth Chamberlain Global Issues Scholarship.** This scholarship was initiated by John (“Jack”) Chamberlain in memory of his wife Ruth. The scholarship provides support for one or more students in the Meijer Honors College who have shown significant promise, growth, or improvement, and have demonstrated a research or career interest in solving global problems (for example, issues of climate change, natural disasters, energy, population change, sustainability, etc.). Areas of study may include but are not limited to natural resources, biology, chemistry, or related sciences. The scholarship may be awarded for a maximum of two semesters, but may be renewable.

### Jonathan and Marcia White Endowed Honors College

**Scholarship.** This scholarship continues Jonathan’s legacy of public service and commitment to advancing homeland security. It rewards bright students in the Frederik Meijer Honors College who are pursuing careers in national security or public service. The scholarship was established in recognition of Colonel Ralph Hauenstein’s record of military and civilian service. Candidates must be in honors and enrolled for at least 12 credit hours per semester. The scholarship is renewable up to a total of six semesters.

For more information on applying and competing for the Lubbers, Meijer First Generation, or Zukaitis scholarships, contact an admissions counselor at [admissions@gvsu.edu](mailto:admissions@gvsu.edu) or (616) 331-2025 or (800) 748-0246. For the Chamberlain, White, and other scholarships, see [www.gvsu.edu/financialaid](http://www.gvsu.edu/financialaid) or call (616) 331-3234 or (800) 748-0246.

## The Graduate School

### Administration

Dean: Potteiger  
Associate Dean: Luttenton

### Website

[www.gvsu.edu/gs](http://www.gvsu.edu/gs)

### Mission

The mission of The Graduate School is to define and support excellence in graduate education and the scholarly and research activities associated with it; to articulate a vision of excellence in our actions and policies that affect students, faculty members, and curriculum; and to advocate for graduate education and graduate students within the university in terms of resources, services, and other activities that support graduate student endeavors and goals.

### Graduate Degree Programs Offered at Grand Valley

Refer to the Graduate Information section of this catalog for a listing of all graduate degrees.

### Overview

The Graduate School is located in the Richard M. DeVos Center on the Robert C. Pew Grand Rapids Campus. The Pew Grand Rapids Campus is home base for most of Grand Valley State University’s graduate degree programs. Many graduate programs and courses are offered in Grand Rapids so they are more accessible to adult learners living or working throughout the Grand Rapids metropolitan area. Additionally, many graduate programs offer classes in outlying communities throughout Northern, Central, and Southern Michigan.

The dean of The Graduate School works on behalf of all graduate students to ensure that Grand Valley’s graduate programs are of the highest quality, that faculty members teaching graduate courses are well-qualified to teach at the graduate level, and that university policies and procedures are applied appropriately to graduate students. The dean of The Graduate School and staff members work closely with the Office of the Provost, the Graduate Council, the Office of Admissions, academic deans, department chairs, graduate program directors, the Center for Adult and Continuing Studies, the Office of the Registrar, the Office of Multicultural Affairs, the Student Services Division, and Student Financial Aid to advocate on behalf of graduate students and to provide leadership and vision for graduate education at Grand Valley.

Currently enrolled graduate students or those interested in graduate studies at Grand Valley are welcome to visit The Graduate School in the Richard M. DeVos Center for assistance, advice, or to provide feedback on any aspect of their graduate education. The phone number is (616) 331-7105. For general questions about the admission process for graduate students at Grand Valley, students should contact the associate director for graduate admissions at (616) 331-2025. For questions about a specific graduate degree program, contact the graduate program director for that program. Contact information for graduate program directors may be found on The Graduate School website.

### Awards

**Graduate Dean’s Citations for Academic Excellence:** The dean of The Graduate School presents awards to outstanding graduate students recognized for their academic achievement. Nominations for the awards are submitted to The Graduate School by the graduate program director in the student’s area of study. Awards are presented twice per year at the Graduate Student Celebration, held at the end of the fall semester for students who graduated the previous spring/summer and in the fall semester, and in April for students graduating at the end of the winter semester. Awardees receive a certificate and an honors cord, which can be worn at the Commencement ceremony. The Graduate Dean’s Citations for

## Center for Adult and Continuing Studies

Academic Excellence include university-wide recognition for excellence in the following categories:

- Academic Excellence in a Degree Program Award
- Outstanding Doctoral Dissertation Award
- Outstanding Master's Thesis Award
- Outstanding Final Project Award
- Outstanding Publication Award
- Award for Excellence Service to the Community/Profession
- Award for Excellence in Leadership/Service to GVSU
- Award for Excellence in Promoting Inclusion and Diversity at GVSU
- Award for Excellence in Sustainability

## Graduate Assistantships

The Graduate School is responsible for the overall administration of the university's graduate assistantship (GA) program and policies. Assistantships provide graduate students with part-time, paid work experiences in their field of study and allow them to expand and apply the knowledge and skills they learn in the classroom in a work setting. Graduate assistants typically work either 10 or 20 hours per week, depending on the terms of their appointment. Under the GA program, faculty and university staff members benefit as well, in that they receive assistance with research activities, special projects, and assignments that require the advanced skills that graduate students possess. Students receive tuition support as well as a stipend, which may help them lower the overall cost of attending graduate school.

Students interested in a graduate assistantship should first discuss their interest with their academic advisor or graduate program director, as students often find assistantships within their programs. However, other academic and nonacademic units may have positions available as well. While The Graduate School administers the policies and makes the final determination as to the students' eligibility for an assistantship appointment, the advertisement of positions and the selection process are performed by the hiring unit. More information on graduate assistantships may be found in the Costs and Financial Aid and Graduate Information sections of the catalog.

## Graduate Council

The Graduate School provides administrative support to the Graduate Council, which is part of university faculty governance. The Graduate Council is responsible for oversight of university policies relating to graduate education and the review and approval of the graduate curriculum. The Graduate Council's voting membership is made up of elected faculty representatives from each college and the university library, along with two graduate students who are elected by the Graduate Students Association (GSA). The GSA is a recognized student organization that is eligible to receive funds from the Office of Student Life. More on the GSA can be found by visiting [www.gvsu.edu/gsa/](http://www.gvsu.edu/gsa/).

## Graduate Student Association

The Graduate School actively supports the Graduate Student Association (GSA), the university-wide organization for graduate students at Grand Valley. This includes cohosting many professional development events, promoting social events, and providing guidance for the GSA. The GSA appoints two graduate students to serve as voting members of the Graduate Council, a university governance body that reviews and approves graduate courses and programs, and develops and approves graduate-level academic policies. The GSA also appoints graduate student representatives to serve on the following University Standing Committees: Academic Standards and Policies Committee, Faculty Salary and Budget Committee, Faculty Teaching and Learning Center Advisory Committee, University Assessment Committee, Online Education Council, Campus Life Committee, and University Academic Senate. Each year, the GSA awards outstanding faculty with two Dean's Citations, one for outstanding mentorship with the Outstanding Faculty Mentor award, and one for

inclusion with the Kimboko Inclusion Award. The collaboration between The Graduate School and the GSA provides all graduate students with opportunities for success beyond the classroom.

## Center for Adult and Continuing Studies

### Administration

Executive Director: Simone Jonaitis

### Website

[www.gvsu.edu/learn](http://www.gvsu.edu/learn)

### Mission

The Center for Adult and Continuing Studies provides programs and services that link the needs of lifelong learners with the resources of the university.

### Program Information

The Center for Adult and Continuing Studies coordinates academic programs, services, and professional development for students at regional sites and locations throughout Michigan. The Center for Adult and Continuing Studies recognizes the unique needs of the nontraditional student and the multiple time constraints and demands of an individual's experience. For more information about programs and services available at Grand Valley's campuses and regional sites throughout Michigan, please contact us by phone at (616) 331-7180 or on the Web at [www.gvsu.edu/learn/](http://www.gvsu.edu/learn/).

The Center for Adult and Continuing Studies also coordinates professional development and community engagement opportunities:

- Grand Forum
- Skills training and certification

Details about these programs can be found in the Community Resources section of the catalog. Classes are offered in Allendale, Grand Rapids, and/or Holland, Muskegon, Traverse City.

### Holland

Grand Valley State University offers an accelerated undergraduate degree in liberal studies at the Meijer Campus in Holland. This degree completion program is specifically designed to meet the needs of nontraditional and adult students returning to higher education. A variety of undergraduate courses are offered. The campus hosts a full range of student services including academic and career advising, tutoring, computer labs, library, and career services. Full registration and payment services are also available. In addition to academic programming, personal and professional development workshops are offered at the Holland Campus. Individuals and organizations seeking additional information about Grand Valley in Holland should call (616) 394-4848 or visit [www.gvsu.edu/learn/holland/](http://www.gvsu.edu/learn/holland/).

### Muskegon

The Muskegon Regional Center is located at the James L. Stevenson Center for Higher Education on the campus of Muskegon Community College. The liberal studies major is offered in Muskegon. This degree completion is specifically designed to meet the needs of nontraditional and adult students returning to higher education. Staff members at the center are available to advise students considering a transfer to Grand Valley, as well as to assist with registration and payment services. Individuals and organizations seeking additional information about Grand Valley in Muskegon should call (231) 777-0505 or visit [www.gvsu.edu/learn/muskegon/](http://www.gvsu.edu/learn/muskegon/).

### Traverse City

Grand Valley State University offers degree completion and a full range of services to Northern Michigan. The Traverse City Regional Center, located at the Northwestern Michigan College University Center, offers

undergraduate degrees in allied health and liberal studies. Students can earn a master's degree in education, physician assistant, public health, and social work. Other Northern Michigan locations include Sault Ste. Marie where Grand Valley State University offers the Masters in Social Work. Individuals and organizations seeking additional information about Grand Valley in Northern Michigan can call (231) 995-1785 or visit [www.gvsu.edu/learn/traverse/](http://www.gvsu.edu/learn/traverse/).

## Scholarships

### Grand Forum Scholarship for Continuing Education

This scholarship provides financial assistance to persons whose college education was interrupted for one or more reasons and who wish to continue to pursue earning a college degree at Grand Valley. Candidates must be returning as undergraduate students. Candidates must have a minimum of 24 prior credits at Grand Valley and be enrolled as a degree-seeking student with at least three credit hours. They must demonstrate financial need as defined by filing the Free Application for Federal Student Aid (FAFSA). Scholarship amount varies and cannot exceed the cost of three credits.

## University Libraries

### Administration

Dean: Lee Van Orsdel

Interim Associate Dean of Research and Instruction: Lynn Sheehan

Interim Associate Dean of Technology and Information Services: Jeffrey Daniels

Director of Special Collections and University Archives: Robert Beasecker

### Website

[www.gvsu.edu/library](http://www.gvsu.edu/library)

### Mission

Grand Valley State University Libraries purposefully collect, teach, display, discover, disseminate, and preserve information, in all its forms, to support the university curriculum and fuel the intellectual life of the university. We connect scholars and learners to resources. We create spaces and programs that inspire the university community and promote inquiry as an essential life skill.

### About Us

Grand Valley State University was the proud recipient of the Association of College and Research Libraries (ACRL) 2012 Excellence in Academic Libraries Award: [www.ala.org/acrl/awards/achievementawards/excellenceacademic/](http://www.ala.org/acrl/awards/achievementawards/excellenceacademic/). The University Libraries offer dynamic and diverse opportunities for research, collaboration, and individual study. From four unique locations (the Mary Idema Pew Library Learning and Information Commons and the Seidman House, both in Allendale; the Steelcase Library at the Richard M. DeVos Center in Grand Rapids; and the Frey Foundation Learning Center in the Cook-DeVos Center for Health Sciences in Grand Rapids), the libraries serve the entire Grand Valley community. Each library's collection is tailored to its location and the programs it serves, with daily deliveries of physical materials between all University Libraries locations.

### Events and Exhibits

The Mary Idema Pew Library offers event and exhibit spaces dedicated to supporting programs that enrich the educational, cultural, and creative life of the entire university community. Events and exhibits provide both planned and serendipitous opportunities for students to engage in learning moments that support, and at times transcend, their classroom experiences.

### Student Support Services

Our libraries offer a suite of unique programs and services to enhance students' learning experiences. In the Knowledge Market, there are peer

consultant services that help students hone their skills in research, writing, and presenting. Students may also visit the Data Inquiry Lab in the Mary Idema Pew Library and meet with faculty members for assistance with qualitative data management, analysis, and visualization. Other services that support student research and increase student efficiency include research consultations with professional librarians, a suite of online subject guides to help students find relevant resources on their topics, desktop delivery of journal articles across campuses, an interlibrary loan service that borrows materials from other institutions, and electronic course reserves for required class readings. General reference help is available through email or chat ([www.gvsu.edu/chat](http://www.gvsu.edu/chat)), by phone, text, or in person at any of our locations.

### Technology in the Libraries

Desktop computers, laptops, scanners, and printers are available for use in the Mary Idema Pew Library Learning and Information Commons, Steelcase Library, and the Frey Foundation Learning Center. The Mary Idema Pew Library also houses the Technology Showcase ([www.gvsu.edu/techshowcase](http://www.gvsu.edu/techshowcase)) where students can experiment and create using the latest technologies like 3-D printing, gesture-based computing, and robotics.

### Library Collections

The University Libraries house a robust collection of resources in multiple formats that support the research and scholarship activities of students and faculty members, including over 650,000 print volumes, 60,000 electronic journals, and more than one million e-books. Grand Valley State University is a depository for United States government documents.

### Curriculum Materials Library

Located in the DeVos Center on the Robert C. Pew Grand Rapids Campus, the center has a diverse collection of high-quality instructional materials for preschool through grade 12, including puppets, teaching aids, big books, print materials, and educational machines. The Curriculum Materials Library provides spaces where education majors can preview resources, develop lesson plans, create media for the classroom, and try out teaching aides. There is also a collection of K-12 materials housed on the fourth floor of the Mary Idema Pew Library Learning and Information Commons on the Allendale campus.

### Special Collections

Seidman House on the Allendale Campus contains both the University Archives and the libraries' Special Collections. The latter includes substantial numbers of rare books, Michigan novels, the Harvey Lemmen Collection on Lincoln and the Civil War, the Johnson Center Philanthropy Archives, and the papers of acclaimed Michigan author Jim Harrison, among others. Overlooking the ravine, Seidman House also offers a quiet study area during business hours.

### Digital Collections

Grand Valley State University Digital Collections contain a selection of photographs, correspondence, diaries, interviews, and publications from the holdings of the libraries' Special Collections and University Archives, and other university entities. This expanding resource makes unique or rare materials from Grand Valley collections available electronically to students, faculty members, administrators, researchers, and the general public, <http://gvsu.cdmhost.com/cdm/>.

### ScholarWorks@GVSU

ScholarWorks@GVSU is an online repository of research and scholarly outputs by Grand Valley faculty members and students, selected and deposited by individual university departments and centers on campus. Since its launch in 2008, works in the repository have been downloaded more than two million times by readers from all 50 states and 193 different countries around the world. ScholarWorks currently hosts 20 journals and 10 open access textbooks.

## Admissions

### Undergraduate Admissions

#### Freshman Applicants

Grand Valley State University welcomes qualified students to submit their applications. Admission decisions are selective based on the secondary school record, grades earned as well as courses selected, the personal data submitted on the application, and ACT or SAT results.

Freshmen are normally expected to be graduates of accredited high schools or preparatory schools. A strong high school background in basic academic subjects is important in a student's preparation for college study. The admission requirements are designed to ensure that students who are admitted to Grand Valley State University have the ability to successfully complete academic work and fully use the educational opportunities available.

Grand Valley grants admission to students who are prepared to meet the challenges of a rigorous university curriculum. Admission at Grand Valley is selective. Each application for admission is carefully reviewed and academic performance, as well as other criteria presented by prospective students, is considered in the evaluation. Applicants will be reviewed using a combination of high school courses completed, cumulative grade point average, standardized test scores, grade point trend, rank in class, and other factors.

A total of 20 units is required (a unit is the satisfactory completion of one year's work). Exceptions to these requirements will be considered in relation to other credentials presented.

#### Admissions

A single deficiency in an academic area will not necessarily mean a student is refused admission. However, students who are missing a number of courses will be at a disadvantage. We recommend that high school students who plan to attend Grand Valley prepare by completing the following high school program. High school coursework is the single most important factor in consideration for freshman admission. High school preparation should include the following:

- Four years of English, including composition
- Three years of science, including two years of laboratory science
- Three years of college preparatory mathematics, including two years of algebra
- Three years of social sciences
- Two years of a single foreign language

Further, we recommend elective courses in computer science and the fine arts. We also strongly recommend a fourth year of mathematics and additional science courses. Results of the ACT or SAT will be required before an admission decision is rendered unless the applicant has graduated from high school three or more years previously.

The requirement of high school graduation may be waived for adults, provided there is evidence that they are likely to be successful in college. This evidence will in most cases take the form of the General Educational Development (GED) test.

Students are encouraged to apply early in the fall of their senior year. Assistance in the admissions process at Grand Valley can be obtained from high school counseling offices. The admissions counseling staff welcomes the opportunity to meet with prospective students. Appointments should be arranged in advance by calling the Admissions Office at (616) 331-2025 or toll-free (800) 748-0246, or by contacting:

#### Admissions Office

Grand Valley State University  
1 Campus Drive  
300 Student Services Building  
Allendale, MI 49401-9403

Web: [www.gvsu.edu/admissions](http://www.gvsu.edu/admissions)

Email: [admissions@gvsu.edu](mailto:admissions@gvsu.edu)

To be considered for freshman admission, you must submit:

- Completed undergraduate application
- \$30 nonrefundable application fee
- Official high school transcript
- Official results of the ACT or SAT

Applications will be reviewed as soon as all information has arrived, and the applicant can expect a decision shortly thereafter. The Admissions Office may withhold a decision for additional information or for further testing. Applicants will be notified to provide any additional information. Applications for admission must be completed at least 30 days before the final day of registration. However, admission to any semester is subject to earlier closing without notice.

All documents and supporting data required for admission become the property of Grand Valley State University and will not be returned to the applicant.

#### Transfer Applicants

A transfer applicant is someone who has attended another college or university. The applicant will be evaluated on previous coursework at the college level. High school performance will also be reviewed for those who have earned fewer than 30 semester hours (45 quarter hours) of college-level coursework.

To be considered for transfer admission, you must submit the following:

- Completed undergraduate application
- \$30 nonrefundable application fee
- Official transcripts from *all* previous colleges (transcripts must be sent directly from the colleges to the Grand Valley State University Admissions Office)

Applicants who have earned fewer than 30 semester hours (45 quarter hours) at the time of application must also submit the following:

- Official high school transcript
- Official results of ACT or SAT

Applications will be reviewed as soon as all information has arrived, and the applicant can expect a decision shortly thereafter. The Admissions Office may withhold a decision for additional information. Applicants will be notified to provide any additional information. Applications for admission must be completed at least 30 days before the final day of registration. However, admission to any semester is subject to earlier closing without notice.

All documents and supporting data required for admission become the property of Grand Valley State University and will not be returned to the applicant.

Transfer students must complete a minimum of 12 hours in the unit conferring the major (six for the minor). Some programs have higher requirements; transfer students should consult descriptions of specific major requirements.

#### Transfer of Credit

Grand Valley makes every effort to transfer credit for academic work completed at other institutions. In general, courses completed with a D grade at an institution accredited by one of the Regional Accrediting Commissions will transfer when the overall GPA of all previous work, as calculated by Grand Valley, is C or better. Transfer credit is typically determined by the offering of an equivalent course at Grand Valley. Limited transfer credit may be awarded from technical or terminal associate degree programs. Credit from nonaccredited colleges may, under special circumstances, be granted if it is germane to a student's program. Approval for such credit must be given by the director of the Student Academic Success Center. Such credit will be validated after 15 semester hours of satisfactory work have been completed at Grand Valley (2.0 GPA

or higher). Transfer credit will be granted only to those students admitted as degree-seeking. Transfer credit may be awarded for correspondence courses taken through a regionally accredited institution.

Transfer students admitted as degree-seeking will receive a Transfer Credit Statement/Degree Audit, which indicates how coursework completed at other colleges and universities will transfer to Grand Valley on a course-by-course basis. Total credits transferred are recorded on the student's academic record and will apply toward Grand Valley degree requirements; grades are not transferred.

For information governing the use of transfer credit to fulfill degree requirements, see the Academic Policies and Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog.

### Transfers from Michigan Community Colleges

Grand Valley State University is a member of the Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO), which has formulated an agreement between two- and four-year institutions. Students who transfer to Grand Valley and have fulfilled the MACRAO transfer agreement or the Michigan Transfer Agreement (MTA) through a Michigan public community college have satisfied the Foundations categories of the General Education Program and one Supplemental Writing Skills (SWS) course. However, transfer students with a MACRAO or MTA will still need to complete the following requirements: one SWS course in their major or division, the General Education Program two-course Cultures requirement, and the two-course Issues requirement. For specific course information, please refer to [www.gvsu.edu/gened/](http://www.gvsu.edu/gened/).

### Concurrent Enrollment with Community Colleges

Concurrent enrollment allows students at both Grand Valley State University and community colleges to make full use of the variety of courses offered by both institutions. Through concurrent enrollment, students have more scheduling options, more choice of course locations, and many more courses available. Students may take courses at both institutions simultaneously or alternate enrollment between them. Financial aid may also be available to students who qualify.

Students must be admitted to both institutions. Please refer to the Transfer Applicant or Nondegree-seeking Applicants section of the Grand Valley State University Undergraduate and Graduate Catalog for specific admissions requirements to Grand Valley State University.

### Reverse Transfer Agreement

Grand Valley State University has signed agreements with several Michigan community colleges whereby students who transferred to GVSU from a participating community college without receiving their associates' degree may qualify to complete this degree while attending GVSU.

An email will be sent from the registrar at the end of each semester to students who meet the following criteria:

- Transferred a minimum of 45 credit hours from the community college to GVSU
- Have a combined total of at least 55 credits completed, including both those from the community college and GVSU
- Are in good academic standing

Students who want to request their record be reviewed by a community college official should complete the reverse transfer agreement transcript release form available on the registrar's website. Degree program advisors at the community college will:

- Audit the record to see if the student qualifies for the award of the associate's degree
- Notify the student of the results of the review

Additional information or questions should be directed to the Student Assistance Center at (616) 331-3327, or sent by email to [regdept@gvsu.edu](mailto:regdept@gvsu.edu).

### Undergraduate Nondegree-seeking Applicants

The nondegree-seeking admission status is designed for persons who, at the time of admission, are not interested in obtaining a degree from Grand Valley.

Application requirements and limitations:

- Graduation from high school three or more years previous to their first enrollment
- A maximum of 30 semester hours earned as a nondegree-seeking undergraduate student may apply toward a Grand Valley degree program
- Applications must be complete at least 30 days before the final day of registration

### High School Dual-enrollment Program

Some high school students may be eligible for concurrent enrollment in Grand Valley courses. Qualification and admission will be based on the following factors:

- An appointment with an admissions counselor is required each semester prior to enrollment
- Completed nondegree-seeking application
- Official high school transcript
- An overall GPA of 3.0 or above in high school coursework
- Official results of ACT or SAT if available
- Completed Grand Valley Dual Enrollment Form including all appropriate signatures
- Limitation of two classes per semester
- Permission from the Admissions Office must be obtained for future semesters at Grand Valley while still in high school
- Students qualifying for dual enrollment assistance from their high school must present a dual enrollment authorization form prior to enrollment
- Students must earn at least a 2.0 in each dual-enrollment class if they wish to continue taking dual-enrollment courses at Grand Valley State University

A decision on admission will be made when all information has arrived. The Admissions Office may withhold a decision for further information or until an interview has been held. Applicants will be notified to submit any additional information.

### Undergraduate Guest Student Applicants

This nondegree-seeking admissions status is designed for degree-seeking students from another college or university who are interested in transferring back the credits earned at Grand Valley State University to their home institution.

Application requirements and limitations:

- Eligible to re-enroll at their home institution
- Completed official Guest Application

### Frederik Meijer Honors College

The Grand Valley State University Frederik Meijer Honors College is intended for students who, in their previous academic pursuits, have demonstrated a distinctly high level of intelligence, motivation, creativity, and academic achievement. The college provides its students with special academic opportunities and challenges.

High school students admitted to Grand Valley State University are typically invited to join the Meijer Honors College if they have a 3.5 or better high school GPA and an ACT score of at least 28 or an SAT score of 1320.

Transfer students who wish to enter the Meijer Honors College may apply for admission if they have a 3.5 or better college GPA. Applicants should contact the director of the Meijer Honors College.

For more information about the Meijer Honors College, consult the Frederik Meijer Honors College section in the catalog.

### International Students

Grand Valley is proud to host international students. Students will find a safe and welcoming environment with many on-campus activities. More than 430 international students from 76 countries currently attend Grand Valley.

In order to be considered for admission, international applicants must submit all of the following documents to the Admissions Office by **October 15 for the winter semester (January)** or by **May 1 for the fall semester (August)**:

- Completed international admission application
- \$30 nonrefundable application fee
- Record of English proficiency. Students may satisfy the English proficiency requirements with these tests:
  - TOEFL: IBT 80, Written 550
  - IELTS: 6.5
  - MELAB (undergraduate only): 77
  - ELS (undergraduate and the following graduate programs: computer and information systems, cell and molecular biology, bioinformatics, biostatistics): Level 112
  - PTE: 53
- Undergraduate students from the following countries do not need to take the TOEFL/IELTS but will need to take the SAT or ACT exams:
  - Antigua and Barbuda
  - Australia
  - Bahamas
  - Barbados
  - Belize
  - Bermuda
  - Botswana
  - Canada
  - Dominica
  - Fiji
  - Gambia
  - Ghana
  - Grand Cayman Islands
  - Grenada
  - Guyana
  - Ireland
  - Jamaica
  - Kenya
  - Lesotho
  - Liberia
  - Malawi
  - New Zealand
  - Nigeria
  - Sierra Leone
  - South Africa
  - Saint Kitts and Nevis
  - Saint Lucia
  - Saint Vincent and the Grenadines
  - Swaziland
  - Tanzania
  - Trinidad and Tobago
  - Uganda
  - United Kingdom
  - Virgin Islands
  - Zambia
  - Zimbabwe
- Verification of Financial Support. Applicants and their sponsor must complete and sign the Financial Support Form and submit original bank statements verifying that the necessary amount of support is available. Applicants must demonstrate that they have full financial support as part of the application process.
- Original or certified true copies of all certificates and grade reports of secondary and postsecondary work. If the credentials are not in English, they must be accompanied by an English translation.
- A one- or two-page personal statement on the following topic, "How my personal experience and cultural heritage has shaped the person I am today and how those experiences can impact Grand Valley."

Please note some graduate programs may require additional tests or documents for admission.

Partial tuition scholarships are available to qualified admitted international students. All required admission documents must be submitted by May 1 for scholarship consideration.

All documents and supporting data required for admission become the property of Grand Valley State University and will not be returned to the applicant.

### Credit by Examination

In some cases, students may be granted advanced placement or receive college credit by examination. Tests are available to determine levels of competence in certain subject areas. Grand Valley encourages prospective students to investigate their use.

Additional information on credit by examination can be found in the General Academic Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog.

### Special Entrance Requirements for Certain Undergraduate and Graduate Programs

The standards for entry into the following majors and programs exceed the minimum requirements for admission to Grand Valley. Students must fulfill the additional requirements before they may declare a major in any of these noted areas. Please refer to the department entries for admission requirements and application deadline.

Allied health sciences (certain emphases only)  
Art education  
Athletic training  
Computer science  
Dance  
Diagnostic medical sonography  
Education  
Engineering  
Film and video production  
Health information management  
Information systems  
Medical laboratory science  
Music  
Nursing  
Occupational safety and health management  
Occupational therapy (M.S.)  
Physical therapy (D.P.T.)  
Physician assistant studies (M.P.A.S.)  
Police academy (MCOLES)  
Professional science masters (M.S.)  
Radiation therapy  
Radiologic and imaging sciences  
Seidman College of Business programs  
Social work  
Studio art (all emphases)  
Therapeutic recreation

### Appeal of Admissions Decisions-Undergraduate

Applicants denied admission may appeal that decision in writing to the director of admissions within 30 days of notification. It is important to note that an appeal will be heard only when new or additional information is present.

### Graduate Admissions

The graduate programs at Grand Valley State University are designed for students who are interested in expanding their professional preparation and development or continuing their education. Applicants for graduate admission must meet the following university minimum requirements to be considered:

- Earned a baccalaureate degree from a regionally accredited college or university in the United States, or the equivalent of this degree from another country
- Demonstrated ability to pursue graduate work successfully. Graduate programs generally require an undergraduate grade point average of at least 3.0

## Degree-seeking Domestic Students

Students who meet the following university requirements and the additional requirements of their chosen program will be considered for degree-seeking status:

1. A baccalaureate degree from an accredited institution of higher education
2. Submission of all required admission materials, including:
  - a. Completed graduate application for admission.
  - b. \$30 nonrefundable application fee (unless applicant has previously applied to Grand Valley State University).
  - c. Official copies of transcripts from all institutions of higher education previously attended. Transcripts must be sent from those institutions directly to the GVSU Admissions Office. GVSU does not require official transcripts from Grand Valley State University.
  - d. Record of English proficiency for applicants whose native language is not English. Students may satisfy the English proficiency requirements with these tests:
    - TOEFL: 80
    - IELTS: 6.5
    - MELAB: 77
    - PTE Academic: 53
3. Additional requirements and application materials specific to the graduate program

## Degree-seeking International Students

Students who meet the following university requirements and the additional requirements of their chosen program will be considered for degree-seeking status:

1. Completed international admission application
2. Submission of all required admission materials, including:
  - a. \$30 nonrefundable application fee (unless applicant has previously applied to Grand Valley State University).
  - b. Record of English proficiency for applicants whose native language is not English. Students may satisfy the English proficiency requirements with these tests:
    - TOEFL: 80
    - IELTS: 6.5
    - MELAB: 77
    - PTE Academic: 53
  - c. Verification of financial support.
  - d. Original or certified true copies of all certificates and grade reports of secondary and postsecondary work. If the credentials are not in English, they must be accompanied by an English translation.
3. Additional requirements and application materials specific to the graduate program

You must submit a completed application form and all required documentation to the Admissions Office before your application file receives admissions consideration. Applicants whose files are incomplete will not be considered for full admission. The webpage for graduate admission information is [www.gvsu.edu/admissions/graduate/](http://www.gvsu.edu/admissions/graduate/).

You can monitor your application status by calling the Admissions Office at (800) 748-0246 or (616) 331-2025. All documents and supporting data required for admittance become the property of Grand Valley State University and will not be returned to the applicant.

## Graduate Admissions Status

**Full admission:** Indicates that the applicant fully meets all the entrance criteria, including degree(s) required, GPA requirement(s), test score requirement(s), letters of recommendation, and official transcript(s) of all previous coursework completed. Only a graduate degree candidate who has achieved full admission status will be granted his/her degree. This status signifies that all required documents (including final transcripts) are on file with the university.

**Provisional admission:** Applicant who must submit additional application document(s) before achieving full admission status. The deadline for submitting missing documents is the last day of classes of their first semester of enrollment. Examples of missing documents may include:

- a. Official transcripts or admission test scores
- b. Certified copies or official verification of professional licenses or certifications
- c. Letters of recommendation
- d. Other documents required by their department

**Conditional admission:** Applicant who must meet specific conditions set by the degree program before attaining full admission status. Individual graduate programs determine the parameters of conditional admission and set the deadline(s) by which the conditions need to be met. Examples of specific conditions include:

- a. **Curriculum deficiencies:** Applicant who is not admissible or is marginally admissible to a graduate program because he/she has not completed prerequisites or background courses required for success in the graduate program.
- b. **Academic deficiencies:** Applicant whose credentials may be marginally acceptable. Although the graduate program may agree to admit such a candidate with reservation, the program may identify grade conditions that need to be met.
- c. **Nonstandard evidence of the potential for success in graduate work:** Applicant does not meet the standard admission criteria, but other significant evidence exists of the candidate's potential for success in a graduate program. Examples of such evidence include:
  - Candidate's maturation subsequent to his or her previous academic record
  - Candidate's significant professional and other accomplishments related to the program's discipline(s) and subsequent to a marginal academic record
  - Standardized admission test scores that are not representative of a particular candidate's aptitude for graduate work
  - Candidate's prior academic performance was negatively affected by significant nonacademic factors or influences that are no longer present

**Denied admission:** Indicates that the applicant is not granted admission to a degree program under any status.

**Degree-seeking student:** Applicant who has been granted admission to a degree program under full, provisional, or conditional status.

## Nondegree-seeking Students

Individuals who wish to take graduate courses but not pursue a graduate degree may be admitted as nondegree-seeking students. To obtain nondegree-seeking status, an individual must provide the following:

- Completed nondegree-seeking graduate application

A maximum of 6-12 credit hours taken as nondegree-seeking may be applied to a graduate degree depending on the program of interest. Students should check specific program descriptions for details.

## Changing Status from Nondegree-seeking to Degree-seeking

You may seek a change in status by

1. submitting all required admission materials; and
2. submitting a degree-seeking application form to the Admissions Office.

## Appeal of Admissions Decisions-Graduate

Admissions decisions may be appealed to the director of the graduate program and then to the dean of the college in which the program resides. Students who are nondegree-seeking may appeal an admissions decision to the dean of The Graduate School.

## Costs and Financial Aid

### Petition to Return

Following a voluntary absence of two or more consecutive semesters or sessions, a graduate student must complete a Petition to Return form. Graduate students are reminded that following a voluntary absence of 24 consecutive months they must follow the Grand Valley State University Undergraduate and Graduate Catalog requirements in effect at the time of their return to Grand Valley. Such students should meet with their program advisor to revise their plan of study.

Graduate students who wish to return to Grand Valley following an academic dismissal must submit a written appeal to the dean of the appropriate academic college in which the graduate program resides.

Graduate students who wish to change to a different graduate degree program within Grand Valley must complete the application process for that program and be formally accepted into the program. No additional application fee is required, and the applicant need not supply duplicate copies of official transcripts already on file.

### Dual Level Enrollment

Undergraduate students at Grand Valley State University may register for graduate credit prior to completing a baccalaureate degree. To do so, students must have earned a minimum of 85 semester hours, have a minimum 3.0 grade point average, demonstrated potential to succeed at the graduate level as determined by the graduate program director of the graduate program offering the course or be admitted to a graduate degree program, and receive approval from their undergraduate advisor, the course instructor, and the graduate program director of the graduate program offering the course. Students wishing to apply for dual enrollment must obtain a Dual Level Enrollment Request form from the registrar's webpage and indicate on the form that they are currently: (1) an undergraduate student requesting the designation of a graduate course as part of the undergraduate program (this course may not be used as part of some future graduate program at Grand Valley), or (2) an undergraduate student requesting enrollment in a graduate course to be designated as part of a future program (a student may count a maximum of nine credits toward the graduate degree). The completed form must be submitted to the Registrar's Office by the close of business on the fifth day of the semester in which the student wishes to enroll in the course.

## Costs and Financial Aid

### Costs

Tuition is based on the classification of the student and the course: undergraduate or graduate, lower or upper division, resident or nonresident of Michigan.

Tuition rates and fees are set by the Board of Trustees. The rates listed here are for the 2017-2018 academic year. Additional tuition may be added for students taking classes that require special equipment, consumable supplies, or extraordinary overhead. For more information about special course charges, go to [www.gvsu.edu/tuitionExt.htm](http://www.gvsu.edu/tuitionExt.htm).

Tuition for lower division (0-54 credits) undergraduate students who are Michigan residents taking anywhere from 12 to 15 credit hours is \$5,997 per semester. Tuition is \$498 per credit hour for fewer than 12 credits and for each credit over 15. Tuition for upper division (55 or more credits) undergraduate students who are Michigan residents taking anywhere from 12 to 15 credit hours is \$6,309 per semester. Tuition is \$525 per credit hour for fewer than 12 credits and for each credit over 15.

For lower division (0-54 credits) nonresident undergraduate students, tuition is \$8,532 total per semester for anywhere from 12 to 15 credits and \$709 per credit for fewer than 12 credits and for each credit over 15. For upper division (55 or more credits) nonresident undergraduate students, tuition is \$8,844 total per semester for anywhere from 12 to 15 credits and \$736 per credit for fewer than 12 credits and for each credit over 15.

Masters level tuition ranges from \$627-686 per credit hour depending on program, see [www.gvsu.edu/financialaid/coa/](http://www.gvsu.edu/financialaid/coa/). Doctoral level tuition ranges from \$770-792 per credit hour. Students classified as graduates pay their graduate program tuition rate for all courses taken, regardless of residency.

The previously listed tuition rates apply to all students registering for credit courses, including guests, visitors, and all categories of students who are not pursuing a degree at Grand Valley State University. Rates for noncredit courses in special programs apart from the regular university curriculum are published with the announcements of such programs.

Rates of tuition and fees are those in effect at the time of publication of the Grand Valley State University Undergraduate and Graduate Catalog. They are subject to change at any time by Grand Valley's Board of Trustees.

### Fees

Late registration (allowed only in the first five days of the semester) requires a \$50 late fee. Fees for resident and nonresident are the same.

Schedule revision, or drop/add, is held concurrently with all registrations. A student may drop or add any course for which prerequisites have been met and capacity permits. Additional tuition charges are due when a student adds a credit. Under exceptional circumstances a student may be allowed to add a course after the deadline. The completed transaction, accompanied by support from the instructor, department chair, and collegial dean, must include a \$25 late add fee and any additional tuition. Specific dates and times for all registrations are set by the registrar and listed in the schedule of courses. For more information on financial regulations regarding late registration and dropping or withdrawing from classes, click on the Policies section on the Financial Aid website.

### Parking

Students wishing to park on either the Allendale or Robert C. Pew Grand Rapids Campus must purchase a parking permit. Permits can be ordered electronically at [www.gvsu.edu/parking/](http://www.gvsu.edu/parking/). The permit costs \$200/semester for full-time students and \$110/semester for part-time students. A student is considered part-time if they are taking six or fewer credits each semester. The permit costs will be charged to their student account and billed on their regular tuition bill.

### Residency

Because students normally come to Grand Valley State University for the primary or sole purpose of attending the institution, rather than establishing a domicile in Michigan, those who enroll as nonresident students will continue to be classified as such throughout their attendance unless they demonstrate that they have permanently abandoned their previous home and permanently established Michigan residency. See Michigan Residence Requirements for Grand Valley's policy for determining residency.

### Tuition and Fees Refund Policy

Students who reduce their number of credit hours or withdraw from Grand Valley may be eligible, upon application to the Office of the Registrar, to receive a refund of tuition. The amount of refund will be based on the following schedule:

1. Students withdrawing before the start of the semester and during the first week of classes are eligible for a full (100 percent) refund of the applicable credit hours assessed. All financial aid awarded to the student will be reduced based on the required Federal Return to Title IV (R2T4) calculation. Students should expect to have a portion of their financial aid returned. (See Financial Aid and Complete Enrollment Withdrawal section.)
2. Students withdrawing during the second week of classes in a shortened session (spring or summer) and in the second, third, and fourth weeks of classes in a full session are eligible for a 75 percent tuition refund of the applicable credit hours assessed.

3. Students withdrawing after the second week of classes in a shortened session (spring or summer) and the fourth week of classes in a full session are not eligible for a tuition refund.
4. Students who withdraw completely and are eligible for a 100 percent refund of tuition will be eligible for a full refund of their assessed credit hours and other mandatory fees. Students withdrawing completely during the 75 percent refund period will be eligible for a 75 percent refund of their assessed credit hours and other mandatory fees. There will be no refund of these fees after the last date for a 75 percent refund as stated in the Annual Class Schedule online.

Students who have financial aid should talk to the Office of Financial Aid and Scholarships before dropping/withdrawing from classes to understand how their aid will be affected.

A specific schedule of refunds, with qualifying dates, is published each semester in Grand Valley's official Annual Class Schedule.

The refund is based on the date of receipt of the completed class drop or withdrawal form in the Office of the Registrar. If a course does not begin during the first week of the start of the semester, refunds will be based on the date of the first class meeting.

When Grand Valley State University cancels a course or when it is determined that a student has registered for a course he or she was not eligible to take, a full refund will be made regardless of the date.

In cases in which financial aid was used to pay for all or part of tuition, the refund will be used to repay the sponsor first and then the student, when appropriate. Refer to the Repayment of Unearned Federal Student Aid section of this catalog for details of this procedure.

### **Tuition Refund Appeals**

Student applications for refund of tuition are reviewed weekly by the Tuition Refund Appeals Committee. The applicant is notified in writing following the meeting. Approved refunds will follow the normal refund process returning federal and institutional funds as dictated by policy.

### **Financial Aid and Complete Enrollment Withdrawal from University/Repayment of Unearned Federal Student Aid**

Federal regulations require that the recipients of federal grants and loans who completely withdraw from an institution during an enrollment period must repay any unearned portion of the loan or grant funds that were or could have been disbursed for that enrollment period. The statute makes clear that federal funds are awarded to a student under the assumption that the student will attend for the entire period for which the assistance is awarded. When a student ceases academic attendance before the end of that period, the student has not earned all of the federal financial aid and therefore may not be eligible for the full amount of the federal funds awarded. The amount of federal funds earned by the student is determined by multiplying the percentage of the enrollment period completed by the total amount of federal loans and grants disbursed. If a student completely withdraws before 60 percent of the semester is completed, the student may be required to repay a portion of the federal financial aid. If the percentage of the enrollment period completed is more than 60 percent, the student has earned 100 percent of the aid. Students who completely withdraw will be billed for any institutional charges that remain as well as the amount of the unearned federal student aid that has been given to them.

Students who withdrawal during the 100 percent refund period will be required to repay funds previously advanced to them. These students will be billed. Failure to provide repayment will result in a hold being placed on both the student's transcript and registration and ineligibility for further financial aid funding until such funds are repaid.

Students who stop attending but do not officially go through withdrawal procedures are considered to have unofficially withdrawn. In cases of

unofficial withdrawals, the last recorded day of known academic activity will be used as the date of withdrawal.

### **Receiving Financial Aid for Repeated Courses**

The Office of Financial Aid and Scholarships is required to monitor and adjust a student's enrollment level for federal student aid if, or when, they repeat coursework for credit that they have already earned.

- A student may receive aid when repeating a course for the first time.
- A student may receive aid when repeating a course that was previously failed, regardless of the number of times the course was attempted and failed.
- A student may receive aid to repeat a previously passed course one additional time. For this purpose, a passing grade is defined as D- or better.
- If a student retakes a course that is not aid eligible, the credit hours will be excluded from the total enrollment for the semester.
- Students will receive an e-mail notification from our office if they are enrolled in a course that would need to be excluded from their eligible enrollment.

Please note: This rule applies whether or not the student received aid for earlier enrollments in the course.

### **Financial Aid for Students**

At Grand Valley State University, more than \$277 million in financial aid was awarded to more than 22,700 students. More than \$81 million of that was in the form of scholarships and grant assistance. Even though Grand Valley believes that the responsibility for financing a college education rests with students and their families, large amounts of aid are available. A student who receives a scholarship or grant may need to be willing to borrow and work to cover the remainder of his or her educational costs. In fact, because no one program can cover all college expenses, aid programs are usually combined in "packages" suited to the student's needs. This means that students receive aid in a variety of forms. Rarely would a student receive all one type of aid – for example, a grant – but may receive a mixture of grant, scholarship, student employment, and loan.

To be considered for aid, a student must be admitted as a degree-seeking student. The financial aid a student receives is based on his or her enrollment status each semester. Financial aid awards will be adjusted based on the number of enrolled credits. The majority of financial aid programs require at least half-time enrollment (6 credits per semester for undergraduate students and 4.5 credits per semester for graduate students).

To maintain and renew aid, students must make satisfactory academic progress. For most federal and state aid, need must be demonstrated by submitting a Free Application for Federal Student Aid (FAFSA). Students are encouraged to visit [www.fafsa.gov](http://www.fafsa.gov) to file the FAFSA online and utilize the IRS Data Retrieval Tool to import their tax information. Contact the Office of Financial Aid and Scholarships if you need assistance in accessing or completing this application.

### **Application Procedure**

All financial aid is awarded for the academic year beginning with the fall semester. Students must reapply for financial aid every year.

We encourage students to file the FAFSA for the following academic year by the Grand Valley State University priority deadline of March 1. Students who file after March 1 may not receive full grant funds (see application dates in the next section). An individual must be a degree-seeking student to be eligible to receive financial assistance. Most aid is awarded to students attending at least half-time (six or more credit hours for undergraduate students), although students attending less than half-time may be considered for the Federal Pell Grant program. Continuing education students (part-time, nondegree-seeking students) are not eligible for federal financial aid; however, they may apply for and receive some types of alternative loan programs. These students, and all others, can also

## Costs and Financial Aid

utilize the Grand Valley State University tuition payment plan offered by the Student Accounts office. For additional information on alternative loan programs, contact the Office of Financial Aid and Scholarships. Financial aid for international students is limited based on federal guidelines.

Additional aid may be awarded for the spring/summer session depending on the availability of funds. If you are seeking a spring/summer award, you must complete the spring/summer application, which is available on the Office of Financial Aid and Scholarships website each February at [www.gvsu.edu/financialaid/summer/](http://www.gvsu.edu/financialaid/summer/).

If you wish to be considered for financial aid, please refer to the deadline dates listed and follow the four basic steps outlined here.

1. If you are a new student, you must submit application forms for admission to Grand Valley. It is recommended that you apply for admission by December 31 for the fall semester.
2. A Free Application for Federal Student Aid (FAFSA) form must be completed by you and/or your parents and/or your spouse. Applications must be submitted online at [www.fafsa.gov/](http://www.fafsa.gov/). In order for us to receive your FAFSA, you must list Grand Valley State University among your choice of schools. Our federal school code is 002268. The FAFSA is the only application for aid that Grand Valley requires.
3. In some cases you or your parent may be required to submit additional information to the Office of Financial Aid and Scholarships to verify the accuracy of your financial aid application. The Office of Financial Aid and Scholarships may request additional information if, upon reviewing data you have presented, we believe further clarification of your financial situation is needed. Such additional information may include information about your household size, assets, or income.
4. Award notifications for new students will be mailed to your permanent address beginning mid-January. Returning students will receive their award notification in June through myBanner.

## Application Dates to Remember

### October 1

- Free Application for Federal Student Aid (FAFSA) becomes available at [www.fafsa.gov](http://www.fafsa.gov)
- Grand Valley scholarship cycle begins. To apply for Grand Valley endowed and department scholarships, visit [www.gvsu.edu/myscholarships/](http://www.gvsu.edu/myscholarships/).

### December 31

- Incoming freshman applicants must submit a completed admission application by this date to be considered for the major scholarship programs offered by Grand Valley.

### January

- Entering freshman students and transfer students receive notification of their financial aid award.

### February

- The Spring/Summer Financial Aid Application becomes available to all students interested in receiving aid for the spring/summer semester. The online form is available at [www.gvsu.edu/financialaid/summer/](http://www.gvsu.edu/financialaid/summer/).

### March 1

- Incoming community college transfer applicants must submit a completed admission application by March 1 to be considered for Grand Valley incoming transfer merit scholarships.
- This is the priority deadline for filing the Free Application for Federal Student Aid (FAFSA). All students who want to receive Federal financial aid must file this application and list Grand Valley as a college choice. Our federal school code is 002268.

### June

- Returning upperclass and graduate students receive notification of their financial aid award through myBanner.

## Cost of Attendance and Student Budgets

Before applying for financial aid, students and parents should assess all of the costs associated with attending Grand Valley. The following tables estimate the typical nine-month (two-semester) academic year expenses for single residents (living anywhere on or off campus except with parents or relatives) and commuting undergraduate students (living with parents or relatives). Some of the following expenses are discretionary (personal and miscellaneous, transportation, books, and supplies), therefore an average is used to determine the costs associated for such expenses. For more information regarding costs for graduate and doctoral level students, please visit [www.gvsu.edu/financialaid/budgets/](http://www.gvsu.edu/financialaid/budgets/).

<b>Residential Students</b>	<b>On-campus</b>	<b>Off-campus</b>
Tuition and fees* (Michigan resident)	\$12,290	\$12,290
Books and supplies	\$700	\$700
Personal and miscellaneous	\$1,248	\$1,248
Room and board*	\$9,150	\$5,560
Transportation	\$1,200	\$1,200
Total	\$24,588	\$20,998

### Commuting Students

Tuition and fees*	\$12,290
Books and supplies	\$700
Living expenses	\$800
Transportation/Personal	\$2,448
Total	\$16,238

### Out-of-state Students

	<b>On-campus</b>	<b>Off-campus</b>
Tuition and fees* (NonMichigan resident)	\$17,352	\$17,352
Books and supplies	\$700	\$700
Personal and miscellaneous	\$1,248	\$1,248
Room and board*	\$9,150	\$5,560
Transportation	\$1,200	\$1,200
Total	\$29,650	\$26,060

\*Estimated tuition and fees and room and board charges. Actual charges are determined by the Grand Valley State University Board of Trustees. The rates listed here may change for the 2017-2018 academic year.

## Financial Aid for Study Abroad

Financial aid is available to assist in financing the cost of approved study abroad programs. Students may receive assistance for Grand Valley summer programs, as well as full year and one-semester programs through exchanges and other individualized programs.

Students participating in study abroad programs receive financial aid in the amount they normally would receive if remaining on campus; however, students are generally able to borrow loan funds to assist in covering the additional costs. Limited scholarships and grants are available for some study abroad programs. Meeting with a financial aid counselor is highly encouraged. This helps facilitate discussions to ensure your study abroad is fully covered.

Students interested in a study abroad experience must contact the Padnos International Center regarding available program options and are encouraged to apply early for financial aid.

## Financial Aid Programs

At Grand Valley, financial aid includes scholarships, grants, loans, and student employment. This aid is usually combined in a “package” to offer the student flexibility in meeting their educational costs. This includes a combination of the various types of aid – loans, jobs, scholarships, and grants – put together for an award rather than just one of these sources. If you wish to apply for or renew financial assistance, you should review the following information on the types of available financial aid.

1. **Programs not based on need.** Each program requires different application procedures. Eligibility is determined jointly by the Office of Financial Aid and Scholarships and the agency or department funding the program.

2. **Programs based on need.** These require students to complete the Free Application for Federal Student Aid (FAFSA). Eligibility is determined by the Office of Financial Aid and Scholarships.
3. **Special programs.** These require students to apply directly to the agency or department responsible for determining eligibility and funding.

## Programs Not Based on Need

### Grand Finish

The less time you spend in college, the less money you'll spend on your degree. Grand Valley's Grand Finish grant will help you achieve that goal. For more information, please visit [www.gvsu.edu/grandfinish/](http://www.gvsu.edu/grandfinish/).

Every new, full-time student can take advantage of the Grand Finish grant. Complete 90 credit hours within three years of enrollment and we'll pay you \$1,000 over the next two semesters of study. If you transfer to Grand Valley, you're eligible for a \$500 grant once you've earned 90 credit hours, with an average of 30 credit hours per year at Grand Valley in the year(s) following your transfer.

Dual enrollment and advanced placement credits earned prior to your first semester at Grand Valley count toward the 90-hour requirement, speeding your time to graduation.

For more details, please visit [www.gvsu.edu/grandfinish/](http://www.gvsu.edu/grandfinish/).

## Scholarships

Scholarship eligibility criteria indicated as follows are for students entering in the 2017-2018 academic year as freshman or transfer. Scholarship information for the future academic years may be found on our scholarship webpages at [www.gvsu.edu/scholarships/](http://www.gvsu.edu/scholarships/). Grand Valley offers a merit-based scholarship program. We determine initial eligibility for these scholarships at the time of admission, although final award decisions and the amount of some scholarships are made by the scholarship committee after the student has completed all required application materials. To be considered for the incoming freshman and incoming transfer scholarships, the Admissions Office must receive the students completed admissions application and all supporting documents by December 31 for fall admission for incoming freshman and by March 1 for fall admission for incoming transfer scholarships. Documents received after the deadlines listed previously will not be used for scholarship consideration.

Complete applications consist of an application for admission, official transcripts, official results of the ACT or SAT test, and a \$30 application fee. The merit-based scholarships are described as follows.

1. **Awards of Distinction.** This group of scholarships includes Grand Valley's highest merit-based scholarships, ones that many students aspire to receive. They generally require high academic achievement and top scores on the ACT or SAT. Additional amounts of up to \$2,000 are awarded to students who are National Merit Finalists.
  - a. **Presidential Scholarships.** To be considered for a Presidential Scholarship, you must have a 3.80 high school cumulative grade point average, a minimum 32 composite ACT score or 1470 on the new SAT combined score on the Evidence-based Reading and Writing and Math, and attend a scholarship competition. Awards range from \$4,000-\$7,000. Awards are made up to \$7,000-\$10,000 in combination with the Award for Excellence. Grand Valley must be the first institution you attend after graduation from high school. This award is renewable for three additional consecutive years provided you maintain a 3.5 or better cumulative grade point average and meet the Financial Aid Satisfactory Academic Progress standards.
  - b. **Faculty Scholarships.** To be considered for a Faculty Scholarship, you must have a 3.60 high school grade point

average, a minimum 30 composite ACT score or 1400 on the new SAT combined score on the Evidence-based Reading and Writing and Math, and attend a scholarship competition. Awards range from \$1,000-\$3,000. Awards are made up to \$4,000-\$6,000 in combination with the Award for Excellence. Grand Valley must be the first institution you attend after graduating from high school. This award is renewable for three additional consecutive years provided you maintain a 3.5 or better cumulative grade point average and meet Financial Aid Satisfactory Academic Progress.

## 2. Awards for Excellence

- a. **Awards for Excellence Scholarship.** This scholarship provides awards of \$3,000. You must be a graduate of a high school in Michigan and Grand Valley must be the first college you attend after graduation. All admitted freshman students will be considered for this scholarship. Students who receive this award must have a 3.5 or better high school cumulative grade point average and 26 composite ACT score or 1260 on the new SAT combined score on the Evidence-based Reading and Writing and Math.

This scholarship is renewable for three additional consecutive years provided you maintain a 3.25 or better cumulative grade point average and meet Financial Aid Satisfactory Academic Progress.

- b. **Out-of-state Awards for Excellence.** This scholarship provides awards of \$3,000 plus the difference between full-time Michigan resident tuition and nonresident tuition. Grand Valley must be the first college you attend after high school graduation. All admitted freshman students will be considered for this scholarship. Students who receive this award must have a 3.5 or better high school cumulative grade point average and 26 composite ACT score or 1260 on the new SAT combined score on the Evidence-based Reading and Writing and Math.

This scholarship is renewable for three additional consecutive years provided you maintain a 3.25 or better cumulative grade point average and meet Financial Aid Satisfactory Academic Progress.

- c. **Awards for Excellence Transfer Scholarship.** This scholarship provides awards of \$2,000. You must have only attended an accredited community college in Michigan and completed 30 college credit hours at the time of application review. All credits earned must be from a Michigan Community College. All admitted transfer students with a completed admission application by March 1 will be considered for this scholarship. Students who receive this scholarship have at least a 3.5 college cumulative grade point average.

This scholarship is renewable for one consecutive year provided you maintain a 3.25 or better cumulative grade point average and meet Financial Aid Satisfactory Academic Progress.

## 3. Laker Scholarship

- a. **Laker Scholarship.** This scholarship provides awards of \$1,000. You must be a graduate of a high school in Michigan and Grand Valley must be the first college you attend after graduation. All admitted freshman students will be considered for this scholarship. Students who receive this award must have a 3.5 or better high school cumulative grade point average and a composite ACT score of 23, 24, or 25 or between 1140 and 1220 on the new SAT combined score on the Evidence-based Reading and Writing and Math.

This scholarship is renewable for three additional consecutive years provided the student maintains a 2.85 cumulative grade point average and meets Financial Aid Satisfactory Academic Progress.

## Costs and Financial Aid

- b. Out-of-state Laker Scholarship.** This scholarship provides awards of \$1,000 plus the difference between full-time Michigan resident tuition and nonresident tuition. Grand Valley must be the first college you attend after high school graduation. All admitted freshman students will be considered for this scholarship. Students who receive this award must have a 3.5 or better high school cumulative grade point average and a composite ACT score of 23, 24, or 24 or between 1140 and 1220 on the new SAT combined score on the Evidence-based Reading and Writing and Math.

This scholarship is renewable for three additional consecutive years provided you maintain a 2.85 cumulative grade point average and meet Financial Aid Satisfactory Academic Progress.

- 4. Early Awareness Scholarship.** Recipients of this scholarship will have at least two years of participation in one of the following programs: The Detroit Compact, Wade H. McCree Jr. Incentive Scholarship, Introspect Youth Services Inc., Ada S. McKinley Community Services Inc., TRIO Upward Bound, TRIO Talent Search, or GEAR UP while in high school. Students must have a completed admission application submitted by December 31 for the following fall semester. This scholarship cannot be combined with the Urban Schools Scholarship or a Native American Tuition Grant.

- a. Early Awareness Scholarship.** This scholarship provides awards of \$3,000. Students who receive this award must have a 3.3 or better high school cumulative grade point average and a composite ACT score of 21 or 1070 on the new SAT combined score on the Evidence-based Reading and Writing and Math.

This scholarship is renewable for three additional consecutive years provided the student maintains full-time attendance and a 2.5 cumulative grade point average and meets Financial Aid Satisfactory Academic Progress.

- b. Out-of-state Early Awareness Scholarship.** This scholarship provides awards of \$3,000 plus the difference between full-time Michigan resident tuition and nonresident tuition. Students who receive this award must have a 3.3 or better high school cumulative grade point average and a composite ACT score of 21 or 1070 on the new SAT combined score on the Evidence-based Reading and Writing and Math.

This scholarship is renewable for three additional consecutive years provided the student maintains full-time attendance and a 2.5 cumulative grade point average and meets Financial Aid Satisfactory Academic Progress.

- c. Early Awareness Transfer Scholarship.** This scholarship provides awards of \$3,000. Transfer students must have at least two years of participation in one of the programs listed previously. Students who receive this award must have a 3.0 community college cumulative grade point average and have completed 30 college credit hours at the time of application review. Students must have a completed admission application by March 1 and transfer directly from the community college.

This scholarship is renewable for one consecutive year provided you maintain a 2.5 cumulative grade point average and meet Financial Aid Satisfactory Academic Progress.

- 5. Urban Schools Scholarship.** This scholarship is for students graduating from one of the following high schools: Michigan – Grand Rapids Public Schools, Detroit Public Schools, Arthur Hill, Benton Harbor High School, Detroit High School of Fine and Performing Arts, Detroit University Prep Academy, Flint Northwestern High School, Flint Southwestern Classical Academy, John Pershing, JW Sexton, Northwestern, Pontiac Central, Pontiac Northern, Saginaw High School, Southfield Lathrup, Southfield Senior High, and Western International. NonMichigan – Chicago

High School Agricultural, Curie, Gwendolyn Brooks, Hillcrest, Hyde Park Academy, John Hope College Preparatory, Jones College Prep, Kenwood Academy, Lane Tech, Morgan Park, Percy Julian, Proviso East, Proviso West, Thornridge, Thornton Fractional North High School, Thornwood, Westinghouse High School, and Whitney Young. This scholarship cannot be combined with the Early Awareness Scholarship or a Native American Tuition Grant.

- a. Urban Schools Scholarship.** This scholarship provides awards of \$3,000 to students graduating from one of the high schools previously listed. Students must have a 3.3 high school cumulative grade point average and a composite ACT score of 21 or 1070 on the new SAT combined score on the Evidence-based Reading and Writing and Math.

This scholarship is renewable for three additional consecutive years provided the student maintains full-time attendance and a 2.5 cumulative grade point average and meets Financial Aid Satisfactory Academic Progress.

- b. Out-of-state Urban Schools Scholarship.** This scholarship provides awards of \$3,000 plus the difference between full-time Michigan resident tuition and nonresident tuition to students graduating from one of the high schools previously listed. Students must have a 3.3 high school cumulative grade point average and a composite ACT score of a 21 or 1070 on the new SAT combined score on the Evidence-based Reading and Writing and Math.

This scholarship is renewable for three additional consecutive years provided the student maintains full-time attendance and a 2.5 cumulative grade point average and meets Financial Aid Satisfactory Academic Progress.

- c. Urban Schools Transfer Scholarship.** This scholarship provides awards of \$3,000 to students graduating from one of the high schools previously listed. Students must have a 3.0 community college cumulative grade point average and completed 30 college credit hours at the time of application review. They must have a completed admission application by March 1 and transfer directly from the community college.

This scholarship is renewable for one additional consecutive year provided you maintain a 2.5 cumulative grade point average and meet Financial Aid Satisfactory Academic Progress.

- 6. Community College Distinguished Graduate Scholarships.** This \$1,000 scholarship is awarded to select recipients of all Michigan community colleges. The respective community colleges select the recipients. Students must have at least a 3.5 cumulative grade point average, be completing their associate's degree, matriculate directly to Grand Valley, and apply for admission by March 1. This scholarship is renewable for one additional consecutive year, provided you maintain a 3.25 cumulative grade point average and meet Financial Aid Satisfactory Academic Progress.

- 7. Phi Theta Kappa (PTK) Scholarships.** New entering transfer students who are members of the PTK Honor Society at Michigan community colleges are eligible to apply for this scholarship. Applicants must possess a 3.50 cumulative grade point average, be a member of the PTK Fraternity, be admitted to Grand Valley, and enroll as a full-time student. Applicants must apply for admission by March 1. Scholarship applications are submitted through [myscholarships](http://myscholarships.gvsu.edu), the online scholarship portal at [www.gvsu.edu/myscholarships/](http://www.gvsu.edu/myscholarships/). Applicants include a letter of application indicating their educational and career goals, a letter of recommendation from their PTK chapter advisor, and a resume. The scholarship is renewable for one additional consecutive year provided the student maintains a 3.5 cumulative grade point average and meets Financial Aid Satisfactory Academic Progress.

The previously listed scholarships are only for use in fall and winter semesters. The Office of Financial Aid and Scholarships will review each scholarship recipient at the end of winter semester for renewal for the next academic year. If a student fails to meet the renewal requirements, the scholarship will be canceled for the following academic year. A student can petition for reinstatement once they again meet the minimum requirements. The appeal for reinstatement form is available online at the Office of Financial Aid and Scholarships website ([www.gvsu.edu/financialaid](http://www.gvsu.edu/financialaid)).

- 8. Robert C. Trotter Tri-County Scholarships.** Each high school in the counties of Kent, Muskegon, and Ottawa are allotted two \$500 scholarships to Grand Valley to award to students of their own choosing. Students must have a 3.2 cumulative grade point average, a minimum ACT composite score of 22 or 1110 on the new SAT combined score on the Evidence-based Reading and Writing and Math, and not be the recipient of other merit scholarships\* offered by Grand Valley. Entering freshmen wishing to be considered should contact the counseling office in their high school. Complete admissions application must be submitted by December 31 for fall admission.
- 9. Alumni Heritage Scholarship.** This is an \$800 scholarship awarded to a child of a Grand Valley alumni. One or both parents must have graduated from GVSU with a bachelor or master's degree. Students who have step-parents or grandparents who are alumni are not eligible. Must be entering as a freshman with GVSU being the first college or university attended after high school, have a 3.3 high school cumulative grade point average, full-time enrollment and must not be the recipient of merit scholarships\* offered by Grand Valley. A formal application is not required. To be considered for an award, students must indicate their parent's alumni status on their admissions application. Complete admissions application must be submitted by December 31 for fall admission.
- \*Merit scholarships offered by GVSU are classified as the Laker, Award for Excellence, faculty and presidential scholarships. If you are awarded more than one scholarship listed here that covers the difference between resident and nonresident tuition, you will only receive this differential once.
- 10. Upperclass Honor Scholarships.** A limited number of scholarships up to \$1,000 are awarded annually to upperclass students not receiving scholarships from other sources. Students must be full-time undergraduates, have a 3.5 cumulative grade point average, and have completed at least 40 semester hours at Grand Valley, or if a transfer student, must have completed at least 15 hours at Grand Valley. Scholarship applications are submitted through myScholarships, the online scholarship portal at [www.gvsu.edu/myscholarships/](http://www.gvsu.edu/myscholarships/). Selection of upperclass honor award recipients are made by the Grand Valley Scholarship Committee. These scholarships may be renewed for one additional consecutive year for students who enroll full-time, maintain a 3.25 cumulative grade point average, and meet Financial Aid Satisfactory Academic Progress. Students must apply by the March 1 deadline.
- 11. Athletic Scholarships.** Scholarships are given to students participating in varsity sports. Awards are determined by the coaches. Athletic scholarships are awarded in all men's and women's varsity sports. Men: baseball, basketball, cross-country, football, golf, swimming and diving, track, and tennis. Women: basketball, cross-country, golf, lacrosse, softball, soccer, swimming and diving, tennis, track, and volleyball. If you think you would be eligible for athletic aid assistance, you should contact the appropriate Grand Valley coach for more information.
- 12. Music and Dance Scholarships.** Talent awards are available to outstanding instrumentalists, pianists, singers, and dancers attending Grand Valley State University and participating in various performance groups, regardless of financial need or academic major. Contact the chair of the music department for more information.
- 13. Fine Arts Scholarships.** These scholarships are for students majoring in the fine arts program at Grand Valley. Information and application forms for these scholarships are available from the departmental offices. Selection of scholarship winners is made by a committee of fine arts faculty members.
- 14. Other Grand Valley State University Scholarship Programs.** Grand Valley State University offers an ever-increasing number of endowed, departmental, and annually funded scholarships. Please refer to our scholarship website at [www.gvsu.edu/scholarships](http://www.gvsu.edu/scholarships) for more information or to apply through myScholarships, our online application database. Following is a list of GVSU scholarship programs.
- A Grand Day at a Time Scholarship  
A. Scott and Ruth P. Koeze Graduate Business Scholarship  
Aaron M. DesRocher Memorial Chemistry Scholarship  
Accounting Scholarship  
Ada Council for Arts Rebecca Vogelsang Memorial Scholarship  
Adam M. Malson Memorial Scholarship  
Alena E. Zachery-Ross '95 and Quinton Ross Muskegon Heights Scholarship  
Alex Anino Music Scholarship  
Alexander Calder Honors Scholarship  
Alison McManus Walters '73 Fostering Success Scholarship  
Alt-Marsiglia Scholarship  
Alumni Association Presidents' Leadership Endowed Scholarship  
Alumni Heritage Scholarship  
American Photo Marketing Entrepreneurship Scholarship  
Amos Nordman Foundation Scholarship  
Ann M. Dilley Jewelry/Metalsmithing Scholarship  
APICS Scholarship  
ARAMARK Student Excellence Endowed Scholarship  
Archie A. Blood Jr. '79, '83 Endowed PATHWAYS Scholarship  
Arend D. and Nancy Lubbers Honors College Scholarship  
Arthur C. Hills Music Scholarship  
AT&T Pioneers Michigan Chapter Scholarship  
Atomic Object Scholarship  
Autocam Medical Engineering Scholarship  
Baldwin Foundation Scholarship Endowment  
Barbara Flaschenriem Endowed Classics Scholarship  
Barbara H. Padnos International Scholarship  
Barry Castro Business Ethics Scholarship  
Becky Eckstrom Environmental Studies Scholarship Endowment  
Benjamin Mutnick Endowed Hospitality and Tourism Management Scholarship  
Bernard & Camille Cebelak Scholarship  
Berthold Price Scholarship  
Bill & Diana Wipperfurth Annis Water Resources Institute Student Research Scholarship  
Blinkhorn/Donk First Generation Scholars Endowed Scholarship  
Blue Transfer Scholarship  
Boand & Rowe Endowment for Advancement of Women in Sport & Physical Activity  
Branstrom Fine Arts Scholarship for Art and Design  
Breen Scholarship  
Brian Haskin Memorial Endowed Scholarship  
Brooks College Endowed Scholarship for Study Abroad  
Brooks First Generation Diversity Endowed Scholarship  
Budden Family Pathway Endowed Scholarship  
Buzzitta Family Endowed Scholarship  
Campbell-Williams Endowed Business Scholarship  
Candace Otte Scholarship for Nursing

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Caprice R. Wagner Memorial Scholarship  
Career Center Internship Award  
Carl and Claudia Bajema Grand Rapids Urban Schools Endowed Scholarship  
Carl and Delores Arendsen Golf Scholarship  
Carlton Radiologic and Imaging Sciences Undergraduate Scholarship  
Charles & Florence Irwin Scholarship Endowment Fund  
Charles and Susan Baker-Clark Endowed HTM Scholarship  
Charles L Toot Endowed Memorial Golf Scholarship  
Charlotte A. Gierst & Salome C. Egeler Trust Scholarship  
Children's Enrichment Center Student Parent Scholarship  
Christos T. and Joan A. Panopoulos Physician Assistant Studies Scholarship  
Chuck Peterson '83 Memorial Film and Video Endowed Scholarship  
Charles and Nancy Borgeson Science, Technology and Mathematics Endowed Scholarship  
Class of 1968 Endowed Scholarship  
Coach Jim Meerman Memorial Endowed Scholarship  
College of Education Future Teacher Scholarship  
College of Liberal Arts and Sciences Endowed Scholarship  
Colliers International Endowed Scholarship  
Computing and Information Systems Scholarship Fund  
Corky Meinecke Scholarship Endowment Fund  
Crawley Japanese Studies Scholarship  
Crowe Horwath, LLP Outstanding Accounting Student Scholarship  
Cultural Engagement Study Abroad Scholarship  
Daniel Kemp Alumni Leadership Scholarship  
Daphne Siegel Memorial PATHWAY Scholarship  
David Alan Bergsma Scholarship Fund  
David Daniels Memorial Scholarship  
David and Diana Moore Biology Graduate Student Scholarship  
David G. and Mary L. Annis Education Scholarship  
Denise Meier Memorial Endowed Scholarship  
Detroit Compact Scholarship  
Devon Smiley Legacy Scholarship  
DeWitt Barrels Inc. Environmental Science and Natural Resources Scholarship  
Dick Nelson Memorial Sports Broadcasting Scholarship  
Dirk Koning Film and Video Scholarship  
Don and Millie Wagner Scholarship in Memory of Caprice R. Wagner  
Don Williams Sr. Dean Emeritus Multicultural Business Education (MBEC) Scholarship  
Donna K. Brooks Presidential Scholarship  
Doris Rucks Scholarship  
Doug and Christen Fox Scholarship  
Doug and Linda Woods Athletic Training Scholarship Endowment  
Douglas C. and Kimberly K. Fenbert Endowed Memorial Scholarship  
Douglas K. and Ellen Chung Asian Social Work Graduate Scholarship  
Dr. Andrew M.C. Brown Memorial English Scholarship  
Dr. Donald J. Klein Sr. Graduate Endowed Scholarship in Accounting  
Dr. George I. and Helen Z. Quimby Scholarship  
Dr. James D. Hoffman Scholarship  
Dr. Nancy K. Mack & Katherine Klemit Mack Endowed Memorial Scholarship  
Dr. Nancy K. Mack Scholarship  
Dr. Roy and Patricia Olsson Jr. Health Professions Scholarship  
Dr. Roy and Patricia Olsson Jr. Therapeutic Recreation Endowed Scholarship  
Dr. Sara Kane-Smart Endowed Scholarship in Honor of Children's Advocacy Center in Holland  
Drs. Esther and Enrico Sobong Scholarship  
Duke Tanaka Jr. Anatomy Scholarship  
DV Alpha Scholarship Endowment  
Earl Harper Scholarship  
Economics Department Faculty Endowed Scholarship  
Edith I. Blodgett Endowed Music Scholarship  
Edward Tremba Geology Scholarship  
Eitzen Voice Scholarship  
Elizabeth Platek '89 Communication Scholarship  
Empowering Haiti Through Education Scholarship Fund  
Engineering/Computing & Information Systems Scholarship  
English Faculty Endowed Scholarship for New Majors  
English Faculty Scholarship for New Majors  
Eric A. Andres Live, Laugh, Love, Learn Scholarship  
Eric I. Maino Community Technology Award Endowment  
Eric Jon Gillette Memorial Scholarship  
Esther R. Padnos Nursing Scholarship  
Esther Rehm Stotz Scholarship  
Eugene and Lillian Pawl Scholarship  
Excel Business Scholarship  
Faculty Teaching and Learning Center Endowment Scholarship  
Felix V. & Gladys A. Zukaitis Athletic Scholarship  
Felix V. & Gladys A. Zukaitis Honors Scholarship  
Finance Advisory Board Scholarship  
Finance Department Faculty Endowed Scholarship  
First Generation Urban Schools Scholarship  
Florence Cowan Ward Scholarship for Nursing  
Folds of Honor Scholarship  
Foreign Student Scholarship  
Four Ps of Marketing Scholarship  
Frances Anne Kelleher Endowed Memorial Scholarship  
Fraternity and Sorority Laker Leaders Scholarship  
Fred A. Bell Business Scholarship Endowment  
Fred M. and Bernedine Keller Engineering Diversity Scholarship  
Frederick A. Chapman Endowed Memorial Public Relations Scholarship  
Frederick S. Singer Memorial Veteran's Endowed Scholarship  
Frederik Meijer First Generation Honors College Student Scholarship Endowment  
Frederik Meijer Opportunity Scholarship  
FTC&H Engineering Endowed Scholarship  
FTCH Occupational Safety and Health Management Endowed Pathway Scholarship  
Gail and Scott Haebich Nursing Scholarship  
George and Georgia Breur Scholarship  
George and Marianne Stein Endowed Memorial Scholarship  
Georgette "Tété" Zainea Memorial Pathway Endowed Scholarship  
Gilbert R. and Patricia K. Davis Davis Theatre Endowed Scholarship: Remembering Shakespeare  
Gilbert R. and Patricia K. Davis Endowed Merit English Scholarship  
Gilbert R. and Patricia K. Davis Endowed Merit Humanities Scholarship  
Glenn A. and Betty J. Niemeyer History Scholarship Endowment  
Global Programs Endowed Scholarship  
Grand Valley Grand Forum Scholarship  
Grand Valley State University Symphony Orchestra Endowed Scholarship  
Grand Valley UAW Region 1-D Scholarship  
Green Family First Generation College of Education Scholarship  
Gregg K. Dimkoff Endowed Finance Scholarship  
Greta & Arthur Delong Perpetual Scholarship  
GV in DC Endowed Scholarship  
GVSU Founders Endowed Scholarship  
GVSU LGBT Scholarship Endowment  
GVSU Web Team Scholarship  
H. James Williams Endowed Scholarship  
Helen Claytor Minority Scholarship

Helen DeVos Presidential/Faculty Scholarship  
 Henry and Juanita Dungey School of Public and Nonprofit Administration Excellence Award  
 Henry H. and Juanita Dungey Endowed Scholarship in Memory of Henry W. Dungey '00  
 Holliday Willey Psychology Scholarship for the Study of Pervasive Development Disorders  
 Hong Chen Memorial Endowment  
 Hosford Family Excellence in Academics and Athletics Endowed Scholarship  
 HTM Club Scholarship  
 Hugo Salazar Memorial Scholarship  
 Hyatt Place Wyoming HTM Scholarship  
 Hyman H. & Greta M. Berkowitz Scholarship  
 Initech Global Advancing Technology Scholarship  
 Initech Global Technology Scholarship  
 Ira Brad Memorial Scholarship  
 J. C. Huizenga Business Scholarship  
 Jacob B. Mol Family Scholarship Fund  
 Jad Abou-Maarouf '05, '08 and Selene Lacayo '06 Scholarship  
 James D. Bachmeier Endowed Scholarship  
 Jean E. Martin Doctor of Nursing Practice Scholarship  
 Jean Enright Women and Gender Studies Scholarship  
 Joan A. Panopoulos Scholarship  
 Joan Boand Athletic Scholarship  
 Joe E. Reid Memorial Scholarship  
 John Allegrina Nontraditional Student Endowed Memorial Scholarship  
 John and Barbara Gracki Football Degree Completion Scholarship  
 John J. and Marjorie E. Shepard Communications Scholarship  
 John T. Batchelder Political Science Scholarship  
 John W. and Virginia M. Reifel Economics Scholarship  
 Johnny C. Burton Memorial Scholarship  
 Johnson Leadership Scholarship Endowment  
 Jonathan and Marcia White Honors College Endowed Scholarship  
 Joseph E. Appelt P.E. Engineering Scholarship  
 Joseph Spruit Engineering Scholarship  
 Joyce Hecht Distinguished Scholarship in Philanthropy  
 Jurries Family Scholarship  
 Justice and Society Endowed Scholarship  
 Kathleen B. Vogelsang Seidman College of Business Scholarship for Nontraditional Students  
 Kaufman Family Endowed Scholarship Honoring L. William Seidman  
 Kendal J. DenBleyker Endowed Scholarship  
 Kenneth and Irene Fridsma Endowed Special Education Scholarship  
 Kirkhof College of Nursing Alumni Scholarship  
 Kipp & Erin Chillag Scholarship  
 Koning Family Health Sciences Scholarship  
 Kurt F. Kimball Scholarship Endowment  
 L.V. Eberhard Scholarship  
 Lacks Enterprises Scholarship  
 Laker Baseball Alumni Leadership Award  
 Larita "Rita" Stephanak Memorial Nursing Scholarship  
 Laura Sakoski Memorial Scholarship  
 Lois Searles Hospitality and Tourism Internship Award  
 Lt. James W. Parmelee Memorial Scholarship  
 Lt. William Zimmerman Memorial Scholarship  
 Lupe Ramos-Montigny "SI SE PUEDE" Legacy Endowed Scholarship  
 Lynne Kraemer Memorial Scholarship  
 Mack-Jackson African American Teacher Scholarship  
 Macomb County Student of the Week  
 Margaret "Peggy" Boyce Nontraditional Student Scholarship  
 Margaret F. Ward Art and Design Scholarship  
 Margaret Proctor School of Communications Scholarship  
 Margaret Ward Music Scholarship  
 Maria I. Perez Nursing Scholarship  
 Maribeth Wardrop Leaders in Philanthropy  
 Mark A. and Elizabeth C. Murray International Travel Scholarship  
 Mark A. Warren Memorial Scholarship  
 Marlene Kenneway Love of Dance Scholarship  
 Marney (Houseman) MacAdam Endowed Voice Scholarship  
 Marvin G. DeVries Endowed Scholarship  
 Mary & Wilhelm Seeger Scholarship  
 Mary & Wilhelm W. Seeger Global Programs Scholarship  
 Mary Jane Dockeray Scholarship  
 MaryBeth Koeze Art Scholarship  
 MaryBeth Koeze Endowed Scholarship in memory of Dr. Thomas Henry Koeze  
 Mathematics Endowment Scholarship  
 Mayor George Heartwell Through College Scholarship  
 McFadden International Child Welfare Scholarship  
 Michael and Susan Jandernoa Scholarship Endowment  
 Michael F. Young '90, '94 Memorial Endowed Scholarship  
 Michigan Garden Club Scholarship  
 Michigan Office Solutions Endowed Seidman College of Business Scholarships  
 Mi-Light Photonics Scholarship  
 Mithilesh & Jitendra Mishra Foreign Student/Faculty Scholarship  
 MLK Scholarship  
 Mnomen Native American Endowed Scholarship  
 Modern Languages & Literatures Endowed Study Abroad Scholarship  
 Moriah Muscaro '15 Feature Twirler Endowed Scholarship  
 Movement Science Student Excellence Endowed Scholarship  
 Mullendore Legal Studies Criminal Justice Scholarship  
 NAI Wisinski Scholarship  
 Nathan M. Hurwitz Endowed Memorial Scholarship  
 Nichols Sustainability Scholarship  
 NN Autocam Precision Components Group Engineering Scholarship  
 Norman Gibson Geology Field Study Scholarship  
 Norris, Perné & French Finance Pathway Endowed Scholarship  
 Occupational Safety and Health Management Scholarship  
 Orgulloso de Ser 'Proud to Be' Scholarship Endowment  
 Ottawa Co Am Golf Scholarship  
 Owen F. Bieber Scholarship Trust  
 P. and J. Versluis Endowed Scholarship  
 Pamela and Daniel G. DeVos Musical Theater Scholarship  
 Pathway Annual Scholarship  
 Paton Family Entrepreneur Scholarship Endowment  
 Paul '81 and Pamela '80 Schweitzer Scholarship Endowment  
 Paul A. '72 & Janet M. (Nickless) '71 Royce Endowed PATHWAY Scholarship  
 Paul and Dianna Johnson STEM PATHWAY Endowed Scholarship  
 Paul and Sue Spindler Accounting Study Abroad Scholarship  
 Paul B. Henry Congressional Internship Award  
 Paul Brian and Margaret Susan Brooks Endowed Memorial Scholarship  
 Paul C. Miller Scholarship  
 Paul Springer Crew Scholarship  
 Paul W. Potter and Margaret E. Potter Scholarship  
 Peace and Justice Activist Scholarship  
 Peter P. and Patricia R. Renucci Medical Lab Sciences Scholarship Endowment  
 Peter P. Renucci Family Medical Lab Sciences Scholarship Endowment  
 Philip P. and E. Joyce Versluis Supply Chain Management Endowed Scholarship  
 Physical Therapy Urban Schools Endowed Scholarship

## Costs and Financial Aid

Pioneer Class of 1967 Endowed Scholarship  
Plant Service Personnel Descendants Scholarship  
PNC Early Childhood Education Scholarship Endowment  
Positive Black Women Endowed Scholarship  
Price Heneveld Engineering Scholarship  
Professional Support Staff (PSS) Scholarship Endowment  
Professor Charles Knop Chemistry Scholarship  
Ram and Usha Singh Social Work Scholarship  
Randy and Debbie Price Endowed Scholarship  
Rauch Family Leadership Endowed Scholarship for Portage Schools  
Recreation Leadership Endowed Scholarship  
Redfield Financial Group Business and Baseball Endowed Scholarship  
Reverend Dennis and E. Jean (Lackey) McMurray Academic Achievement Scholarship  
Richard E. Flanders Scholarship  
Richard E. Veazey Graduate Academic Scholarship in Accounting  
Richard Giles Memorial Scholarship  
Richard M. DeVos Presidential/Faculty Scholarship  
Richard Wheeler First Responder Memorial Scholarship  
Rick K. Hamlin Endowed Memorial Scholarship  
Robert and Barbara Wood Entrepreneur Scholarship  
Robert and Linda '89 Rynbrandt Endowed Sociology Scholarship  
Robert Bosch Fuel Systems Engineering Scholarship  
Robert H. and Barbara Wood Entrepreneur Scholarship  
Robert L. Chamberlain Scholarship  
Robert W. Fletcher Memorial Endowment  
Rodney J. Mulder Social Work Scholarship  
Ronald Ward Scholarship  
Ross W. Perry Bachelor of Science Scholarships  
Ruth Chamberlain Global Issues Scholarship Endowment  
Ryan Short Memorial Scholarship  
Samuel L. Westerman Endowed Seidman PATHWAY Scholarship  
Samuel L. Westerman Foundation Scholarship for Nursing  
School of Accounting Faculty Endowed Scholarship  
School of Communications Scholarship Fund  
Scott Flahive Police Academy  
Scott M. Dykstra Oliver Products Company Engineering Scholarship  
Seidman College of Business Commercial Real Estate Scholarship  
Seidman College of Business Management Department Scholarship  
Seidman College of Business Study Abroad Scholarship  
Seymour and Esther Padnos Engineering Scholarship  
Shawn D. Wiersma Criminal Justice Memorial Scholarship  
Shelby Fazio '13 Memorial Endowed Scholarship  
Small Family Endowed Scholarship  
Social Work Scholarship  
Solina and Steven Kramer Endowed Memorial Scholarship  
Somers-DeMaria Endowed Scholarship  
Spartan Minority Scholarship  
Spectrum Health Diversity Scholarship  
Spectrum Industries Endowed Scholarship  
SPX Corporation Engineering Scholarship Fund  
Statistics Endowment Fund  
Steelcase Foundation Scholarship  
Steelcase Inc. Seidman College of Business Diversity Scholarship  
Steele A. and Mary D. Taylor Pathway to Education Scholarship  
Stephanie Urbanawiz Physician Assistant Endowed Scholarship  
Steven E. Williams Memorial Pathways to Recovery Endowed Scholarship  
Student Legacy Scholarship  
Student Support Fund  
Student Textbook and Supplies Scholarship  
Sullivan Scholarship  
T.J. Maciak Give Life Endowed Scholarship  
Tax Executives Institute Accounting/Tax Scholarship  
Teri Linn (Houghton) Marsh Endowed Memorial Nursing Scholarship  
The Albert S. and Ella D. Koeze Art Scholarship  
The Coopersville Scholarship  
The Donald and Barbara VanderJagt Mathematics and Athletic Scholarship  
The Donna K. Brooks Presidential Scholarship  
The General Dynamics Land Systems Engineering Scholarship  
The George Jacob Reister and Juliana Knodel Reister Family Memorial Scholarship  
The Graduate Teacher Certification Scholarship  
The Grand Valley Lanthorn Merit Scholarship  
The Hilda C. Holder Endowed Scholarship for Women in Business Fund  
The Howard and Rose Stein Endowed Biology Scholarship  
The Ilene I. Schooley Biomedical Sciences Scholarship  
The J. Patrick Sandro Education Scholarship  
The Jack J. Korff Seidman College of Business Finance Scholarship  
The Judith S. Pratt Nontraditional Nursing Scholarship  
The Malinoski Family Pre dental Scholarship  
The Nedra J. Otis Art Scholarship  
The Peggy & Shirley Scholarship  
The People Space Scholarship  
The Professor Paul A. Huizenga Biology Education Scholarship  
The Rev. Darld and Joyce Black Doctor of Physical Therapy Scholarship in Memory of Robert Klein  
The Right Place/MMTC-West Manufacturers Council Scholarship  
The Social Work Minority Scholarship  
The Subar Family – Model Coverall Service Scholarship  
The Waddell/Treanor Native Plant Endowment  
The Wisner Doctor of Physical Therapy Scholarship  
Theresa McKee, MS OTR, Occupational Therapy Endowed Scholarship  
Tom and Marcia Haas Power of 10 Endowed Scholarship  
Thomas A. & Cheryl L. '91, '98 Butcher Endowed Nontraditional Student Scholarship  
Thomas and Joyce Wisner Engineering Scholarship Endowment  
Thomas Seykora Alumni Leadership Scholarship  
Thompson Foundation Scholarship  
Thompson Working Families Scholarship  
Tim and Terry Selgo Student-Athlete Scholarship Endowment  
Todd Jager Memorial Graduate Athletic Training Student Award  
Tom and Marcia Haas & Family Laker Marching Band Scholarship  
Tom and Marcia Haas Power of 10 Endowed Scholarship  
Tony Pfennig Baseball Commitment Account Award  
TowerPinkster Endowed Engineering Scholarship  
Trans-Matic Engineering Scholarship  
Valerie P. Eggert Distinguished Scholarship in Philanthropy  
VanderZwaag Business Scholarship  
Vetter Family Marketing Scholarship  
Village at 48 West Freshman Scholarship  
Volkhardt Family Scholarship  
Wade McCree Scholarship  
Walsh VIP Scholarship  
Walton Boston Koch Memorial Scholarship  
Warren Reynolds Endowed Scholarship  
Wayland Street Films Scholarship for the Arts in Memory of BrownHill  
West Shore AWARE Scholarship  
West Side Challenge Scholar Endowed Scholarship  
WGVU LZ Michigan Scholarship Endowment  
WGVU-TV Scholarship  
Whitney Young Outreach Engineering Scholarship  
Wildey Family Scholarship  
William Hegarty Endowed Scholarship

Windstream Enterprise Resource Planning Scholarship  
 Windstream Technology Scholarship  
 Wolverine Worldwide Endowed Scholarship  
 Women's Center Nontraditional Student Scholarship  
 Writing Majors Scholarship

## Programs Based on Need

### Grants

The following programs are considered "gift" assistance and do not require repayment.

1. **Grand Valley Need-based Grant Programs.** These grants are available to full-time undergraduate students with exceptional unmet need after all other financial aid is awarded and is based on availability of funds. To apply, you must complete the FAFSA. Priority given to students who file their FAFSA by March 1 each year.
  - a. **Grand Valley Grant.** This \$3,000 award is for new students who have an estimated family contribution of \$2,000 or less as determined by filing the FAFSA. This award is renewable provided the student files the FAFSA by March 1 each year, the expected family contribution is \$2,000 or less and the student meets Financial Aid Satisfactory Academic Progress. Additional grant amounts of up to \$2,000 are available to all undergraduates who have exceptional unmet need after all other financial aid is awarded.
  - b. **GV Grant.** This need-based grant award amount is up to \$3,500 for all students who have exceptional unmet need. Eligibility is determined each academic year based on the FAFSA.
  - c. **Grand Valley Freshman Grant.** This need-based grant award amount is up to \$2,400 for new first-time freshman students who have exceptional unmet need.
  - d. **Grand Valley Second-year Grant.** This need-based grant award amount is up to \$2,700 for returning second-year students who have exceptional unmet need and have completed a sufficient amount of their attempted credits.
  - e. **Grand Valley Third-year Grant.** This need-based grant award amount is up to \$2,700 for returning third-year students who have exceptional unmet need and have completed a sufficient amount of their attempted credits.
  - f. **Grand Valley Transfer Grant.** This need-based grant award amount is up to \$3,000 for incoming transfer students who have exceptional unmet need.
2. **Federal Pell Grant.** This program is the main source of need-based federal financial aid grant funds. To apply for a Pell Grant, you must submit the FAFSA and indicate on this form that you wish Grand Valley State University to receive your application. The Office of Financial Aid and Scholarships in turn will notify you of the exact amount of the grant, which is determined from a payment schedule published by the U.S. Department of Education. No specific GPA is required for renewal; however, students must be making Financial Aid Satisfactory Academic Progress to remain eligible.
3. **Federal Supplemental Educational Opportunity Grants (SEOG).** These federal grants are awarded to undergraduate students with exceptional unmet financial need. No specific GPA is required for renewal; however, students must be making Financial Aid Satisfactory Academic Progress to remain eligible. Priority is given to students who qualify for the Federal Pell Grant Program.
4. **Michigan Competitive Scholarship.** This state scholarship program is available to undergraduate students pursuing their first degree. Students must demonstrate both financial need and merit. Eligible applicants must complete the FAFSA by March 1 for priority consideration. Students must achieve a qualifying ACT

score of at least 23 (composite) or 90 (scaled score) prior to entering college. Starting with the Class of 2017, an ACT score will not be considered. Students must achieve a qualifying score of at least 1200 on the SAT. Please visit [www.michigan.gov/missg](http://www.michigan.gov/missg) for all eligibility requirements. Awards from this program are subject to state funding.

5. **Federal TEACH Grant.** The Teacher Education Assistance for College and Higher Education (TEACH) grant program provides grants of up to \$4,000 per year to students who intend to teach in specified content areas in a public or private elementary or secondary school that serves students from low-income families. Contact the Office of Financial Aid and Scholarships for more information.
6. **Native American Tuition Benefit.** Students who are certified by the Michigan Intertribal Council to be a member of a federally recognized tribe and a Michigan resident are eligible for a tuition benefit equal to their tuition costs. Students who believe they are eligible Native Americans can contact the Michigan Intertribal Council at (800) 562-4957 for an application and additional information. Students must be meeting institutional eligibility requirements to qualify.

## Educational Loans Based on Need

1. **Federal Perkins Loans.** This federal loan program is for students who have financial need, are U.S. citizens, meet Financial Aid Satisfactory Academic Progress requirements of Grand Valley, and are not in default on previous federal loan programs. No interest accrues and no repayment is required while you are enrolled at least half-time in most institutions of higher education. Repayment at a minimum of \$40 per month is required within a 10-year period following the termination of your student status. Because of limited funds, loans are made for up to a maximum of \$2,000 per year at Grand Valley. Students must complete the Free Application for Federal Student Aid (FAFSA). Eligible students will be notified by the Grand Valley Office of Financial Aid and Scholarships.  
 The interest rate is a simple annual 5 percent on the unpaid balance with repayment beginning nine months after the student is no longer enrolled at least half-time (six credits for undergraduate students).
2. **Federal Direct Subsidized Loan.** This federal loan program operates through the U.S. Department of Education and provides loans to students to help meet their educational expenses. Interest rates are fixed at 3.76 percent for 2016-2017. The interest rate changes each year on July 1. The federal government deducts a 1.068 percent origination fee from the total amount of the loan. If you are eligible for a subsidized loan, the federal government will pay the entire interest charge while you are in college. Students must demonstrate financial need to qualify. A student can borrow up to \$3,500 for the freshman year of study; \$4,500 for the sophomore year; and \$5,500 for the junior and senior years, although the total borrowing plus other available resources cannot exceed the calculated financial need of the student to attend Grand Valley. Students must complete the Free Application for Federal Student Aid (FAFSA). First-time borrowers on or after July 1, 2013 will not be eligible to receive subsidized direct loans if the period during which the borrower has received such loans meet or exceeds 150 percent of the published length of the program. Eligible students will be notified by the Grand Valley Office of Financial Aid and Scholarships.
3. **Nursing Loans.** These federal loans are for students who are accepted into the nursing program at Grand Valley. Nursing loan criteria closely follow those of the Federal Perkins Loan Program.

## Educational Loans Not Based on Need

1. **Federal Direct Unsubsidized Loan.** The unsubsidized loan is not based on need. Eligibility is determined by taking the cost of education to attend Grand Valley and subtracting any financial aid the student has been awarded. The interest rate is fixed at 3.76 percent

## Costs and Financial Aid

for undergraduate students and 5.31 percent for graduate students for 2016-2017. The interest rates change each year on July 1. Under the Unsubsidized Federal Direct Student Loan Program, however, the interest accrues on the loan while the student is enrolled in school, during the grace period, and during any periods of deferment or repayment. Students may pay on the interest while in school. Students not paying on their accruing interest should be aware that their loan principal will increase based on the amount of that unpaid interest. The federal government deducts a 1.068 percent origination fee from the total amount of the loan. Repayment of the loan principal begins six months after the student is no longer enrolled at least half-time. To be considered for the Unsubsidized Federal Direct Student Loan, students must first complete the Free Application for Federal Student Aid (FAFSA) and list Grand Valley as a college choice.

- 2. Federal Direct Parent PLUS Loan for Undergraduate Students (PLUS).** Parents of dependent students may borrow funds under the parent loan program. The program makes loans of up to the full cost of educational expenses without regard to financial need. The interest rate is fixed at 6.84 percent for 2015-2016. The federal government deducts a 4.272 percent origination fee from the total of the loan. Funds are made available through the Federal Direct Plus Loan Program. Grand Valley, not local banks, will originate these loans for parents.
- 3. Federal Direct Graduate PLUS Loan.** Graduate students may borrow funds under this program. The program makes loans of up to the full cost of educational expenses without regard to financial need. The interest rate is fixed at 6.31 percent for 2016-2017. The federal government deducts a 4.276 percent origination fee from the total of the loan. Funds are made available through the Federal Direct PLUS Loan Program. Grand Valley, not local banks, will originate these loans for students.
- 4. Alternative Loan Programs.** Alternative loans are nonfederal loans to supplement financial aid for credit-worthy students and their families. A student may borrow an amount up to the cost of education minus other financial aid already awarded. Both fixed and variable interest rates are available. Interest rates may vary depending on the student's decision to pay on the loan while in school versus deferring repayment until after graduation.

Contact the Office of Financial Aid and Scholarships or visit our website [www.gvsu.edu/financialaid](http://www.gvsu.edu/financialaid) for more information.

## Student Employment

Student Employment aids students in obtaining employment that will help finance their education and develop work skills for their future career choice. We work with all university departments and the community to create part-time and summer employment opportunities for students. As part of the Office of Financial Aid and Scholarships, we administer the Federal Work Study Program university-wide.

Student Employment is a resource for job-seeking students and hosts an online jobs database called LakerJobs. Visit LakerJobs at [gvsu.edu/studentjobs](http://gvsu.edu/studentjobs) and click on the LakerJobs icon to search current job postings, which include on-campus and off-campus jobs and internships. For more information, please contact Student Employment at (616) 331-3238 or visit us in person at 100 Student Services Building.

**Federal Work Study Program:** Work study is a federally funded program that is awarded to students based on demonstrating financial need by filing the FAFSA. Students awarded work study must apply and be hired for work study positions through LakerJobs. If students do not have work study on their financial aid award, they can still apply and receive a nonwork-study job on campus. Many jobs do not require work study. All students receive biweekly paychecks. Work-study awards do not pay toward a student's bill.

## MoneySmart Lakers

MoneySmart Lakers is a financial education program on campus specifically focused on educating students about financial skills for their future. This program provides students with the tools and resources to help them understand their personal finances and to help them develop their money management skills. MoneySmart Lakers provides on-demand presentations, interactive seminars, and individual appointments to address the financial literacy needs of the community.

Some of the topics addressed by MoneySmart Lakers:

1. Creating a spending plan
2. Learning how to build and maintain good credit
3. Understanding loans
4. Financing your education
5. Wealth building

For more information, please visit the MoneySmart Lakers site at [www.gvsu.edu/moneysmart](http://www.gvsu.edu/moneysmart), email [moneysmart@gvsu.edu](mailto:moneysmart@gvsu.edu), or call the office at (616) 331-3234.

## Additional Payment and Student Options

- 1. Grand Valley Short-term Loans.** For a small service fee, short-term loans of up to \$500 are available for books and other emergencies. Repayment dates are determined by the Office of Financial Aid and Scholarships at the time of application but do not exceed 60 days or the end of the semester (whichever comes first). Students need to be in good standing with the institution to apply for this loan. Applications and general policies regarding short-term loans are available at the Office of Financial Aid and Scholarships.
- 2. Grand Valley Deferment Plan.** The deferment plan allows students to pay their tuition in four installments for a small processing fee each semester. Applications and general policies regarding the deferment plan are emailed with the initial tuition billing each semester and are also available online through the myBanner system. Contact the Student Accounts Office for more information at (616) 331-2209 or toll-free (800) 789-1923.
- 3. Company Loans.** Employees from participating companies that have a tuition reimbursement program are eligible to apply for a deferred tuition loan. Under this program, students may defer payment of their tuition until they receive reimbursement from their employers. Applications for this loan are available online through the myBanner system. Contact the Student Accounts Office for more information at (616) 331-2209 or toll free (800) 789-1923.

## Special Programs

**The Veterans Readjustment Benefits Act (GI Bill®)** provides educational benefits for servicemen and women who have served on active duty. You can obtain further information from the Veterans Administration office nearest your home or by calling them. They also have a website you can go to for more information, visit [www.va.gov](http://www.va.gov).

**Michigan Public Act 245** provides partial tuition payment to students from Michigan who are children of veterans who died in service or were totally disabled because of service causes. You can request an application and review further information at [www.michigan.gov/mistudentaid](http://www.michigan.gov/mistudentaid).

**Michigan Works!** provides financial assistance designed to prepare individuals for entry into the labor force. Go to [www.michiganworks.org](http://www.michiganworks.org) to find out more about these funding options and the steps necessary to receive this financial assistance.

**Veterans Administration Benefits.** Information about education benefits offered by the U.S. Department of Veterans Affairs (VA) is available at the official U.S. government website: [www.benefits.va.gov/gibill](http://www.benefits.va.gov/gibill). GI Bill® is a registered trademark of the VA.

**Vocational Rehabilitation.** The Michigan Department of Education, Bureau of Rehabilitation Services, provides services and financial

assistance to students with certain disabilities. You can obtain information by calling your local Bureau of Rehabilitation office or writing to Michigan Rehabilitation Services, Box 30010, Lansing, Michigan 48909 or calling (517) 373-3390. For a listing of district offices call (800) 605-6722. To renew vocational rehabilitation assistance, you must submit the necessary financial aid forms each year and make arrangements for a review of your case with your vocational rehabilitation counselor.

**Tribal Grants.** Financial assistance may be available for Native American students who are affiliated with a tribe. For more information on requirements and application materials, contact your tribal higher education officer.

**Private Scholarships.** A limited number of scholarships are available from private sources. Contact organizations in your community that may provide scholarships, especially those in which you and/or your parents are active. Your local high school guidance office is also a source of this information. Scholarships may have deadlines beginning as early as October 1 for the following year, so it is important to begin your search as early as possible.

### Enrollment Requirements for Disbursement of Aid

Your financial aid award is based on full-time enrollment, regardless of the plans you indicated on the FAFSA. Specific funds, however, have enrollment requirements and will apply toward your bill and be backed off your bill as your enrollment changes (i.e. as you drop and add credits).

**The following funds will pay on your bill as long as you are enrolled for at least one credit:**

- Some private (nonfederal) loans
- Some private scholarships

**The following funds will pay on your bill as long as you are enrolled at least half-time (6 or more credits as an undergraduate; 4.5 or more as a graduate):**

- Federal Direct Subsidized Loans
- Federal Direct Unsubsidized Loans
- Federal Direct PLUS Loans
- Some private loans

**The following funds will be prorated based on your enrollment:**

- State Competitive Scholarship
- Federal Work Study

Prorated for three-quarter time enrollment of 9-11 credits

Prorated for half-time of 6-8 enrollment credits

- Federal Pell Grant
- Federal TEACH Grant
- Federal Supplemental Opportunity Grant

Prorated for three-quarter time enrollment of 9-11 credits

Prorated for half-time enrollment of 6-8 credits

Prorated for less than half-time enrollment of 1-5 credits

**The remaining funds require full-time enrollment of 12 or more credits to pay on your bill:**

- Federal Perkins Loan
- Federal Nursing Loan
- Grand Valley grants
- Grand Valley scholarships
- Some private scholarships

### Satisfactory Academic Progress (SAP)

Federal regulations governing federal funds require institutions to monitor the academic progress of financial aid recipients. Grand Valley State University's policy is to provide financial aid only to students capable of remaining in good academic standing and who make adequate progress toward a degree. Adequate academic progress required to remain eligible for financial aid is defined as follows.

### Undergraduate Students

- Achieve a minimum 1.5 cumulative GVSU grade point average after 24 credits
- Achieve a minimum 1.8 cumulative GVSU grade point average after 54 credits
- Achieve a minimum 2.0 cumulative GVSU grade point average after 55 credits
- Complete and pass a minimum of two-thirds of all GVSU credit hours attempted
- Complete all degree requirements within 150 percent of the minimum number of credit hours required to graduate (based on 120 credits for undergraduate students)

### Second Undergraduate Students

- Maintain a minimum 2.0 cumulative GVSU grade point average
- Complete and pass a minimum of two-thirds of all GVSU undergraduate attempted hours
- Complete all additional requirements within 150 percent of the minimum number of credit hours required to complete an additional program. An additional 60 credits will be allowed for subsequent undergraduate work (based on 120 + 60 credits for second undergraduates).

### Graduate Students

- Maintain a minimum 3.0 cumulative GVSU grade point average
- Complete and pass a minimum of two-thirds of all GVSU graduate credit hours attempted
- Complete all degree requirements within 150 percent of the minimum number of credit hours required to graduate (based on 60 credits for graduate students)

### Doctoral Students

- Maintain a minimum 3.0 cumulative GVSU grade point average
- Complete and pass a minimum of two-thirds of all GVSU credit hours attempted
- Complete all degree requirements within 150 percent of the minimum number of credit hours required to graduate (based on 120 credits for doctoral students)

### General Provisions and Information

- Transfer credits will not be included in calculating the two-thirds completion rate. Transfer credits are included in the 150 percent of required credits limit for all students.
- Satisfactory academic progress will be determined at the end of each semester for all enrolled students regardless of whether or not financial aid was received that semester.
- Students in good financial aid academic standing who fail to meet the requirements in the subsequent semester will be placed on financial aid warning to allow them one semester to regain eligibility. If students are not meeting the overall satisfactory academic progress requirements after one semester of warning, they will no longer be eligible for aid.
- Students who were placed on a SAP warning status who were unable to meet the minimum requirements will be given the option of appealing to the SAP Appeals Committee to request an exception to receive financial aid for one probation semester. While on probation, a student must meet the following requirements to maintain financial aid eligibility:
  - Earn a 2.5 semester GPA or a 2.0 cumulative GPA.
  - Complete all credits the student is still registered for at the end of the drop/add period.
- All credit hours attempted through international programs and through concurrent enrollment agreements count in the SAP calculation.

Students meeting financial aid probationary requirements will be continued on financial aid academic plan until they again meet standard academic progress requirements. Failure to meet the financial aid

## Academic Policies and Regulations

probationary GPA and/or credit completion requirement while on financial aid probation will result in the loss of eligibility for continued financial aid.

- Students may regain financial aid eligibility by achieving a minimum accumulative GPA of 2.0 and/or successfully completing a minimum of 67 percent of cumulative attempted credit hours at their own expense.
- Repeat classes increase the total attempted hours, but do not increase the total number of credits completed.
- Grades of W, NC, F, or I do not count in the GPA or credit completion requirement; however, these grades do count as attempted credits.
- Credits hours earned by testing or other nonstandard means are counted in the satisfactory academic progress calculations as both hours attempted and hours earned.
- All credit hours attempted through international programs and through concurrent enrollment agreements count in both attempted and earned calculations.
- Students who fail to meet the previously listed academic progress standards may appeal the loss of financial aid eligibility. Appeals must be submitted to the Office of Financial Aid and Scholarships with appropriate documentation of the circumstances which prevented the student from meeting the SAP requirements. The deadline for submission of an appeal for any semester in which aid is denied under this policy is the last day of the fourth week of classes.

NOTE: Refer to the Academic Policies and Regulations for the Academic Review Policy. These are separate from and different than the financial aid satisfactory academic progress requirements discussed previously.

### Terms and Conditions Governing Acceptance of Award

Grand Valley State University's Office of Financial Aid and Scholarships makes every effort to provide timely and accurate information in your award notification. The university also reserves the right to change without notice any award due to federal, state, or university changes in policies, procedures, or regulations.

In accepting your financial aid award offer, you are stating that you have met and will continue to meet all the following conditions of acceptance set by federal regulations and Grand Valley policies:

- The information submitted on your aid application is correct and complete.
- You will notify Grand Valley's Office of Financial Aid and Scholarships if you receive assistance not originally on your award notification (i.e. an outside scholarship). A reduction of other aid may be necessary even if funds have already been disbursed.
- You will use the financial aid awarded to you only for payment of tuition, books, housing costs, transportation, and other related educational expenses.
- You agree that financial aid awarded to you may be used as a credit toward payment of all tuition, fees, room, board, and all other charges that may be due or past due on your student account.
- You will maintain sufficient academic progress toward your degree according to the policy of the Grand Valley Office of Financial Aid and Scholarships.
- You will maintain the minimum credit hour(s) that you have registered for after 100 percent refund each semester. Your award will be based on full time attendance and will be adjusted after the 100 percent tuition refund period each semester. If you drop below the number of credit hours upon which your award was based or withdraw completely from your courses, you may be expected to repay all or part of your award.
- You will notify the Office of Financial Aid and Scholarships if you do not plan to enroll in a semester for which you have been awarded aid.

- You are not in default on educational loans and do not owe a balance as a result of returned aid for any federal funds received at Grand Valley or elsewhere.
- You must meet all the requirements regarding registering for selective service, citizenship status, and drug conviction status.
- You will respond promptly to any requests for additional information. Failure to do so may result in you being billed for a portion or all of the aid disbursed to you or will delay additional disbursements.
- You will immediately notify the Grand Valley Registrar's Office if you withdraw from the university. You may be billed for part or all of your financial aid. The bill will depend on the date of your withdrawal and the percentage and amount of institutional refund to be received.
- You agree to repay to Grand Valley any financial aid funds disbursed to you in error. If a mistake was made, whether by you, Grand Valley, or another, agency federal regulations require that the mistake be corrected and funds be billed back as necessary.

## Academic Policies and Regulations General Academic Policies

### Semester Hour

The unit of credit is the semester hour; the number of semester hours of credit given for a course generally indicates the number of periods a class meets each week.

### System of Grading

Grade	Quality Points	Grade	Significance
A	4.0	CR	Credit
A-	3.7	NC	No Credit
B+	3.3	I	Incomplete
B	3.0	W	Withdrawal
B-	2.7	AU	Audit
C+	2.3	X	Deferred
C	2.0	NR	No Report
C-	1.7	P	Pass
D+	1.3	PS	Pass
D	1.0	PD	Pass with Distinction
F	0.0	R	Research

Quality points are the numerical equivalent of letter grades. A grade point average (GPA) is computed by dividing the number of quality points earned by the number of semester credits attempted (only those graded A-F). The GPA is used to determine academic standing, eligibility to participate in certain curricular and cocurricular programs, academic honors, and academic standing, which may include probation, jeopardy of dismissal, or dismissal. A minimum GPA of 2.0 for undergraduate students and 3.0 for graduate students is required for graduation. Some programs require a GPA in excess of the minimum to satisfy major requirements.

Credit at the graduate student level will be awarded for grades of C (2.0) or better. This includes all graduate coursework and core, background, and foundation courses. Grades below C will be calculated in a student's GPA, but the credits will not count toward the degree.

Please refer to each academic section for specific requirements.

### Incomplete Grade

The grade of I, Incomplete, indicates that a student was doing satisfactory work, but due to nonacademic reasons beyond the student's control, the student was unable to complete the remaining requirements of the course. This is a temporary grade given for work that is lacking in quantity to meet course objectives. This grade may not be given as a substitute for a failing grade or withdrawal. A student is expected to

complete course requirements according to the following schedule: fall semester incompletes, end of winter semester; winter and spring/summer incompletes, end of fall semester. Instructors are required to file a change of grade form or request an extension of the Incomplete grade at the end of each semester. A student cannot graduate with an Incomplete on their record. Please see the faculty manual for instructions on assigning an Incomplete grade.

### Deferred Grade

The grade of X (deferred) is a temporary grade that may be given only in a course that cannot be completed in one semester. Such courses are usually research projects. This grade is given only for work that is satisfactory in every respect but for which students need more than one semester to complete. An X grade must be removed within two calendar years from the date of assignment. If not, it will be changed to NC. A student cannot graduate with an X grade on their record.

### Credit/No Credit Grade

All coursework will be graded (A-F) unless the appropriate faculty body within a college, the dean of the college, and the Curriculum Committee have approved proposals on an individual course basis that the course be conducted on a credit/no credit basis.

Undergraduate students may elect certain undergraduate coursework on a credit/no credit basis. A maximum of 10 semester hours of major, minor, or cognate courses within the major may be taken on a credit/no credit basis only with the consent of the student's major department. A maximum of 25 percent of a student's hours of Grand Valley courses earned to fulfill graduation requirements may be taken on a credit/no credit basis (credit = C or above for undergraduate courses, credit = B or above for graduate courses). Courses that are graded CR/NC as the standard grading scheme (e.g., internships) do not count in the maximums stated previously. Consent is unnecessary if the course is an elective, a general education course, or a B.S. or B.A. degree requirement. Changes from a grade to credit/no credit and vice versa will not be allowed after the first week of the semester.

### Graduate Project, Thesis, and Dissertation Grades

The grades PS (Pass), PD (Pass with Distinction), W (Withdrawal), and NC (No Credit) are the only grades that may be assigned as the final grade for a graduate project, thesis, or dissertation. The Withdrawal grade is available only for students who wish to voluntarily and permanently terminate their degree program. The Pass with Distinction grade may only be awarded for a project, thesis, or dissertation that is exceptional in its significance and presentation and unanimously recommended by the project, thesis, or dissertation committee.

### Research Grade

The grade of R (Research) is the only grade that may be assigned each semester to a continuous enrollment course for a graduate project, thesis, or dissertation (xxx-696, xxx-796). The R grade is permanent and not affected by the final grade assigned to the project, thesis, or dissertation.

### Repeat Course Policy

A student may repeat any course one time. When repeating a course, the grade earned shall be the grade of record but the grades of all courses attempted will remain on a student's official transcript.

Students who repeat a course will have only the last grade counted toward their GPA, whether or not the last grade is higher. Grades of I, W, AU, CR, or NC do not replace an earlier grade.

Repeating a course more than once is allowed only with the approval of the student's academic advisor. In cases when the course is not in the student's academic advisor's unit, approval to repeat the course must be approved by the appropriate unit head of the department where the course is offered. Please note: many undergraduate secondary admission

programs and postgraduate professional programs routinely recalculate students' undergraduate GPAs to include repeated coursework. The inclusion of repeated grades may lower your overall GPA when applying to such programs. Students should consult with prospective programs regarding their policies before applying.

For additional information regarding changes in federal regulations and impacts on financial aid for repeating courses, please click on the Important Policies section on the Financial Aid website.

### Course Repeat Appeal Process

If an advisor for undergraduate students/programs declines a student's request to repeat a course more than once, the student may appeal the decision by putting the request and the rationale for the request in writing and submitting both to the unit head of the program in which the course is located. If the unit head declines the appeal, or is the original decision maker, the student may then submit the appeal to the dean of the college in which the course is located.

### Auditing a Course

Any student may register to take a course on an audit or noncredit basis, provided admission and course prerequisites have been met. Students who wish to audit a course must indicate their intent to the Registrar's Office during the first five class days of the semester. Changes from credit to audit and vice versa will not be allowed after the first week of the semester. Tuition costs for auditing are the same as for credit.

### Withdrawal from an Undergraduate Course

A student may withdraw from a course and receive a grade of W when the completed Registration and Drop/Add Form is presented to the registrar by the end of the ninth week or dropped through self-service Banner. Students who do not withdraw before the deadline must accept a grade other than W depending on the instructor's judgment of their performance in the course(s) and any mitigating circumstances. Students who request an exception of the withdrawal deadline due to extenuating circumstances must present their explanation of appeal attached to a Registration and Drop/Add Form signed by their professor and department chair along with at least one statement of support from the professor or department chair to the director of the Student Academic Success Center. Students should continue attending class until notification of a final decision about their appeal is received.

For additional information regarding late registration and dropping or withdrawing from classes throughout the academic year, please click on the Important Policies section on the Financial Aid website.

### Withdrawal from a Graduate Course

For information on withdrawal from a graduate course, please refer to the section in the catalog on Graduate Academic Policies and Regulations.

### Withdrawal from Grand Valley State University

Students withdrawing from Grand Valley during an academic term must obtain a complete withdrawal form from the Registrar's Office and, if applicable, have it signed by the director of the Student Academic Success Center. The completed form must be returned to the Registrar's Office. Any refunds will be based on the date the completed form is filed with the Registrar's Office.

Graduate students must follow the Graduate Academic Policy on Course Withdrawals.

Students in good standing who wish to return to Grand Valley after an absence of two or more semesters must submit a Petition to Return form to the Registrar's Office prior to registration. The form can be obtained from the Office of Admissions, the Registrar's Office, or the Registrar's Office website.

## Uniform Course Numbering System

### 1. Uniform Course Numbering Guidelines

Category	Description
000-099	Credit in these courses does not apply to the minimum 120 credits required for the baccalaureate degree.
100-199	Introductory courses, generally without prerequisites, primarily for first-year undergraduate students.
200-299	Courses primarily for second-year undergraduate students.
300-399	Courses primarily for third- and fourth-year undergraduate students.
400-499	Advanced courses primarily for fourth-year undergraduate students.
500-599	Courses primarily for first-year graduate students or prerequisites for 600- and 700-level courses.
600-699	Courses primarily for students admissible to graduate programs.
700-799	Courses primarily for advanced graduates in postmaster and postdoctoral programs.

### 2. Reserved Undergraduate Course Numbers

- The numbers 180, 280, 380, and 480 are reserved for use only as special topics courses.
- The numbers 399 and 499 are reserved for use only as independent study and research courses.
- The number 490 is reserved for use only as an internship or practicum course.
- The number 495 is reserved for use only as a Capstone course.

### 3. Reserved Graduate Course Numbers

- The numbers 680 and 780 are to be used for graduate special topics courses.
- The numbers 690 and 790 are to be used for graduate research preparation courses.
- The numbers 693 and 793 are to be used for graduate project courses.
- The numbers 695 and 795 are to be used for graduate thesis/dissertation courses.
- The numbers 696 and 796 are to be used for graduate thesis/dissertation continuous enrollment courses.
- The numbers 699 and 799 are to be used for graduate independent study courses.

## Dual Level Enrollment Policy

Undergraduate students at Grand Valley State University may register for graduate credit prior to completing a baccalaureate degree. To do so, students must have earned a minimum of 85 semester hours, have a minimum 3.0 grade point average, demonstrated potential to succeed at the graduate level as determined by the graduate program director of the graduate program offering the course or be admitted to a graduate degree program, and receive approval from their undergraduate advisor, the course instructor, and the graduate program director of the graduate program offering the course. Students wishing to apply for dual enrollment must obtain a Dual Level Enrollment Request form from the registrar's webpage and indicate on the form that they are currently: (1) an undergraduate student requesting the designation of a graduate course as part of the undergraduate program (this course may not be used as part of some future graduate program at Grand Valley), or (2) an undergraduate student requesting enrollment in a graduate course to be designated as part of a future program (a student may count a maximum of nine credits toward the graduate degree). The completed form must be submitted to the Registrar's Office by the close of business on the fifth day of the semester in which the student wishes to enroll in the course.

## Grades – Midterm

Grades are reported by the registrar at midterm as well as at the conclusion of the semester. Midterm grades are reported for all freshmen

and for any undergraduate student in other than good standing. Midterm grades will be available on the Web and not recorded on the student's official transcript.

## Grades – End of Term

Final grades are reported at the conclusion of each academic term and become part of the official record of the student. Final grade reports are available on the Web within one week of the last day of the examination period unless interrupted by university closure for holidays.

## Transcripts

Transcripts of students' academic records are available from the Registrar's Office. Requests for an official transcript bearing the signature of the registrar and the university seal will be prepared and mailed within 24 hours after the request. Unofficial transcripts will be prepared immediately for currently enrolled students. Unofficial transcripts are available at any time on the Web at no charge through myBanner. No transcripts will be released if a student has an encumbrance or indebtedness to Grand Valley State University. To comply with the federal mandate, transcripts will not be released without a signed, written request from the student.

## Credit Hour Definition

Courses at GVSU are categorized into one of several course "activity" types. For each course activity type, the university has identified the number of hours students are expected to devote to the course per semester per credit. The definitions do not include homework, reading, studying, or other student preparatory activities. Furthermore, the definitions do not cover faculty workload expectations. In the definitions, a semester is assumed to be a typical 15 week instructional semester. Courses offered in other time frames can be scaled accordingly. As an example, the most common course is a three-credit lecture/discussion. According to the definition, the university expects 45 student contact hours per semester for this course. For additional information please view the UCC definition at [gvsu.edu/facultygov/](http://gvsu.edu/facultygov/).

The University Curriculum Committee makes exceptions to the policy based on accreditation standards and practice in the discipline. Please view the UCC definition and programmatic exceptions for additional information at [gvsu.edu/facultygov/](http://gvsu.edu/facultygov/).

## Academic Honesty

### Integrity of Scholarship and Grades

Truth and honesty: The principles of truth and honesty are recognized as fundamental to a community of teachers and scholars. The university expects that both faculty members and students will honor these principles and in so doing protect the validity of university grades. This means that all academic work will be done by the student to whom it is assigned without unauthorized aid of any kind. Instructors, for their part, will exercise care in the planning and supervision of academic work, so that honest effort will be positively encouraged. Compliance shall include compliance with the following specific rules:

- No student shall knowingly, without authorization, procure, provide, or accept any materials which contain questions or answers to any examination or assignment.
- No student shall, without authorization, complete, in part or in total, any examination or assignment for another person.
- No student shall, without authorization, allow any examination or assignment to be completed, in part or in total, by another person.
- No student shall knowingly plagiarize or copy the work of another person and submit it as his or her own.
- No student shall submit work that has been previously graded or is being submitted concurrently to more than one course without authorization from the instructor(s) of the class(es) to which the student wishes to submit it.

## Plagiarism

Any ideas or material taken from another source for either written or oral presentation must be fully acknowledged. Offering the work of someone else as one's own is plagiarism. The language or ideas taken from another may range from isolated formulas, sentences, or paragraphs to entire articles copied from books, periodicals, speeches, or the writing of other students. The offering of materials assembled or collected by others in the form of projects or collections without acknowledgment also is considered plagiarism. Any student who fails to give credit in written or oral work for the ideas or materials that have been taken from another is guilty of plagiarism.

Such activity may result in failure of a specific assignment, an entire course, or, if flagrant, dismissal from Grand Valley. For further information see the Student Code.

## Policy on Research Integrity

The university has developed policies and procedures to comply with the federal government regulations regarding dealing with and reporting possible misconduct. Allegations of misconduct should be referred to the appropriate dean or appointing officer or the provost and vice president for Academic Affairs, or the research integrity officer (excerpted from Grand Valley State University Policy and Procedures for Handling Allegations of Misconduct in Science; for the complete policy refer to the Faculty Handbook). Students involved in research, who suspect that an incident of misconduct has occurred, should report the incident to the dean of their academic college or the research integrity officer.

## Student Academic Grievance Procedures

Academic grievances are generally defined as those (a) involving procedures, policies, and grades in courses, (b) those involving major, minor, or program (graduate or undergraduate) degree requirements, (c) those involving general undergraduate university graduation requirements such as general education, total credit, or residency requirements, or (d) graduate degree requirements such as total credit or residency requirements. Filing of a grievance is required by the end of the following regular semester after notification of grade or receipt of adverse decision. Appeals of decisions must take place 30 days after receipt of notification.

- a. Resolution of an academic grievance involving procedures, policies, and grades in individual courses. The resolution of academic grievances is based on two principles: first, that the resolution of a grievance should be sought at the lowest possible level, and second, that pathways for appeal exist for both faculty members and students. Resolution should be pursued as follows:
  1. An appeal to the instructor.
  2. If the grievance is not resolved to the student's satisfaction, a further appeal could be made to the unit head who may request that the appeal be put in writing. Both the student and the faculty member will be notified in writing of the unit head's decision.
  3. If the disposition by the Unit Head is not acceptable to either party, an appeal, in writing, may be made by either party to the dean of the college. If the dean feels that there is some merit in the written grievance, he or she may establish a committee to review the grievance and make a recommendation within 30 days to the dean. Such a committee may include a representative of the dean's office, a faculty representative from the college of the course under appeal, and a student representative. If a student representative is to be included in the committee, the student that is a party to the appeal must sign a FERPA release/waiver prior to the committee convening. Upon receiving the committee's recommendation in the latter procedure, the dean shall rule on the grievance. Both the student and the faculty member will be notified in writing of the dean's decision.
  4. If the disposition by the dean is not acceptable to either party, an appeal, in writing, may be made to the provost. The provost's review and judgment in the case will be final. Both the student

and the faculty member will be notified in writing of the provost's decision.

In cases where the faculty member in question also serves as the unit head, the dean shall appoint a suitable faculty member from the college to function as unit head for purposes of grievance. In a similar fashion, if the faculty member in question also serves as dean, the provost shall appoint a faculty member to act as the unit head for purposes of grievance. If an appeal is sought in this latter case, it will go directly to the provost.

- a. Resolution of an academic grievance involving fulfillment of program, major, or minor degree requirements should be pursued as follows: An appeal to the unit head or graduate program director. If the grievance is not resolved to the student's satisfaction at this level, an appeal to the dean of the college would be possible, in the same manner as outlined in (a). Finally, a further appeal could be made to the provost as described in (a) listed previously.
- b. Resolution of an academic grievance involving fulfillment of general undergraduate university requirements, such as general education, total credits, and residency requirements should be pursued as follows: A written appeal to the director of the Student Academic Success Center. If at this point the grievance is still not resolved to the student's satisfaction, a further written appeal could be made to the provost. In this case, the provost shall establish a committee to review the grievance and make a recommendation within 30 days. Such a committee shall include a representative of the provost's office, a faculty representative related to the student's major, and a faculty representative from outside the student's college. Upon receiving the committee's recommendation, the provost will render a final judgment in the case.
- c. Exceptions to institutional graduate degree requirements sought by individual students will be determined by the dean and the provost.

The student filing the grievance may have an observer from the Dean of Students Office or a person of his or her choice attend any meeting at which the student appears. The faculty member involved in the grievance may have an observer of his or her choice attend any meeting at which the faculty member appears.

## Registration

**New undergraduate students:** Course selection and tuition payments are completed during the orientation program. Complete orientation/registration information is mailed to all new students before their intended term of entry.

**New graduate students:** Complete registration information is sent to all new students before their intended term of entry.

**Advance registration** is intended primarily for all currently enrolled and former students and is normally held during the preceding semester.

**Late registration** occurs during the first five days of each semester. Any registration or tuition payment received during the period must be accompanied by a \$50 nonrefundable late registration fee. Courses beginning after the fifth class day and workshops or similar offerings without a prescribed registration process will be free of the late fee assessment on the first class day.

**Schedule revision**, or drop/add, is held concurrently with all registrations. A student may drop or add any course for which prerequisites have been met and capacity permits. Additional tuition charges are due when a student adds a credit. Under exceptional circumstances a student may be allowed to add a course after the deadline. The completed transaction, accompanied by support from the instructor, department chair, and collegial dean, must include a \$25 late add fee and any additional tuition. Specific dates and times for all registrations are set by the registrar and listed in the schedule of courses. For more information on the new financial regulations regarding late registration and dropping or withdrawing from classes, click on the Important Policies section on the Financial Aid website.

## General Academic Policies

**Registering for two sections of the same course.** Students may not be simultaneously enrolled in two sections of the same course specifically designated as repeatable for credit by a department or unit.

### Prerequisites

Prerequisite courses provide the background necessary for successful performance in a course. The university uses an automated check of students' records, including transfer work and test scores at the time of registration to determine whether students have successfully completed the prerequisites for certain courses. The online catalog lists prerequisites in the course descriptions.

**Prerequisite checking applies to all students regardless of their level or college. Prerequisites are enforced by the Banner student information system at the time of registration.**

Students will be permitted to register if they have satisfactorily completed, are currently enrolled in the prerequisites for the course, or have departmental approval to be in the course.

### Satisfactory completion means:

- Meeting the minimum acceptable passing grade requirement as indicated in the course description by completion of a Grand Valley State University course or an equivalent transfer class
- Having a test score that meets the requirement

If you have **not satisfactorily** completed or are **not registered** for the prerequisite, you will receive a prerequisite error message when you attempt to register for the class.

### Electronic Overrides

If a course requires a registration permit, is closed, or prevents registration based on major, class, prerequisite etc., students may request a registration override through the myBanner system. The department offering the course evaluates the request for an electronic override and determines if an override will be granted. Once the electronic override is entered into the Banner system, you can register for that class. The issuance of an electronic override does not automatically register you in the course.

### Duplicate Registration

Students who register for the same class in multiple future semesters will be dropped from the class(es) for all subsequent terms.

## Michigan Residence Requirements

The following brief summary of the policy adopted by the Board of Trustees of Grand Valley State University applies to all students:

Because students normally come to Grand Valley State University for the primary or sole purpose of attending the institution rather than establishing a domicile in Michigan, those who enroll in Grand Valley as nonresidents will continue to be so classified throughout their attendance as students unless and until they demonstrate that their previous domicile has been abandoned and a Michigan domicile established. No students shall be eligible for classification or reclassification as a resident unless they shall be domiciled in Michigan and have resided in Michigan continuously for not less than six months immediately preceding the first day of classes of the semester for which classification or reclassification is sought.

For purposes of the regulations, resident students are defined as students domiciled in the State of Michigan. Nonresident students are defined as those whose domicile is elsewhere. Students shall not be considered domiciled in Michigan unless they are in continuous physical residence in this state and intend to make Michigan their permanent home, not only while in attendance at Grand Valley but indefinitely thereafter as well, and have no domicile or intent to be domiciled elsewhere.

The residence of a student who otherwise would be classified as a nonresident will follow that of his or her spouse if the spouse is classified as a resident, after the student has met the six-month domicile requirement.

Non-U.S. citizens who have been lawfully admitted for permanent residence in the United States shall not, by reason of that status alone, be disqualified from classification or reclassification as resident. However, non-U.S. citizens who are present in the United States on a temporary or student visa shall not be eligible for classification or reclassification as residents.

- Individuals who are on active duty service in the U.S. military, reservists of the same, or U.S. veterans and their spouses or dependents are considered residents for tuition purposes.
- Certain individuals may be eligible for consideration as resident students if they graduated from a Michigan high school after attending three years and are not legal residents of the United States; this eligibility extends for 28 months following high school or community college graduation.

It is the responsibility of the student to register under the proper residence classification, to advise the registrar of possible changes in residence, and to furnish all requested information pertinent thereto.

Application for reclassification must be filed no later than 10 calendar days following the first day of classes of the semester for which such reclassification is sought. Such application shall set forth in writing a complete statement of the facts upon which the application is based, together with affidavits or other supporting documentary evidence. Failure to file such an application on time shall constitute a waiver of all claims to reclassification or rebates for such semester.

Copies of the complete policy are available upon request from the registrar. Address all questions, concerns, and appeals of status to the registrar. The Residency Appeal Board will hear appeals of reclassification decisions.

## Application for Degree

Grand Valley State University awards baccalaureate, master's, and doctoral degrees three times each year: at the conclusion of the fall semester (December), at the conclusion of the winter semester (April), and at the conclusion of the spring/summer session (August).

Degree candidates must notify the registrar of their intention to graduate by completing an electronic application in myBanner prior to the semester in which their degree requirements will be complete.

Degree candidates will be allowed 30 days after the last day of the semester or session to complete all requirements and provide evidence of satisfactory completion to the registrar. No degree will be awarded until all temporary grades are removed. After the 30-day deadline, all remaining candidates will be dropped from candidacy status, and those students must reapply for some subsequent degree date. The candidacy deadline for each semester is listed in the schedule of classes on the Web. Exceptions to this policy will be based solely on extenuating circumstances beyond the control of the student. Any request for an exception must be made in writing to the registrar.

## Commencement

Information concerning Commencement announcements, caps and gowns, invitations, tickets, time and place, assembling, and other relevant items will be mailed to all eligible degree candidates (see Application for Degree section, previously listed) by the dean of students prior to the event.

## U.S. Department of Veterans Affairs: Certification for Benefits

Grand Valley complies in full with all reporting requirements outlined by the U.S. Department of Veterans Affairs. Enrollment, academic status, progress toward degree, conduct, attendance, and graduation requirements are monitored and reported for all benefit recipient students. All eligibility and certifications are handled through the Registrar's Office. Questions should be directed to that office.

## Student Records: Statement of Policy (FERPA)

It is the charge of the registrar to maintain complete and accurate academic records for Grand Valley State University and its past and current student populations. Much of the record keeping is required by either state or federal mandate. Grand Valley adheres to the compliance guidelines of the Family Educational Rights and Privacy Act of 1974, as amended. A statement of the compliance policy is available in the Registrar's Office.

## Health Insurance Portability and Accountability Act (HIPAA) Law

HIPAA is a federal law related to health insurance and medical privacy. Students who have access to protected health information through clinical placements must be trained in HIPAA compliance. Students who have access to certain health related information through their placements are required to receive training on HIPAA privacy practices. If you are not sure whether you should receive training in this area, please contact your major advisor.

## Student Complaint

A student who has a concern that has not been addressed by a policy in this section may present his or her case in writing to the registrar. The registrar will acknowledge receipt of the complaint and respond regarding the disposition and assignment of resolution within 10 calendar days.

## Student Responsibility

Each student must fulfill all general and specific requirements and abide by all pertinent academic regulations to earn a degree at Grand Valley State University. It is the responsibility of the student to learn the requirements, policies, and procedures governing the program being followed and to act accordingly.

# Undergraduate Academic Policies and Regulations

## Classification of Students

Freshman: 0-24 semester credits  
 Sophomore: 25-54 semester credits  
 Junior: 55-84 semester credits  
 Senior: 85 or more semester credits

## Academic Review Policy

Beginning with the fall semester 2002, the following system has been used to evaluate the academic progress of all undergraduate students. Using either the narrative or the table that follows, students can check their credits earned, cumulative grade point average (GPA), and current GPA to readily determine their academic standing. The table that follows lists semester hours earned (including hours in transfer) and the minimum GPA for good standing, probation, jeopardy of dismissal, and dismissal.

- Good Standing:** Each student must have a cumulative GPA of a 2.000 or higher to be in good standing.
- Academic Probation:** A freshman with a cumulative GPA between 1.501 and 1.999 will be placed on probation. A sophomore with a cumulative GPA between 1.801 and 1.999 will be placed on probation.
- Jeopardy of Dismissal:** A freshman whose cumulative GPA is 1.500 or lower and a sophomore whose cumulative GPA is 1.800 or lower will be placed in jeopardy of dismissal. Juniors and seniors whose cumulative GPA is below 2.000 will be placed in jeopardy of dismissal.
- Dismissal:** Students in jeopardy of dismissal have one semester to raise their cumulative GPA above the dismissal level. If the student's cumulative GPA does not rise above the dismissal level and if the current semester GPA is less than a 2.500, the student will be dismissed.

- Readmission Following Dismissal:** A dismissed student may apply for readmission after a period of one calendar year. Evidence of maturity and improved attitude toward academics and the written support of the student's academic advisor must accompany the application for readmission. The Petition to Return form and supporting documentation must be submitted to the registrar not less than 10 days before the first day of classes for the semester of intended return. Petitions are reviewed by the Academic Review Committee on a continual basis. Approval of a petition allows the student to enroll on a conditional basis, as stipulated by the committee. The academic standing for a readmitted student will be jeopardy of dismissal. These procedures apply to students who have more recently attended Grand Valley, within five years, or students who previously attended Grand Valley, five or more years past.
- Due Process Through Appeal:** If a student believes that his or her academic status is in error, he or she may submit a written appeal including written support of his or her academic advisor to the Academic Review Committee, c/o the registrar. It is in the student's interest to appeal immediately if he or she intends to do so, but a student may do so no later than the first class day of the subsequent semester. All appeals will be considered by the Academic Review Committee.

	Semester Hours Earned*	Cumulative GPA for Dismissal	Cumulative GPA for Probation	Cumulative GPA for Good Standing
<b>Freshman</b>	0-24	1.500 or less	1.501-1.999	2.000 or better
<b>Sophomore</b>	25-54	1.800 or less	1.801-1.999	2.000 or better
<b>Junior</b>	55-84	1.999 or less	not applicable	2.000 or better
<b>Senior</b>	85 or more	1.999 or less	not applicable	2.000 or better

\*Including transfer credit hours.

## Dean's List

Undergraduates who earn 12 or more grade point credits with a grade point average of 3.5 or higher in any semester earn a place on the Grand Valley State University Dean's List. (A grade of CR does not count toward the total credits required.) The deans send each student a personal letter and the honor is noted on the student's permanent record.

## Graduation Honors

Graduation honors will be based on the cumulative grade point average, including the final semester. The following scale is in effect for bachelor's degrees awarded Fall 2016, Winter 2017, and Summer 2017:

**Summa cum laude:** 4.000

**Magna cum laude:** 3.889-3.999

**Cum laude:** 3.795-3.888

Cut-off points are determined based on the distribution of GPAs for baccalaureate graduates in the previous calendar year (e.g. 2016-2017 cut-off points are set by examining final GPAs from 2015 graduates).

**Summa cum laude** requires a GPA of 4.000. **Magna cum laude** requires a GPA above the previous year's 95th percentile (but below 4.000).

**Cum laude** requires a GPA above the previous year's 90th percentile (but below the summa cum laude cut-off).

## Class Attendance

At Grand Valley, regular class attendance is considered an essential part of the students' educational experience and a requirement for an adequate evaluation of student academic progress. It is believed that college students, as mature individuals, will recognize the need for regular class attendance and will comply with this requirement.

Class work missed while students are ill or away on faculty-approved business should be made up to the satisfaction of the instructor. Although makeup work will not remove the full adverse effect of the absence in all cases, faculty members will cooperate with students in their attempt to make up their loss when an absence is unavoidable. The degree of the

## Undergraduate Academic Policies and Regulations

effect upon grades will vary with the nature and amount of work missed and must be measured according to the instructor's best judgment. In case of excessive absences, the instructor may refuse to grant credit for the course.

### Student Credit Load

Most courses carry three hours of credit. To complete a bachelor's degree in four years, a student should carry a minimum of 15 hours each semester. First-semester freshmen and students on academic probation may not carry loads greater than 20 credits per semester.

Students who elect to take an extended course load of 20 credits or more must acquire approval from the director of the Student Academic Success Center.

### Advising/Degree Audit

All undergraduate programs recommend that their degree-seeking students meet with an assigned faculty advisor or advising center professional advisor at least once per year, to ensure that there is a clear understanding of program requirements. Students can view their progress toward graduation at any time by using the myPath degree audit system.

### Credit by Examination

In some cases, degree-seeking students may be granted advanced placement or receive college credit by examination. Tests are available to determine levels of competence in certain subject areas. The following tests are available:

**Advanced Placement Program (AP):** AP is a program sponsored by the College Entrance Examination Board (CEEB). Generally, credit is granted for scores of 3, 4, or 5 but is determined by the appropriate academic department.

**College Level Examination Program (CLEP):** Credit is granted for subject examinations offered by CLEP; however, no credit is granted for the CLEP general examinations. Required minimum scores are available on request from the Admissions Office or the Registrar's Office. Native speakers of a language other than English will not be granted CLEP or AP exam credit for that language.

**Defense Activity for Nontraditional Educational Support (DANTES):** Grand Valley will accept for credit certain DANTES college-level courses and college subject matter examinations. Specifics are available upon request from the office of Admissions or the Registrar's Office. There is no limit to the number of DANTES credits that can be applied.

**International Baccalaureate (IB):** Credit is granted for higher level IB exam results (in most subjects). The minimum score is 4. Details of the credit granted are available from the Admissions Office or the Registrar's Office.

Credit by examination in any of the noted programs has the following limitations:

1. Examination credit will be awarded if the student has not previously registered for the course in question at Grand Valley or elsewhere.
2. The credits, while counting toward graduation, will not be used in computing the GPA.
3. Students must earn the last 30 credits toward their degree at Grand Valley; therefore, a student nearing graduation must get a Residency Waiver approved before the CLEP exam is taken.
4. The maximum amount of credit by examination that may be applied toward the baccalaureate is 32 hours. This is inclusive of any combination from Advanced Placement, CLEP, and International Baccalaureate credits awarded.

### Concurrent Enrollment with Michigan Community Colleges

Concurrent enrollment allows students at both Grand Valley State University and those attending Michigan community colleges to make full use of the variety of courses offered by both institutions. Through

concurrent enrollment, students have more scheduling options, more choice of course locations, and many more courses available. Students may take courses at both institutions simultaneously or alternate enrollment between them. Financial aid may also be available to students who qualify.

Students must be admitted to both institutions. Students will follow the policies in place at each school they attend. Grand Valley has waived the rule that requires a student to have satisfied the MACRAO degree prior to taking their first course at Grand Valley. The benefits of the MACRAO agreement will be honored upon verification of completion of the degree. Refer to the General Education Requirements section for further clarification.

### Internships

An internship is experiential learning for credit taking place outside the classroom and directed by a field supervisor and a Grand Valley State University faculty member. A student may enroll for a maximum of 15 credits of internship. An internship must be planned with a faculty advisor the semester before it takes place.

### Orientation

Attendance at an orientation program is required of all degree-seeking undergraduate students before their first semester of attendance. The purposes are to welcome new students, to introduce them to each other and to faculty members with whom they will be working, to administer placement testing, and to assist them in planning programs of study. The final step of orientation is the preparation of a schedule of classes approved by a faculty advisor and completion of the registration process. A schedule of the orientation dates is mailed to all new students well in advance of their term of entrance.

### Transitions

All new students are expected to participate in Transitions, the fall orientation program, which is offered prior to the first day of classes. This exciting program helps students meet new people, get acclimated to campus, and prepare for a successful university experience.

### Degree Requirements

The following requirements apply to all undergraduate degree-seeking students:

1. A minimum of 120 semester hours
2. A cumulative GPA of at least 2.0
3. A graduation major with at least a 2.0 average
4. A minor, if elected, with a 2.0 GPA
5. General education requirements
6. Cognate for Bachelor of Arts or core for Bachelor of Science degree
7. Capstone course
8. The last 30 semester hours toward a baccalaureate degree must be earned in Grand Valley courses
9. A minimum of 58 semester hours must be earned at a senior institution
10. A minimum of 12 Grand Valley earned semester hours must be included in the major (six for the minor)

#### 1. Semester Hours Requirements

Students are required to complete at least 120 semester hours of credit for graduation. Courses taken after summer 1983 numbered below 100 do not apply toward the 120 needed for graduation.

#### 2. Cumulative

For graduation, a student must earn a cumulative GPA of at least a 2.0 based on all coursework attempted at Grand Valley. Some major programs stipulate a GPA requirement exceeding the minimum. Refer to the department entries for specifics.

#### 3. Major

A student must elect a major in one or more of the academic units empowered to present candidates for the undergraduate degree. A

cumulative GPA of 2.0 in the major is the required minimum for graduation. Some majors stipulate requirements exceeding the minimum. Refer to the department entries for program specifics.

#### 4. Minor

A minor is required for select programs for graduation. Any student may choose to complete a minor. If a student chooses to complete a minor, a cumulative GPA of 2.0 is the required minimum for graduation. Some minors stipulate requirements that exceed the minimum. Refer to the department entries for program specifics.

#### 5. General Education Requirements

Ensuring that undergraduate students receive a broad general education has been a primary goal of colleges and universities since their inception. In this era of increasing specialization and growing demand for professional expertise, it is vital that we continue to emphasize the value of general learning.

#### 6. B.A. and B.S. Degree Requirements

All Bachelor of Arts degree programs must include at least three courses that focus on culture, arts, philosophy, or language. At least two courses must be outside of the general education Foundations category. All Bachelor of Arts programs must require third-semester proficiency in a classical or modern language.

All Bachelor of Science degree programs must include at least three courses that focus on mathematics, statistics, quantitative reasoning, or scientific analysis. At least two courses must be outside of the general education Foundations category. At least one course must build upon the expertise developed in the general education Mathematical Sciences category by requiring a general education Mathematical Science course as a prerequisite.

#### 7. Capstone Course

Each undergraduate major curriculum must include a Capstone experience (generally a senior-level course of three credits) with four general criteria: breadth (students must draw on several courses within their major), integration/synthesis (students combine different skills and areas of knowledge into a single experience), application (e.g., students use their knowledge and skills to examine an issue and produce a substantial outcome), and transition (e.g., students reflect on and gain knowledge and skills that prepare them to move from college to the world beyond).

#### 8. Required Hours at Grand Valley

Graduation from Grand Valley State University requires that the completion of the last 30 semester hours toward a baccalaureate degree must be earned at Grand Valley or in Grand Valley programs and courses taught off campus by Grand Valley faculty members.

#### 9. Senior Institution Requirement

Regardless of the number of transfer credits accepted by Grand Valley from junior or community colleges, a baccalaureate degree must include a minimum of 58 semester hours from a senior (a four-year, degree-granting) institution.

#### 10. Transfer Hours for Major and Minor

Regardless of the number of transfer hours accepted by Grand Valley from other institutions, transfer students must complete a minimum of 12 hours in the unit conferring the major (six for the minor).

Grand Valley maintains that a complete education involves more than preparation for a particular career. A career occurs in the context of a life, and a sound general education helps one “make a life” as well as “make a living.” The university remains committed to assuring that all undergraduate students, regardless of academic major or intended profession, receive a broad education rooted in the arts and sciences.

The focus of our General Education Program is to provide students with an education that balances depth with breadth, the specialized with the general. The General Education Program helps students become literate

in a sophisticated way in a number of disciplines, and it fosters their ability to make connections across various domains of knowledge. Such preparation will provide students with the general knowledge and skills necessary to participate intelligently in the discourses that shape local, national, professional, and global communities.

Teaching in the liberal tradition is at the heart of Grand Valley’s identity, and this focus is critical in our General Education Program. Liberal education transcends the acquisition of information; it goes beyond the factual to ask important evaluative and philosophical questions. Liberal learning holds the fundamental principles and suppositions of a body of knowledge up to inquiry, question, and discussion. It helps a person recognize the assumptions under which he/she operates and encourages the examination and questioning of those assumptions. Liberal learning begins in the General Education Program and continues through more specialized studies comprising each student’s major and minor areas of study.

Grand Valley is dedicated to making sure that our students, via their academic majors, become competent specialists in their fields of endeavor. An equally pressing priority is that our graduates also possess the marks of a generally educated person – that they will have acquired the broad knowledge and life skills that will allow them to be informed and thoughtful people. These ideals co-exist within our institution, and together they produce people who can contribute to their own well-being, their communities, their professions, and the world in which they live.

The General Education Program provides a broad-based liberal education experience that fosters lifelong learning and informed citizenship. The program prepares students for intelligent participation in public dialogs that consider the issues of humane living and responsible action in local, national, and global communities.

Refer to [www.gvsu.edu/gened](http://www.gvsu.edu/gened) for more information.

### Student Learning Outcomes of the General Education Program

The General Education Program teaches the knowledge and skills needed to intelligently participate in public discourse.

#### Knowledge Outcomes

Graduates will know:

1. about the major areas of human investigation and accomplishment – the arts, the humanities, the mathematical sciences, the natural sciences, and the social sciences.
2. about their own culture and the culture of others.
3. how academic study connects to issues in the world. A generally educated person is able to think in broad terms and see connections in the world. Preparing for responsible citizenship requires that students become conscious of both complementary and competing viewpoints and recognize that any issue or problem can be viewed from multiple perspectives.

#### Skills Outcomes

Graduates are proficient in:

1. Collaboration – working together and sharing the workload equitably to progress toward shared objectives learned through structured activities that occur over a significant period of time.  
Students will:
  - Use knowledge of group dynamics to select appropriate roles.
  - Use knowledge of group management to create effective plans.
  - Successfully follow the group’s plan.
  - Assess their contribution and the contribution of others.
2. Critical Thinking – use systematic reasoning to examine and evaluate information and ideas and then synthesize conclusions to propose new perspectives and solutions.  
Students will:
  - Assess relevant information, perspectives, and assumptions.
  - Construct logical conclusions based on reason and evidence.

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- Formulate novel approaches or create innovative interpretations.
  - Evaluate the proposed ideas or approaches.
3. Ethical Reasoning – use a decision-making process based on defining systems of value.  
Students will:
- Recognize ethical issues when presented in a complex situation.
  - Demonstrate understanding of key concepts and principles underlying various systems of reasoning.
  - Participate in activities that engage them in ethical reasoning.
  - Demonstrate the ability to deal constructively with ambiguity and disagreement.
4. Information Literacy – identify, access, evaluate, and synthesize multiple forms of information.  
Students will:
- Articulate the specific information needed.
  - Access information using appropriate search tools.
  - Evaluate the quality, usefulness, and relevance of the information.
  - Ethically communicate synthesized information.
5. Integration – synthesize and apply knowledge, experiences, and multiple perspectives to new, complex situations.  
Students will:
- Connect academic theories with personal experiences to illuminate both.
  - Draw conclusions connecting examples, facts, and/or theories from more than one field of study.
  - Generalize skills, abilities, theories, or methodologies for solving problems in new contexts.
6. Oral Communication – effectively communicate verbally with a public audience across a variety of contexts.  
Students will:
- Develop content appropriate to the presentation.
  - Organize the content in a logical manner appropriate for the intended audience.
  - Demonstrate evidence of rehearsal during the formal presentation.
  - Demonstrate effective formal presentation skills.
7. Problem Solving – design and evaluate strategies to answer open-ended questions.  
Students will:
- Construct clear and insightful problem statements that prioritize relevant contextual factors.
  - Identify multiple approaches for solving the problem within the given context.
  - Design and fully explain solutions that demonstrate comprehension of the problem.
  - Evaluate the feasibility of solutions considering the context and impact of potential solutions (e.g., historical, ethical, legal, practical).
8. Quantitative Literacy – a competency and confidence in working with numbers.  
Students will:
- Interpret information appearing in different forms (e.g., graphs, tables, equations, text).
  - Evaluate assumptions or biases associated with the chosen method.
  - Solve quantitative problems using appropriate techniques.
  - Draw valid conclusions based on data analysis and critically evaluate conclusions made by others.
9. Written Communication – write effectively for multiple purposes and audiences.  
Students will:
- Develop content that is appropriate to a specific disciplinary or professional context, drawing upon relevant sources.
  - Organize written material to suit the purposes of the document and meet the needs of the intended audience.
  - Express ideas using language that meets the needs and expectations of the intended audience.
  - Use conventions of grammar, punctuation, usage, formatting, and citation appropriate to the specific writing situation.

## Requirements of the General Education Program

**Foundations:** Courses in the Foundations category introduce you to the major areas of human thought and endeavor. These courses present the academic disciplines as different ways of looking at the world, they introduce you to the varied methods used to create knowledge, and they acquaint you with major questions and principles of the field.

### Requirements

1. Arts (one course)
2. Historical Perspectives (one course)
3. Mathematical Sciences (one course)
4. Natural Sciences (two courses, one from Physical Sciences, one from Life Sciences; at least one must contain a lab)
5. Philosophy and Literature (one course)
6. Social and Behavioral Sciences (two courses from two different disciplines)
7. Writing (one course)

**Cultures:** Courses in the Cultures category prompt you to recognize yourself as a cultural being, and to understand the diverse ways in which people organize life and perceive the world. It enhances your ability to live and work intelligently, responsibly, and cooperatively in a multicultural nation and an interdependent world.

### Requirements

1. U.S. Diversity (one course)
2. World Perspectives (one course)

Courses with a Cultures designation may count for Foundations or Issues credit in addition to Cultures credit. See the specific course for details.

**Issues:** Courses in the Issues category provide you with opportunities to integrate learning and cocurricular experiences and then to build connections between prior understanding and new learning. Issues courses are problem-solving courses that encourage cross-disciplinary collaboration within each class. They also develop your understanding of some of the most compelling issues of our time: globalization, health, human rights, identity, sustainability, and the connected topics of information, innovation, and technology.

### Requirements

- Two courses (two courses from two different disciplines)
- Courses can be within the same Issue or be from different Issues
- If a course is cross-listed in two disciplines, your second course must be taken from a third discipline.
- Issues courses must be taken at GVSU (except study abroad, see [www.gvsu.edu/studyabroad](http://www.gvsu.edu/studyabroad)).
- Issues courses have a junior standing prerequisite (you must have completed at least 55 credits prior to taking an Issues course; you can register for the class while the final credits are in progress).

## I. Foundations

### Arts\*

#### (1 course)

ART 101 - Introduction to Art  
ART 153 - Making and Meaning in Art and Design  
ART 159 - Drawing Fundamentals  
ART 260 - Introduction to Painting  
ART 270 - Introduction to Sculpture  
ART 275 - Introduction to Ceramics  
CFV 225 - Film Culture  
CLA 250 - Classical Art and Archaeology  
CPH 175 - Understanding Still Photography  
CTH 101 - Introduction to Theatre  
CTH 161 - Theatre Production  
DAN 200 - Introduction to Dance  
MUS 100 - Introduction to Music Literature

\*This requirement may be fulfilled through study abroad. Contact the Padnos International Center for details.

MUS 129 - Fundamentals of Music  
 MUS 218 - World Music  
 PHI 220 - Aesthetics  
 WRT 219 - Introduction to Creative Writing

**Philosophy and Literature\***  
**(1 course)**

CLA 101 - Greek and Roman Mythology  
 CLA 201 - Classical Literature  
 COM 202 - Critical Interpretation  
 ENG 105 - Literatures in English  
 ENG 115 - Introduction to Science Fiction  
 ENG 203 - World Literature  
 ENG 212 - Introduction to Shakespeare  
 ENG/AAA 231 - Early African American Literature  
 LIB 100 - Introduction to Liberal Education  
 PHI 101 - Introduction to Philosophy  
 PHI 102 - Ethics  
 PLS/HRT 105 - Introduction to Human Rights

**Historical Perspectives\***  
**(1 course)**

ANT 215 - Origins of Civilization  
 CLA 121 - Greek Civilization  
 CLA 131 - Introduction to Roman Civilization  
 EAS 201 - East Asia in the Contemporary World  
 GSI/HST 202 - History of Global Change and Social Transformation  
 HSC 201 - The Scientific Revolution  
 HSC 202 - The Technological Revolution  
 HST 101 - Introduction to World Civilizations  
 HST 102 - Introduction to European Civilizations  
 HST 103 - Introduction to American Civilizations  
 HST 203 - World History to 1500 A.D.  
 HST 207 - European Civilization to the Later Middle Ages  
 HST 208 - European Civilization since the Later Middle Ages  
 HST 212 - India: History and Civilization  
 MES 201 - Introduction to the Middle East

**Mathematical Sciences\***  
**(1 course)**

CIS 160 - Programming with Visual BASIC  
 GPY 200 - Computer Cartography  
 MTH 122 - College Algebra  
 MTH 123 - Trigonometry  
 MTH 124 - Precalculus: Functions and Models  
 MTH 125 - Survey of Calculus  
 MTH 131 - Introduction to Mathematics  
 MTH 201 - Calculus I  
 MTH 221 - Mathematics for Elementary Teachers I  
 PHI 103 - Logic  
 STA 215 - Introductory Applied Statistics  
 The prerequisite to all Mathematical Science courses is MTH 110 or its equivalent.

**Natural Sciences**

**(2 courses, 1 from each category; 1 must contain a lab)**

**Physical Sciences\***

CHM 102 - Chemistry and Society  
 CHM 111 - Introduction to Green Chemistry  
 GEO 100 - Environmental Geology  
 GEO 103 - Oceans  
 GEO 105 - Living with the Great Lakes

**Lab Courses:**

CHM 109 - Introductory Chemistry  
 CHM 115 - Principles of Chemistry I

CHM 201 - Introduction to Chemical Sciences  
 GEO 111 - Exploring the Earth  
 NRM 140 - The Climatic Factor  
 PHY 105 - Descriptive Astronomy  
 PHY 201 - Inquiry: The Mechanical and Thermal World  
 PHY 204 - Inquiry: Electricity, Magnetism, and Optics  
 PHY 220 - General Physics I  
 PHY 230 - Principles of Physics I  
 SCI 226 - Integrated Physical Science for K-8 Teachers

**Life Sciences\***

ANT 206 - Human Origins  
 BIO 105 - Environmental Science  
 BMS 100 - Human Health and Disease

**Lab Courses:**

BIO 104 - Biology for the 21st Century  
 BIO 107 - Great Lakes and Other Water Resources  
 BIO 109 - Plants in the World  
 BIO 120 - General Biology I  
 BMS 202 - Anatomy and Physiology  
 CMB 150 - Biotechnology and Society  
 SCI 225 - Integrated Life Science for K-8 Teachers

**Social and Behavioral Sciences\***  
**(2 courses from 2 disciplines)**

AAA 200 - Understanding Africa  
 AAA 201 - Introduction to African American Studies  
 ANT 204 - Introduction to Cultural Anthropology  
 ANT 207 - Language and Culture  
 ANT 220 - Introduction to Archaeology  
 CJ 101 - Justice and Society  
 DS 201 - Digital Identities and Communities  
 ECO 100 - Current Economic Issues  
 ECO 210 - Introductory Macroeconomics  
 ECO 211 - Introductory Microeconomics  
 GPY 220 - Cultural Geography  
 GPY 235 - World Regional Geography  
 GSI 201 - (Dis)Order and (In)Justice: An Introduction to Global Studies  
 LAS 210 - Exploring Latin America  
 LAS 220 - Introduction to Latino/a Studies  
 LIB 201 - Diversity in the United States  
 PA 270 - Public and Nonprofit Administration  
 PLS 102 - American Government and Politics  
 PLS 103 - Issues in World Politics  
 PLS 211 - International Relations  
 PSY 101 - Introductory Psychology  
 REL 100 - Religions of the World  
 SOC 101 - Introduction to Sociology  
 SOC 105 - Social Problems  
 SOC 287 - Sociology of Religion  
 SW 150 - Human Needs in a Complex Society  
 WGS 200 - Introduction to Gender Studies

**Writing**

**(1 course)**

Students must receive a grade of C (not C-) or better in WRT 150 to fulfill this requirement.  
 WRT 150 - Strategies in Writing

**II. Cultures**

**World Perspectives\*\***

**(1 course)**

AAA 200 - Understanding Africa  
 AAA 300 - U.S.-Africa Relations  
 AAA 302 - African Diaspora

\*This requirement may be fulfilled through study abroad. Contact the Padnos International Center for details.

\*\*This requirement is automatically fulfilled through study abroad. Contact the Padnos International Center for details.

## Undergraduate Academic Policies and Regulations

AAA/PLS 319 - African Politics  
AAA/ENG 337 - Contemporary Black Literature  
ANT 204 - Introduction to Cultural Anthropology  
ANT 215 - Origins of Civilization  
ANT 315 - Comparative Religions  
ANT 340 - Culture and Environment  
ANT 345 - Perspectives on Globalization  
ARA 202 - Intermediate Arabic II: Language and Culture  
CHI 202 - Intermediate Chinese II: Language and Culture  
CHI 323 - Late Imperial Chinese Culture  
CTH 373 - Global Arts Performance and Management  
EAS 201 - East Asia in the Contemporary World  
ECO 349 - Emerging Markets Issues  
ECO 369 - International Economic Issues  
ENG 204 - World Mythology  
ENG/AAA 231 - Early African American Literature  
FRE 202 - Intermediate French II: Language and Culture  
GER 202 - Intermediate German II: Language and Culture  
GPY 235 - World Regional Geography  
GPY/PA 324 - Urbanization  
GPY 350 - Geography of Russia and Its Neighbors  
GPY 351 - Geography of Africa  
GPY 352 - Geography of Latin America  
GPY 355 - Geography of Southwest Asia (The Middle East)  
GPY 356 - Geography of Europe  
GPY/ENS 362 - Farmers, Crops, and our Challenging Agricultural World  
GRK 202 - Intermediate Greek II  
GSI 201 - (Dis)Order and (In)Justice: An Introduction to Global Studies  
GSI/HST 202 - History of Global Change and Social Transformation  
HST 204 - World History Since 1500  
HST 211 - History of Islamic Civilization  
HST 212 - India: History and Civilization  
HST 230 - Latin America in World History  
HST 235 - Africa in World History  
HST 240 - A History of East Asia to 1800  
HST 241 - A History of East Asia since 1800  
HST 310 - Cultural and Social Topics in Nonwestern History  
HST 332 - Emergence of Modern India and South Asia  
HST 342 - History of Buddhism and East Asian Religions  
HTM 175 - International Food and Culture  
HTM 202 - International Tourism  
ITA 202 - Intermediate Italian II: Language and Culture  
JPN 202 - Intermediate Japanese II: Language and Culture  
LAS 210 - Exploring Latin America  
LAT 202 - Intermediate Latin II  
LIB 400 - Global Visionary Thinkers  
MES 201 - Introduction to the Middle East  
MGT 303 - International Business and Culture  
MGT 466 - International Management and Multinational Corporations  
MUS 218 - World Music  
PHI 210 - Eastern Philosophy  
PHI 240 - Middle Eastern Philosophy  
PHI 250 - Existentialism  
PHI 306 - Wisdom of the East: Asian Philosophy  
PLS 103 - Issues in World Politics  
PLS 211 - International Relations  
PLS 281 - Comparative Political Systems: Canada  
PLS 283 - Chinese Politics and U.S.-China Relations  
PLS 284 - Latin American Politics  
PSY 355 - Psychology and Culture  
REL 100 - Religions of the World  
REL 306 - Hinduism and South Asian Religions  
REL 335 - Sacred Texts – Global Contexts  
RUS 202 - Intermediate Russian II: Language and Culture  
SOC/WGS 350 - Family and Gender in the Developing World

SPA 202 - Intermediate Spanish II: Language and Culture

### U.S. Diversity (1 course)

AAA 201 - Introduction to African American Studies  
AAA/WGS 352 - Black Women's Culture and Communities  
AAA 355 - History of the Underground Railroad  
ANT 207 - Language and Culture  
ANT 311 - Native Peoples of North America  
EDF 315 - Diverse Perspectives on Education  
ENG 335 - Literature of American Minorities  
GPY 353 - Geography of the United States and Canada  
HST 205 - American History to 1877  
HST 206 - American History Since 1877  
HST 314 - African American History  
ITC 100 - Intro to Intercultural Competence  
LAS 220 - Introduction to Latino/a Studies  
LAS 373 - Latinos/as in West Michigan  
LIB 201 - Diversity in the United States  
LIB/HRT 320 - Voices of the Civil Rights Movement in the United States  
LIB 350 - The Immigrant Experience in the U.S.  
LIB 401 - Visionary Thinkers in the American Mosaic  
MES 202 - Arab Americans  
MGT 355 - The Diversified Workforce  
MUS 219 - Jazz History  
MUS 300 - Exploring American Music  
PHI 230 - American Philosophy  
REL 340 - Religion and Popular Culture in the United States  
SOC 105 - Social Problems  
SOC 285 - Families in Society  
SOC 287 - Sociology of Religion  
SOC 313 - Race and Ethnicity  
SOC/WGS 317 - Sociology of Gender  
SOC/WGS 318 - Sociology of Sexuality  
SOC 322 - Sociology of Community  
SOC 381 - Class, Race, Gender, and Sexuality  
SPA 313 U.S. - Latino/a Civilization and Culture  
WGS 255 - Gender and Popular Culture

### III. Issues

The following rules apply to Issues courses:

- You may choose your Issues courses from the same category (Globalization, Health, etc.) or from two different categories.
- You must choose two courses from two different disciplines.
- If a course is cross-listed in two disciplines, your second course must be taken from a third discipline.
- Issues courses must be taken at Grand Valley State University (except for study abroad, see [www.gvsu.edu/studyabroad](http://www.gvsu.edu/studyabroad)).

Issues courses have a junior standing prerequisite. For class standing, a junior is defined as a student who has earned 55-84 credits. For prerequisite checking, a student must have completed or will have completed at least 55 credits prior to taking the course. However, they can register for the class while the final credits are in progress.

### Issue: Globalization\*

AAA/HST 357 - The Black Diaspora and the Meaning of Sports, 1800 to the Present  
AAA/PLS 319 - African Politics  
ANT 345 - Perspectives on Globalization  
CLA 301 - Re-imagining the Classics  
CLA 302 - The Stages of Greek and Roman Drama  
ECO 349 - Emerging Markets Issues  
ECO 365 - Comparative Economic Systems  
GPY 335 - Globalization and Development

\*This requirement may be fulfilled through study abroad. Contact the Padnos International Center for details.

GPY 350 - Geopolitics, Energy, and Environment of Russia and Central Eurasia  
 GPY 354 - Geography and Globalization of Asia  
 GPY/ENS 362 - Farmers, Crops and Our Challenging Agricultural World  
 HST 332 - Emergence of Modern India and South Asia  
 LIB/HST/HRT 319 - Human Traffic and Trafficking  
 MGT 303 - International Business and Culture  
 PA 372 - International and Comparative Administration  
 REL 335 - Sacred Texts – Global Contexts  
 SOC 355 - Sociology of Work and Employment  
 STA 341 - Demographic Methods  
 WRT 354 - Writing in the Global Context: Culture, Technology, and Language Practices

**Issue: Health\***

AHS 340 - Health Care Management  
 ANT 320 - Culture and Disease  
 BIO 309 - Plants and Human Health  
 BIO 325 - Human Sexuality  
 BIO 328 - Biomedical Ethics  
 CMB 350 - Foundations of Brewing  
 ECO 343 - Health Economics  
 ENG 386 - Literary Responses to Death and Dying  
 HST 370 - History of Medicine and Health  
 LIB/WGS 326 - Sexuality, Justice, and Advocacy  
 LIB 342 - Food Matters  
 MOV 350 - The Obesogenic Environment  
 NUR 344 - Healthy Aging: A Lifelong Journey  
 NUR 354 - Living with Life-Limiting Illness  
 PSY 367 - Health Psychology  
 REC 302 - Leisure, Health, and Wellness  
 SW 322 - Responding to Illness

**Issue: Human Rights\***

AAA/WGS 352 - Black Women's Culture and Communities  
 ANT 421 - Anthropology of Social Movements  
 CJ 325 - Criminal Justice and Human Rights  
 CLA 367 - Thinking Like a (Roman) Lawyer  
 ENG 384 - Literature of War  
 HST 318 - History of Democracy in America  
 HST 378 - Contesting Human Rights  
 LAS 325 - Human Rights in Latin America  
 LIB/HRT 320 - Voices of the Civil Rights Movement in the United States  
 LIB 350 - The Immigrant Experience in the United States  
 LS/WGS 370 - Women and the Law  
 MES 370 - Contemporary Issues in the Middle East: The Model Arab League  
 MUS 301 - History of Rock and Roll  
 PHI 320 - Social and Political Philosophy: Liberty and Justice  
 PHI 325 - Ethics in Professional Life  
 PHI 330 - Law, Philosophy, and Society  
 PLS 339 - Democracy and the Authoritarian Challenge  
 SOC 313 - Race & Ethnicity

**Issue: Identity\***

AAA/ENG 337 - Contemporary Black Literature  
 AAA 340 - African American Culture and Social Thought  
 ANT 311 - Native Peoples of North America  
 ANT 315 - Comparative Religions  
 ARA/MES 330 - Arab Identity in Literature and Culture  
 ART 391 - Civic Studio  
 BIO 311 - Who's Running Your Life: Genes, Evolution and Behavior  
 BIO 329 - Evolution of Social Behavior  
 CLA/WGS 325 - Body, Gender, Sexuality in Antiquity  
 CLA 365 - Stoicism, Identity and the Happy Life  
 COM 438 - Communication Ethics  
 DS 340 - Identity and Representation in Digital Culture

EAS 351 - Asian American Experiences  
 ECO 350 - Economics of Gender  
 EDF/IDS 325 - Learning from Detroit: Education and Community  
 EDR 317 - Class-Conscious: Popular Culture, Schooling, and Identity  
 ENG 335 - Literature of American Minorities  
 ENG 388 - Emigration and Immigration in Contemporary World Literature  
 HST 322 - American Identity and Sports  
 HST 342 - History of Buddhism and East Asian Religions  
 HST 376 - History of Witch Hunts  
 IDS 350 - Civil Discourse  
 LAS 373 - Latinos/as in West Michigan  
 LIB 314 - Life Journeys  
 LIB 325 - LGBTQ Identities  
 MLL 300 - What's Language Got to Do With It?: Exploring Identity through Language, Culture, and Literature  
 PED 345 - Disability, Sport, and Physical Activity  
 PHI 300 - Theories of Human Nature  
 PHI 343 - Philosophy of Religion Revitalization  
 PHI 370 - Sex Matters: Feminist Philosophy in the Contemporary World  
 PLS 301 - Poverty, Inequality, and U.S. Public Policy  
 REL 306 - Hinduism and South Asian Religions  
 SOC/WGS - 317 Sociology of Gender  
 SOC/WGS - 318 Sociology of Sexuality  
 SOC 322 - Sociology of Community  
 SOC/WGS - 350 Family and Gender in the Developing World  
 SW 333 - Community Work with the Lesbian, Gay, Bisexual and Transgender Community

**Issue: Information, Innovation, and Technology\***

AAA 305 - Perspectives on the Black Arts Movement  
 ART 335 - Digital Creativity  
 ART 392 - Curatorial Studio  
 CIS 310 - Introduction to the Structure and Mechanics of Social Networking  
 CIS 320 - Visualization of Data and Information  
 CIS 358 - Information Assurance  
 CMB 321 - Designing Our Future: Babies, Food, Medicine, and Biotechnology  
 DS 350 - Social Media in Culture  
 ECO 330 - Sports Economics  
 EDT 312 - Children and Technology  
 GPY/MKT/PA 365 - GIS for Economic and Business Decision Making  
 GPY/ECO/PA 385 - GIS in Urban and Regional Analysis  
 LIB 310 - Creativity  
 LIB 323 - Design Thinking to Meet Real World Needs  
 LIB 341 - Leadership for Social Change  
 MTH 312 - Cryptography and Privacy  
 REL 340 - Religion and Popular Culture in the United States  
 SOC/LIB 366 - American Society and Media  
 STA 340 - Statistics in the Media

**Issue: Sustainability\***

ANT 340 - Culture and Environment  
 BIO 319 - Global Agricultural Sustainability  
 BIO 338 - Environmental Ethics  
 ECO 345 - Environmental and Resource Economics  
 EGR 306 - Urban Sustainability  
 EGR 406 - Renewable Energy Systems: Structure, Policy, and Analysis  
 ENG 382 - Literature and the Environment  
 GEO 360 - Earth Resources in Transition: Conventional to Sustainable  
 GPY/PA 324 - Urbanization  
 GPY/ENS 361 - People, Environment, and Development in the Amazon  
 GPY/ENS 363 - World Forests and Their Use  
 GPY/ENS 410 - Landscape Analysis

\*This requirement may be fulfilled through study abroad. Contact the Padnos International Center for details.

## Graduate Academic Policies and Regulations

GPY/ENS 412 - Global Environmental Change  
HTM 368 - Geotourism  
LIB 322 - Wicked Problems of Sustainability  
LIB 330 - The Idea of Nature  
MGT 340 - Ethics and Business, Social Justice, and Sustainability  
NRM 451 - Natural Resource Policy  
PLS/ENS 303 - Introduction to U.S. Environmental Policy  
SOC 351 - Urban Sociology  
WGS 335 - Women, Health and Environment

### Issues: Study Abroad

Details on completing a study abroad Issues course can be found at [www.gvsu.edu/studyabroad/](http://www.gvsu.edu/studyabroad/).

## Supplemental Writing Skills (SWS)

The university requires that all students take two Supplemental Writing Skills courses. These courses, which have Writing 150 with a grade of C (not C-) or better as a prerequisite, are designated SWS in each semester's course schedule. Please read the schedule carefully, because not all sections of a multisection course are necessarily SWS sections. Those that are not designated SWS do not result in SWS credit. The SWS courses need not add to a student's program because they may also count as courses in general education or the major. Transfer students with a MACRAO must take one SWS course (normally in the student's major).

Courses that have received the SWS designation are not merely courses that require written assignments; they adhere to certain guidelines. Students turn in a total of at least 3,000 words of writing during the term. Part of that total may be essay exams, but a substantial amount of it is made up of finished essays or reports or research papers. The instructor works with the students on revising drafts of their papers, rather than simply grading the finished piece of writing. At least four hours of class time are devoted to writing instruction. For a three-credit course, at least one-third of the final grade is based on the writing assignments.

Students must pass the writing skills courses (Writing 150 and the two SWS courses) with a grade of C or better in each course. Students with a grade of C- or lower in an SWS course may repeat the course or pass another SWS course with a grade of C or better before graduation. Transfer students with the MACRAO must pass one SWS course with a grade of C or better.

Questions regarding the SWS program should be addressed to the University Writing Skills Committee: [www.gvsu.edu/sws/](http://www.gvsu.edu/sws/).

## Frederik Meijer Honors College

Frederik Meijer Honors College students may satisfy their general education requirements through the Meijer Honors College curriculum.

## Transfer Students

Students who transfer to Grand Valley with the MACRAO approved associate of arts or science degree from a Michigan public community college have satisfied the Foundations of the General Education Program and one Supplemental Writing Skills (SWS) course. Transfer students with a MACRAO are required to complete the following requirements: one SWS course in their major or college and the Capstone course in that major and the B.A. or B.S. degree requirement where applicable. In addition, transfer students with a MACRAO must also fulfill the following general education requirements: the two-course Cultures requirement and two Issues courses.

## Dual Majors

In order to have dual majors recorded on the official record, a student must meet fully the requirements of each major. Students may complete a single course and that course may be applied to both majors. Dual majors may be awarded as long as there is a minimum of 60 credits across both majors. Students need to complete requirements for

both majors. When course overlap occurs, students should see their advisor, who can help them obtain the proper approvals if substitution is appropriate.

## Multiple Minors

For a multiple minor, each minor must contain 20 credits that are not duplicated in the other.

## Minor

In order to have a minor recorded on the official record, a student must meet fully the requirements of the select minor. A minor must have a minimum of 20 required credits. The required 20 credits in the minor must also be unduplicated in relationship to the major.

## Second Bachelor's Degree

Under certain circumstances a student may earn two baccalaureate degrees. Students with a Grand Valley baccalaureate degree or Grand Valley students pursuing two degrees simultaneously at Grand Valley should note the following information:

1. They must meet all specified requirements for both degree programs.
2. They must complete a minimum of 30 semester hours in residence at Grand Valley beyond that required for the first degree.
3. A student who meets the separate requirements for each of the two degree programs but not the additional residence requirement may have both majors recorded on his/her academic record.
4. A student holding a baccalaureate degree from Grand Valley may not modify his or her undergraduate GPA for degree by pursuing additional coursework.

Students holding a baccalaureate degree from another regionally accredited institution should note the following information:

1. They must meet all specified requirements for a new major degree program.
2. General education requirements are regarded as satisfied by the first degree.
3. They must complete a minimum of 30 semester hours in residence at Grand Valley.
4. Transfer students must complete a minimum of 12 hours in the unit conferring the major (six for the minor).

## Catalog Limitations and Guarantees

A student may graduate under the catalog in effect at the time of his or her initial registration as a degree-seeking student at Grand Valley or under any succeeding catalog. However, no student may graduate under the requirements of a catalog that is more than eight years old. A student cannot declare a course, program, or degree once it has been discontinued even if it existed at the time of the student's entry.

## Graduate Academic Policies and Regulations

### Credit Load

Full-time graduate students register for nine or more credit hours per semester. For financial aid purposes, half-time graduate students register for four and one-half credit hours per semester. Permission from the dean of the appropriate college is required for more than 15 hours per semester.

### Independent Study

No independent study or individualized courses will be allowed in areas where courses exist and are taught at least once per year.

Only graduate degree-seeking students who have completed the core requirements or have special permission from the appropriate academic dean's office may take individualized graduate courses or do graduate-level independent projects.

All independent study topics and the amount of credit to be earned must be approved by the faculty member who agrees to supervise the project.

A maximum of six hours of credit can be granted for independent study. The conditions, meeting times, workload, and subject matter concerned with the project are mutually agreed to by the initiating student and the assenting faculty member, and consistent with standards of quality education. Request forms can be obtained from the faculty member or the academic program office. Some departments may have further restrictions regarding independent study.

## Degree Requirements

In each of the graduate programs offered by Grand Valley State University, the university seeks to provide its students with intellectual challenge and opportunity for scholarly and professional growth. A graduate program is a carefully structured combination of courses and research designed on the whole to serve specific needs of the student.

Specific details of the programs and regulations governing graduate work may be found in the department entries in this catalog. The following information briefly summarizes the institutional minimums for the master's, specialist, and doctoral degrees. In those degree programs where the department requires more than the university minimum, their requirements take precedence.

Credit at the graduate level will only be awarded for grades of C (2.0) or better. This includes all graduate coursework and core, background, and foundation courses. Grades below C will be calculated in a student's GPA, but the credits will not count toward the degree. Graduate students are expected to maintain a cumulative GPA of B (3.0) at all times. Additional information on GPA and grading requirements can be found in the Academic Review for Graduate Students section that follows.

### Graduate Academic Policy for the Award of a Graduate Degree

1. The university may award a graduate degree only when a student meets all program requirements and their graduate program grade point average (GPA) is equal to or greater than a B (3.0) average.
2. Credit at the graduate level will only be awarded for grades of C (2.0) or better. Grades below C will be calculated in a student's GPA, but the credits will not count toward the degree. Individual programs may have more stringent requirements, please refer to your specific program policies for more information.
3. The student must fulfill all requirements for the degree within a period of eight consecutive years. The date of entry into the first graduate course counted toward the degree is viewed as the starting point of the eight-year period.
4. Master's programs may include some courses that are dual-numbered at the senior undergraduate and graduate level (maximum of nine credits). Such courses must be approved for dual listing and must follow the dual-listed course policy. Graduate students may not repeat for graduate credit dual-listed courses that were taken in their undergraduate program. If such a course is a master's program requirement, the department will make an appropriate substitution.
5. Candidates for advanced degrees must demonstrate not only their mastery of the subject matter but their ability to integrate and synthesize it. They must also demonstrate their ability to generate new knowledge and/or apply existing knowledge to specific practical situations in a culminating experience. This demonstration must take the form of a project, thesis, dissertation, internship, comprehensive examination, or a culminating experience course.

### Graduate Academic Policy on the Minimum Number of Credits Required for the Award of a Master's Degree

1. A minimum of 33 graduate-level credits must be earned for a master's degree to be awarded. Graduate-level credits for the master's degree are earned in those courses that are numbered 500 and above that do not meet the definition of a *leveling* course.
2. A cumulative GPA of at least a 3.0 is required of all candidates for the master's degree.
3. At least 24 credits must be earned at Grand Valley.

4. The following types of credit are NOT considered to be graduate-level credit for the purpose of this policy:
  - a. Credit earned for completion of a leveling course (defined as follows)
  - b. Credit that was earned more than eight years prior to the award of the degree
 Exceptions to this provision may be granted for courses over eight-years old based on evidence provided by the student that demonstrates currency in the content of the course, and on the recommendation of the graduate program director for the degree sought, and with the approval of the dean of The Graduate School.
5. No more than nine credits earned from a dual-listed graduate course may be applied toward the degree.

Definition: A leveling course is a course that is intended to provide knowledge skills and competencies expected of students entering a specific graduate program, and that is routinely waived or not required for students with sufficient undergraduate coursework in the discipline or program area.

### Graduate Academic Policy on the Minimum Number of Hours Required for the Specialist Degree

1. A specialist degree program shall require a minimum of sixty (60) graduate credits beyond the baccalaureate degree.
2. Additionally, if a student has earned a master's degree prior to matriculating in the specialist program, the student must earn a minimum of thirty (30) graduate credits beyond the master's degree.
3. Credit earned in a *leveling* course as defined in the Graduate Academic Policy on the Minimum Number of Credits Required for the Master's Degree may not be counted toward the minimum credit required.

A minimum of twenty-four (24) of the required graduate credits must be earned at the university.

### Graduate Academic Policy on the Minimum Number of Hours Required for an Earned Doctoral Degree

1. Except as provided as follows, a graduate degree program shall require the following minimum number of graduate credits to award a doctoral degree:
  - a. Ninety (90) graduate credits beyond a baccalaureate degree
  - b. Additionally, if a student has earned a master's degree prior to matriculation in the doctoral program, at least forty-five (45) graduate credits beyond the master's degree
  - c. Forty-five (45) graduate credits earned at the university
2. A doctoral degree program may require fewer credits than specified previously only if consistent with academic and discipline-based norms.
  - a. Consistency with academic and discipline-based norms may be demonstrated by offering
    - i. authoritative evidence, such as accreditation, professional/academic association standards; and/or
    - ii. documentation of prevailing practices among similar degree titles and programs; or
    - iii. a thorough and convincing rationale for a new innovative doctoral degree programs where similar programs do not exist.
  - b. A doctoral degree may NOT be awarded to a student who has earned fewer than
    - i. seventy-five (75) graduate credits beyond a baccalaureate degree; or
    - ii. thirty (30) graduate credits beyond the master's degree, if a student has earned a master's degree prior to matriculating in the doctoral program; or
    - iii. thirty (30) graduate credits at the university.
3. Credit earned in a *leveling* course as defined in the Graduate Academic Policy on the Minimum Number of Credits Required for the Master's Degree may not be counted toward the minimums specified in this policy.

## Graduate Academic Policies and Regulations

### Graduate Academic Policy on the Transfer of Credit to a Graduate Program

1. Graduate credit from regionally accredited institutions or the equivalent will be considered for transfer to a degree program where the credit
  - a. is relevant to the student's degree program as determined by the graduate program director of the program to which the credit would be applied; and
  - b. for which a grade of B (3.0) or above was earned; and
  - c. is applicable to any graduate degree at the institution from which the credit was awarded; and
  - d. is not a culminating experience; and
  - e. is not an independent learning, project, or similar experience. Practicums, internships, clinical experiences, or fieldwork that are required of the program may be transferred upon approval of the graduate program director.
2. The acceptance of credit in transfer is at the discretion of the graduate program director of the degree program to which the credit will be applied.
3. The following is the maximum amount of transfer credit that may be applied to a graduate degree:
  - a. Nine credits for a degree program with a length of 33 credits
  - b. Thirty percent of the degree program for a degree program longer than 33 credits
4. Exceptions to this policy must be recommended by the graduate program director and approved by the dean of The Graduate School.
5. Definitions
  - a. A regionally accredited institution is an institution that is accredited by one of the following organizations:
    - i. The Higher Learning Commission, North Central Association of Colleges and Schools
    - ii. Middle States Commission on Higher Education, Middle State Association of Colleges and Schools
    - iii. Southern Association of Colleges and Schools Commission on Colleges
    - iv. Northwest Commission on Colleges and Universities
    - v. Western Association of Schools and Colleges Accrediting Commission for Senior Colleges and Universities
    - vi. Commission on Institutions of Higher Education of the New England Association of Schools and Colleges
  - b. A culminating experience is a project, thesis, dissertation, internship, comprehensive examination, or a culminating experience course.
  - c. The equivalent of graduate academic credit from a regionally accredited institution is credit
    - i. earned from an institution which the university has a formal agreement to accept the credit in transfer; or
    - ii. earned from an institution outside of the United States that has been evaluated on a course-by-course basis as equivalent to graduate credit earned from a regionally accredited institution. The evaluation must have been performed by a foreign transcript evaluation service approved by the dean of The Graduate School; or
    - iii. earned from an institution outside of the United States, where the institution is recognized by the dean of The Graduate School as equivalent to a United States regionally accredited institution. Transcripts of foreign institutions issued in languages other than English must be accompanied by a certified translation of the transcript in English.

### Graduate Academic Policy on the Award of Academic Credit for Study Abroad Experiences

1. Graduate academic credit may be awarded to a student enrolled in a graduate degree program for a study abroad experience for which the student received the prior approval of the graduate program director.

- a. The graduate program director, in consultation with the Padnos International Center, shall consider whether the study abroad experience:
  - i. is consistent with the amount of credit to be awarded
  - ii. is consistent in level and rigor with typical academic experiences for which graduate credit is awarded by a United States regionally accredited institution.
- b. The acceptance of study abroad credit to meet a requirement or as an elective in a graduate degree program is at the discretion of the graduate program director.

**Exception:** This provision (paragraph 1) does not apply to a GVSU-sponsored study abroad experience for which credit is specifically awarded for a university course that is listed as a requirement or elective in the graduate degree program.

2. The graduate program director, in consultation with the Padnos International Center, shall consider whether the student's academic performance in a completed study abroad experience is equivalent to a grade of B or higher at a United States regionally accredited institution.
3. Graduate academic credit awarded by the university for a study abroad experience for which the student has obtained the prior approval of the graduate program director is deemed to be graduate credit earned in residence at the university regardless of whether another (e.g., host) institution has awarded credit for the same experience.
4. This policy does not apply to a completed study abroad experience for which the student has not obtained the prior approval of the graduate program director. The applicable policy in such cases is the Graduate Academic Policy for the Transfer of Credit to a Graduate Program.
5. Except for courses meeting the exception in 1. b. as listed previously, the graduate program director shall report each award of graduate credit for a study abroad experience to the dean of The Graduate School for final approval.

### Policy for the Award of Two or More Graduate Degrees at the Same Level

The university may award more than one graduate degree at the same level where

1. all stated requirements are met for each degree;
2. a minimum of two-thirds of the total graduate credits must be unique to each degree sought;
3. projects, theses, dissertations, internships, comprehensive examinations, or culminating experience courses; and
4. the award of two or more graduate degrees must be supported by the graduate program directors of the respective programs, and approved by the dean of The Graduate School.

This policy does not apply to dual-degree programs within the university or offered in conjunction with another graduate institution under formal agreement with GVSU which have been specifically approved through the university curriculum approval process.

### Masters' Theses and Doctoral Dissertations Policy

1. Masters' theses must be overseen and approved by a committee consisting of at least three members. Doctoral dissertations must be overseen and approved by a committee consisting of at least four members.
2. For the master's thesis at least one committee member must be from outside the candidate's specific research topic of study. For the doctoral dissertation at least one committee member must be from outside the candidate's program of study.
3. All committee members must hold graduate faculty member status (full, associate, or adjunct). The chair of the committee must hold full graduate faculty member status.
4. The dean of The Graduate School must approve individuals external to Grand Valley as members for thesis or dissertation committees.

Qualified individuals will be given adjunct faculty member status for three years from the time of approval to serve on the thesis or dissertation committee.

5. The Graduate School will review the committee membership for adherence to policy.
6. There must be an announced, public proposal of the thesis or dissertation.
7. There must be an announced, public defense of the completed thesis or dissertation.
8. All graduate students who are working on their thesis or dissertation and have completed all other credit requirements for their degree program must remain in continuous enrollment by enrolling in at least one thesis or dissertation credit for each subsequent semester until the completion of the thesis or dissertation.
9. The completed document must adhere to the Grand Valley State University guidelines for the preparation of theses and dissertations as regularly reviewed and approved by the Graduate Council.
10. After obtaining final approval from the committee and the appropriate academic dean, the completed document is reviewed by The Graduate School for adherence to the Grand Valley State University guidelines for the preparation of theses and dissertations. Approval of The Graduate School is required before the thesis or dissertation is accepted by Grand Valley State University.
11. An electronic version of the completed approved document must be submitted for inclusion in the Grand Valley institutional repository managed by the University Library.
12. Exceptions to this policy require the approval of the dean of The Graduate School.

#### **Continuous Enrollment Requirement for the Project, Thesis, or Dissertation Phase of Degree Programs**

##### **Master's Programs**

To complete requirements for the degree, students in master's programs may select either a project or a thesis.<sup>1</sup>

1. **Master's project.** Students begin the master's project phase of their program by enrolling in xxx-693 (project). Thereafter, they must continue to enroll in either xxx-693 or xxx-696 (continuous enrollment) for at least one credit every semester until they have completed all requirements for the project.
2. **Master's thesis.** Students begin the master's thesis phase of their program by enrolling in xxx-695 (thesis). Thereafter, they must continue to enroll in either xxx-695 or xxx-696 (continuous enrollment) for at least one credit every semester until they have completed all requirements for the thesis.

##### **Doctoral Programs**

To complete requirements for the degree, students in a doctoral program may select either a project or a dissertation.<sup>1</sup>

1. **Doctoral project.** Students begin the doctoral project phase of their program by enrolling in xxx-793 (project). Thereafter, they must continue to enroll in either xxx-793 or xxx-796 (continuous enrollment) for at least one credit every semester until they have completed all requirements for the project.
2. **Doctoral dissertation.** Students begin the doctoral dissertation phase of their program by enrolling in xxx-795 (dissertation). Thereafter, they must continue to enroll in either xxx-795 or xxx-796 (continuous enrollment) for at least one credit every semester until they have completed all requirements for the dissertation.

<sup>1</sup>Where it is an available option, students may formally select a nonproject, nonthesis, or nondissertation option for completing their degree program.

<sup>2</sup>xxx refers to the standard discipline-based course prefix (e.g., CMB for Cell and Molecular Biology).

#### **Graduate Academic Policy on Course Withdrawals**

A graduate student may seek a timely withdrawal or late withdrawal

from a course and receive a grade of W if the request is approved. For a full semester course, this policy differentiates between requests for a withdrawal made before the end of the ninth week of classes or after the ninth week. The university registrar shall determine the equivalent of the end of the ninth week of classes for a partial-semester (e.g., five week, six week) course. A withdrawal from one or more courses does not remove the student from the graduate program. To completely withdraw from a graduate degree program a student must execute a program withdrawal request.

##### **1. Course withdrawal in the first nine weeks of the semester**

A graduate student may withdraw from a course and receive a grade of W up to the end of the ninth week of class.

##### **2. Course withdrawal after the first nine weeks of the semester (Late Withdrawal)**

After the ninth week of the semester, a degree-seeking graduate student may only withdraw from one or more courses and receive a grade of W with the approval of the course instructor, the director of the graduate program in which they are enrolled, and the dean of The Graduate School. After the ninth week of the semester, a nondegree-seeking graduate student may only withdraw from one or more courses and receive a grade of W with the approval of the course instructor and the dean of The Graduate School.

##### **3. Program withdrawal**

A graduate student may elect to withdraw from a graduate program. Each program shall have a process for reviewing a program withdrawal request that has been approved by and filed with the dean of The Graduate School. A graduate student who has been granted a program withdrawal shall normally receive a W for the current semester courses, be classified by the university as a nondegree-seeking student, and must reapply for admission to the graduate program, if they desire to return. If the student wishes to apply to a different graduate program, he/she must meet all admission requirements for the new program.

#### **Graduate Academic Policy on Leave of Absence**

1. A graduate student may request a leave of absence for a maximum of two years from a graduate program for good cause. Examples of cause include, but are not limited to, medical issues, caring for family members, nonoptional military commitments, maternity, and work requirements.
2. The graduate student shall explain in writing to the graduate program director the reason for seeking a leave of absence and must specify the period for which the leave of absence is sought. The graduate student may provide materials supporting their request (e.g., military orders) if it is deemed necessary.
3. The graduate program director shall review the graduate student's written explanation and supporting materials, relevant circumstances and documentation, academic performance, and history in the program. After considering the results of this review, the graduate program director shall recommend to the dean of The Graduate School whether a leave of absence should be granted and the terms and conditions for return to the program.
4. The dean of The Graduate School shall render a decision after reviewing the graduate student's written request and the recommendation of the graduate program director. The decision by the dean of The Graduate School shall be final.
5. If the student is granted an immediate leave of absence, it shall have the effect of a course withdrawal for all courses in which the student is enrolled. Requesting a tuition reimbursement must be completed following university policy.
6. The student shall follow the graduate program and catalog requirements in effect at the time of re-enrollment.
7. At the discretion of the dean of The Graduate School, a leave of absence may be extended beyond the original time granted at the written request of the student. A student who does not enroll in classes or requests an extension at the end of the leave of absence

## Graduate Academic Policies and Regulations

may be required to reapply for admission at the discretion of their desired graduate program.

8. A leave of absence does not extend the eight-year time limit for the applicability of a graduate course toward a degree. Requesting an extension of the time limit must be completed following university policy.
9. A student in the dissertation or thesis phase of their graduate program is not required to maintain continuous enrollment in any semester for which a leave of absence has been granted.
10. Students who wish to take a semester away from their program and are not part of a cohort or structured program may not need to complete a Leave of Absence request and should contact the graduate program director prior to completing the request.

### Responsible Conduct of Research for Graduate Students Policy

Each graduate student must complete Responsible Conduct of Research (RCR) training prior to completion of 50 percent of the graduate program or prior to engaging in any research activity (e.g. voluntary, independent, or supervised research, projects, theses, or dissertations).

Individual graduate programs must identify what type of minimal RCR training is required and when it will be required, with approval by the dean of The Graduate School. The following options are available:

- Online training from a GVSU approved provider.
- An approved research methodology course.
- An approved workshop or series of workshops.
- An approved RCR course.
- Additional RCR training may be required by individual graduate programs.

### Academic Review for Graduate Students

1. All graduate students are expected to maintain a minimum of a 3.0 graduate program grade point average at all times.
2. The academic review process will be conducted by the appropriate graduate program director for degree-seeking graduate students or by The Graduate School for nondegree graduate students. Academic review is applicable to a graduate student
  - a. who earns in the previous semester
    - i. a grade of **D** or **F**; or
    - ii. the second or subsequent grade of **C** or lower in graduate courses in the student's program; or
    - iii. the second or subsequent grade of **NC** in graduate courses in the student's program;
  - b. whose performance is evaluated as unsatisfactory in a required clinical experience, internship, or practicum;
  - c. whose semester or cumulative program grade point average is less than 3.0;
  - d. who has not met the conditions of a previously imposed academic probation with the time limits imposed; or
  - e. who at the end of the semester has more than two unresolved grades of **I** (Incomplete) that were assigned in a previous semester.
3. Academic review may result in an academic warning, academic probation, or dismissal.

### Graduate Dismissal

1. A graduate student **shall** be dismissed from a graduate program who
  - a. earns a second or subsequent grade of **F** in any graduate course, including repeated courses; or
  - b. has less than a 3.0 graduate program grade point average **AND** has accumulated nine or more hours for which a grade less than a **B-** was earned.
2. A graduate student who has been dismissed from a GVSU graduate program may not be admitted to a different graduate program and may not enroll in graduate courses without the permission of the dean of The Graduate School.

### Appeals of Action Taken Under this Policy

1. A degree-seeking or certificate-seeking graduate student may appeal an action taken under this policy using the graduate program's published process for appeals of academic decisions. If the program does not have a published appeals process, the appeal shall be to the dean of the college in which the graduate program is housed. The student may appeal the decision of the dean of the college and to the provost or the provost's designee. The result of each appeal shall be reported to the dean of The Graduate School.
2. A nondegree graduate student may petition the dean of The Graduate School for reconsideration of a decision. If such reconsideration is unsuccessful, the student may appeal the decision to the provost or provost's designee.

### Effect of Grade Change

If a review of the student's record or dismissal from graduate study is based on a grade that is subsequently changed, the student may appeal or re-appeal any adverse action taken.

### Timing of Decisions

All parties to the decision to take action under this policy shall act expeditiously to arrive at and communicate a decision to the student as soon as practicable. However, in order to afford due process and full consideration of the graduate student's record and circumstances, a decision to dismiss a student under this policy may occur in the semester after the student's performance or actions warranted dismissal. If the graduate student is enrolled in graduate courses at the time of the dismissal, the decision shall have the effect of a withdrawal from Grand Valley State University.

### Requests for Exception to Graduate Policies

**Requests for Exception to Graduate Policy:** The dean of The Graduate School is responsible for the review and final approval or denial of Petitions for Exception to graduate education policies. The student's academic advisor, graduate program director, or dean of the college where the program resides, must support all exceptions in order for the dean of The Graduate School to approve them. Information on Requests for Exceptions can be found on The Graduate School website.

Please refer to the Graduate Education Policies and Procedures Manual ([www.gvsu.edu/gs/manual](http://www.gvsu.edu/gs/manual)) or Graduate Academic Policies and Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog for further information on academic review, probation, and dismissal.

**Petition for Exception to 12-credit Hour Limit:** Grand Valley policy allows graduate students to take a maximum of 12 graduate credit hours without being admitted to a specific graduate program. Once the student gains admission to a graduate program, any credit hours beyond the limit must be granted an exception to the policy in order to be counted toward the degree. The student seeking this exception should contact his or her academic advisor to initiate the Petition for Exception.

### Petition for Exception to Eight-year Time Limit to Degree

**Completion:** All courses to be counted for a graduate degree at Grand Valley must be completed within eight years. This time limit is a way of ensuring the student's validity and currency of knowledge at the time of graduation. The student will be required to either repeat the course or take an approved substitute, if unable to demonstrate currency of knowledge. The start date for the eight-year time limit begins with the first course taken toward the degree planned program.

**Petition for Exception to Graduate Student Policies:** Students seeking to appeal other graduate academic policies must complete the appropriate Petition for Exception form as provided on The Graduate School webpage. The student's academic advisor, graduate program director, or dean of the college where the program resides, must support all exceptions before approval by the dean of The Graduate School.

**Credit Overload:** Full-time graduate students register for nine to 15 credit hours per semester. Permission from the dean of the appropriate academic college is required for more than 15 hours per semester.

**Petition to Return:** Following a voluntary absence of two or more consecutive semesters, a graduate student must complete a Petition to Return form. Graduate students are reminded that following a voluntary absence of 24 consecutive months they must follow the Grand Valley State University Undergraduate and Graduate Catalog requirements in effect at the time of their return to Grand Valley. Such students should meet with their program advisor to revise their study plan.

Graduate students who wish to return to Grand Valley following an academic dismissal must submit a written appeal to the dean of the appropriate division. Graduate students who wish to change to a different program within Grand Valley must complete the application process for that program. No additional application fee is required, and the applicant need not supply duplicate copies of official transcripts already on file.

## Catalog Limitations and Guarantees

Graduate students follow the requirements in the Grand Valley catalog at the time they were originally admitted into a program as degree-seeking students. Students who have not enrolled in Grand Valley for 24 consecutive months must follow the requirements in the Grand Valley catalog in effect at the time of their re-entry. All students have the option of using the program requirements in effect at the time of graduation. Any exceptions must be approved in writing by the faculty advisor and program director and filed in the appropriate program office.

## Undergraduate Information

### Undergraduate Policies and Regulations

Refer to the General and Undergraduate sections of the Academic Policies and Regulations section of this catalog for Undergraduate Policies and Regulations.

### Academic Advising and Student Instructional Support Information

#### Academic Advising Mission

Academic advising engages students in the process of exploring and defining their academic and career goals and in creating effective strategies to achieve these goals.

- Through collaborative relationships with academic advisors, students are encouraged and supported as they develop the skills necessary to take responsibility for their own development and success.
- Academic advisors educate students by providing accessible, accurate, and timely information regarding academic requirements, university resources, and opportunities to develop critical thinking skills and enrich the college experience and their personal lives.

#### Definition of Academic Advising

Academic advising is an integral part of a college education, establishing a collaborative relationship between a student and his or her advisor/s to map out a meaningful and successful educational experience and help guide the student's path to graduation and a career. Academic advising centers and offices are listed as follows.

### College Academic Advising Centers/Offices

Contact information for academic advising centers and offices for each college are listed as follows and on the website at [www.gvsu.edu/advising/](http://www.gvsu.edu/advising/). Students interested in programs in a particular college can contact the advising center or office to learn more about specific programs or courses.

#### Brooks College of Interdisciplinary Studies – Office of Integrative Learning and Advising

133 LMH, (616) 331-8200, [brooksadvising@gvsu.edu](mailto:brooksadvising@gvsu.edu)

#### College of Community and Public Service Undergraduate Advising Center

321C DEV, (616) 331-6890, [ccpsadvisor@gvsu.edu](mailto:ccpsadvisor@gvsu.edu)

#### College of Education Student Information and Services Center

401C DEV, (616) 331-6650, [coeserve@gvsu.edu](mailto:coeserve@gvsu.edu)

#### College of Health Professions – Student Services Office

113 CHS, (616) 331-5900, [chpss@gvsu.edu](mailto:chpss@gvsu.edu)

#### College of Liberal Arts and Sciences Academic Advising Center

C-1-140 MAK, (616) 331-8585, [advstu@gvsu.edu](mailto:advstu@gvsu.edu)

#### Kirkhof College of Nursing Office of Student Services

326 CHS, (616) 331-7160 or (800) 480-0406, [kcon@gvsu.edu](mailto:kcon@gvsu.edu)

#### Seidman College of Business - Seidman Undergraduate Programs

1041 SCB, (616) 331-7500, [go2gvbiz@gvsu.edu](mailto:go2gvbiz@gvsu.edu)

B3-226 MAK, (616) 331-7500

#### Seymour and Esther Padnos College of Engineering and Computing Declared Major Advising (prior to secondary admission):

##### Advising Center

315 KEN and C-2-208 MAK, (616) 331-6025, [pcecadvising@gvsu.edu](mailto:pcecadvising@gvsu.edu)

**Admitted Major Advising** (after secondary admission) should contact their respective school.

#### Faculty Advising

##### School of Engineering

136 KEN, (616) 331-6750, [engineer@gvsu.edu](mailto:engineer@gvsu.edu)

##### School of Computing and Information Systems

C-2-100 MAK, (616) 331-2060, [info@cis.gvsu.edu](mailto:info@cis.gvsu.edu)

##### Department of Occupational Safety and Health

618 EC, (616) 331-6300, [oshdept@gvsu.edu](mailto:oshdept@gvsu.edu)

#### Student Academic Success Center (SASC)

200 Student Services Building, (616) 331-3588, [www.gvsu.edu/sasc](http://www.gvsu.edu/sasc)

The SASC supports student learning by providing a wide range of services to students in one central location: general tutoring services, structured learning assistance course support, math and science tutoring, learning and study skills development services, academic advising for students who have not decided on a specific major or minor, and advising for student athletes through the LAKER Academic Success Center. Advising is also available for those students who are nondegree-seeking students taking courses at Grand Valley. SASC is the location for McNair Scholars and SSS federal grant TRIO programs to support student success.

The SASC is open 8 a.m.-6 p.m. Monday through Thursday and 8 a.m.-5 p.m. on Friday. Appointments can be made online at our website, by calling (616) 331-3588, or by coming into the office.

### Academic Support Resources Through Student Academic Success Center

#### Scheduled Tutoring

Main office: 200 Student Services Building, (616) 331-3451, [www.gvsu.edu/tc](http://www.gvsu.edu/tc)

The Tutoring Center at Grand Valley provides small group, peer-to-peer tutoring free of charge for all Grand Valley students. Subject specific tutoring is provided for most 100- and 200-level courses and upper level courses. These weekly scheduled sessions encourage student success by providing a collaborative learning environment in which students can ask questions, clarify material, and learn course appropriate learning strategies from students who have successfully completed the course. Students are encouraged to request tutors online through the tutoring website early in the semester to maximize academic outcomes.

#### LAKER Academic Success Center

152 Fieldhouse, (616) 331-3328, [www.gvsu.edu/lakeracademiccenter](http://www.gvsu.edu/lakeracademiccenter)

## Graduate Information

The LAKER Academic Success Center academic advisors provide one-on-one academic advising and support to student athletes. Students maintain a regular schedule of appointments to help with academic success and ensure athletic eligibility.

### Learning Skills Services

200 Student Services Building, (616) 331-3588, [www.gvsu.edu/sasc](http://www.gvsu.edu/sasc)

Individual academic coaching is available by both professional and peer coaches. Academic coaching sessions focus on topics including: general college study strategies, test taking, organization and time management, note taking, motivation, and goal setting. Academic coaches can assist students in identifying their academic challenges and develop a plan for improvement using campus resources for support. Group presentations about academic success topics are also available to help students improve their academic performance and confidence.

### Premajor Advising

200 Student Services Building, (616) 331-3588, [www.gvsu.edu/sasc](http://www.gvsu.edu/sasc)

Premajor advisors are available to advise students who have not yet declared a major or are transitioning from one major to another. Advisors assist students with the process of choosing a major, monitor students' academic progress, and discuss other academically related concerns with students. Once students declare their major, they are referred to their major department for advising.

### Chemistry Success Center, Math and Stats Centers, and Walk-in Science Tutoring for BMS, BIO, and PHY

399 Padnos Hall, (616) 331-3695, [www.gvsu.edu/tc](http://www.gvsu.edu/tc)

These subject area centers provide both peer-to-peer and faculty-to-student support for science and math related courses. Successful upper-level students in biology, chemistry, biomedical sciences, physics, math, and stats assist students by providing problem-solving assistance, peer support, and connecting students to other appropriate support services on campus.

### Structured Learning Assistance (SLA), Peer-assisted Study Sessions (PASS)

200 Student Services Building, (616) 331-3588, [www.gvsu.edu/sla-pass](http://www.gvsu.edu/sla-pass)

SLA and PASS offer an embedded tutoring approach to typically challenging courses. Students who select an SLA section of a course will be provided with additional weekly study and practice workshops led by upper-level students who have been successful in the course. These student facilitators work closely with faculty members to provide direct assistance with course content and practice.

### TRIO Student Support Services (SSS)

200 Student Services Building, (616) 331-3401, [www.gvsu.edu/sss](http://www.gvsu.edu/sss)

TRiO Student Support Services provide academic advising, study skills instruction, and career planning to first-generation, financially eligible college students at Grand Valley.

### TRIO Student Support Services/STEM-Health Sciences

200 Student Services Building, (616) 331-5430, [www.gvsu.edu/triostem](http://www.gvsu.edu/triostem)

STEM advisors provide specialized services geared toward support for first-generation, financially eligible college students in science, technology, engineering, mathematics, and health sciences.

## Additional Resources

### Disability Support Resources

Grand Valley is committed to providing access to programs and facilities for all students, faculty members, and staff members. Grand Valley promotes the full inclusion of individuals with disabilities as part of our commitment to creating a diverse, intercultural community. It is the policy of Grand Valley to comply with the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, and other applicable federal and state laws that prohibit discrimination on the basis

of disability. Grand Valley will provide reasonable accommodations to qualified individuals with documented disabilities upon request. The office is located in 4015 James H. Zumberge Hall and can be reached by calling (616) 331-2490 or emailing [dsrgvsu@gvsu.edu](mailto:dsrgvsu@gvsu.edu).

### Fred Meijer Center for Writing and Michigan Authors

The Writing Center offers free peer consulting services in writing for students enrolled in classes. The center provides weekly small group activities for Writing 098 students, assistance to Writing 150 students in computerized classrooms, occasional workshops as requested by faculty members, and a walk-in center available for students with papers in all Grand Valley classes, particularly Supplemental Writing Skills courses. Students who are writing papers for any course can stop by for a walk-in session to get detailed feedback on their work at any stage in the writing process. Writing Center services are provided at the Allendale Campus, Pew Grand Rapids Campus, and Meijer Campus in Holland. Follow us on Twitter at [twitter.com/GVWritingCenter](https://twitter.com/GVWritingCenter).

### McNair Scholars Program/TRIO

230 Student Services Building, (616) 331-3441, [www.gvsu.edu/mcnair](http://www.gvsu.edu/mcnair)

The Ronald E. McNair postbaccalaureate scholars program provides research opportunities and academic advising to talented (3.0 grade point average or higher) sophomores and juniors who are interested in pursuing an education beyond a baccalaureate degree. The goal of the program is to provide assistance to financially eligible, first-generation college students and underrepresented minorities who wish to obtain a doctoral degree.

## Academic Standards and Other Services

200 Student Services Building, (616) 331-3588

### Course Evaluations and Substitutions

Responsible for course evaluations and substitutions for general education Foundations/Cultures requirements.

### Credit Overload Appeals

Review appeals to enroll in more than 20 credits in a semester.

### Residency Waiver Requests

Review appeals to take a course or courses at another institution during the final 30 semester hours of a student's degree program.

### Emergency Notification

It is the responsibility of students to notify their professors of attendance issues. The SASC will email students' professors in cases of extended illness, death, or family emergencies, etc. This process does not excuse students from classes, but serves as an official notification to professors. Students are responsible for making arrangements with professors about missed work.

### Academic Review Committee

Review appeals of the withdrawal deadline and the Petition to Return process.

## Graduate Information

### Graduate Academic Policies and Regulations

Refer to the general and graduate sections of the Academic Policies and Regulations for graduate policies and regulations.

### Advising

At the graduate level, students are advised by faculty members and professional advisors within their program of study. Students should contact the graduate program director or the academic departmental office to identify the name of their advisor and arrange for an initial advising session. A complete list of graduate degree programs and academic departments is listed by college in the The Graduate School section of this catalog.

Academic advising for graduate students is highly individualized for each student as he/she works with an advisor to select an emphasis within a

degree program, develop an educational plan, register for and complete courses, and where required, develop a research proposal, conduct the research, and write a research report. Those students selecting to complete a thesis, dissertation, or a research project work very closely with the faculty advisor and other appropriate faculty members.

Please note that some programs require a faculty advisor to agree to work with a student in a research area before the student can be admitted to the degree program. To learn more about academic advising for graduate students, please contact the support services noted as follows.

## Graduate Student Support Services

### Fred Meijer Center for Writing and Michigan Authors:

(616) 331-2922, (616) 331-6407, [www.gvsu.edu/wc](http://www.gvsu.edu/wc)  
With locations on the Allendale Campus, Robert C. Pew Grand Rapids Campus, and Meijer Campus in Holland, the Fred Meijer Center for Writing and Michigan Authors assists all writers at any stage of their writing processes.

**Pew Campus Student Services:** (616) 331-7220,  
[www.gvsu.edu/pewcampus](http://www.gvsu.edu/pewcampus)

This office coordinates activities with academic and nonacademic departments to provide a full range of services for students. The office, located in 101B DeVos Center, serves as a hub for support services and as a gateway to university information and resources. Moreover, the office seeks to identify student needs to find solutions that enhance learning and provide opportunities for involvement.

**Student Assistance Center:** (616) 331-3327

Student Assistance Centers are located in the Student Services Building on the Allendale Campus and in the DeVos Center Plaza on the Pew Grand Rapids Campus and provide services for registering for classes, tuition payments, Grand Valley ID cards, transcripts and degree progress reports, applications for graduation, processing loan deferments, check cashing, and distributing student payroll checks.

**The Graduate School:** (616) 331-7105, [www.gvsu.edu/gs](http://www.gvsu.edu/gs)  
Currently enrolled graduate students or persons interested in graduate studies at Grand Valley State University are welcome to visit with the dean of The Graduate School for assistance, advice, or to provide feedback on any aspect of their graduate education.

## Academic Programs

Grand Valley State University has more than 300 areas of study, 88 undergraduate degrees, and 37 graduate degrees.

## Graduate Programs

### Accounting

- Combined B.B.A./M.S.A.
- Accounting, M.S.A.
- Finance
- Taxation

### Allied Health Sciences

- Clinical Research Trials Management Certificate

### Applied Behavior Analysis

- Applied Behavior Analysis Certificate

### Applied Linguistics

- Applied Linguistics, M.A.

### Biology

- Biology, M.S.
- Aquatic Sciences
- Natural Resources

### Biomedical Sciences

- Biomedical Sciences, M.H.S.

### Biostatistics

- Biostatistics, M.S.

## Business Administration

- Executive Program (EMBA)
- Traditional M.B.A.
- Finance
- Health Sector Management
- International Business
- Sustainable Enterprise
- Technology and Innovation Management

## Cell and Molecular Biology

- Cell and Molecular Biology, M.S.
- Combined B.S./M.S.
- Biotechnology
- Research

## Clinical Dietetics

- Clinical Dietetics, M.S.

## Communications

- Communications, M.S.

## Computer Information Systems

- Computer Information Systems, M.S.
- Biomedical Informatics
- Cybersecurity
- Database Management
- Distributed Computing
- Information Systems Management
- Software Design and Development
- Software Engineering
- Web and Mobile Computing

## Criminal Justice

- Criminal Justice, M.S.

## Education

- Educational Leadership, M.Ed.
- Educational Leadership
- Special Education Administration
- Leadership, Ed.S.
- Educational Technology, M.Ed.
- Higher Education, M.Ed.
- Adult and Higher Education
- College Student Affairs Leadership
- Instruction and Curriculum, M.Ed.
- Advanced Content Specialization-Science
- Early Childhood Education
- Educational Differentiation
- Elementary Education
- Secondary Level Education
- Literacy Studies, M.Ed.
- Reading/Language Arts
- Teaching English to Speakers of Other Languages (TESOL)
- School Counseling, M.Ed.
- Special Education, M.Ed.
- Cognitive Impairment
- Emotional Impairment
- Learning Disabilities
- Online/Blended Instruction and Assessment Certificate
- Postbaccalaureate Teacher Certification
- Graduate Teacher Certification Program (GTC)
- Professional Certification

## Engineering

- Engineering, M.S.E.
- Combined B.S.E./M.S.E.
- Biomedical Engineering
- Electrical and Computing Engineering
- Manufacturing Operations
- Mechanical Engineering
- Product Design and Manufacturing Engineering

## Student Life

### English

English, M.A.

### Health Administration

Health Administration, M.H.A.

### Medical and Bioinformatics

Medical and Bioinformatics, M.S.

### Medical Dosimetry

Medical Dosimetry, M.S.

### Nursing

Nursing, M.S.N.

Advanced Generalist

Nursing, D.N.P.

Advanced Practice: Adult/Older Adult

Advanced Practice: Child/Adolescent

Health Systems Leadership

Palliative and Hospice Care Certificate

### Occupational Therapy

Occupational Therapy, M.S.

### Philanthropy and Nonprofit Leadership

Philanthropy and Nonprofit Leadership, M.P.N.L.

Community Impact

Mission Advancement

Nonprofit Healthcare

Nonprofit Leadership Certificate

### Physical Therapy

Physical Therapy, D.P.T.

### Physician Assistant Studies

Physician Assistant Studies, M.P.A.S.

### Professional Science Masters

Biostatistics, M.S.

Cell and Molecular Biology, M.S.

Medical and Bioinformatics, M.S.

### Public Administration

Public Administration, M.P.A.

Criminal Justice

Health Administration

Nonprofit Management and Leadership

Public Management

Sustainable Community Development

Urban and Regional Policy and Planning

### Public Health

Public Health, M.P.H.

Epidemiology

Health Promotion

Public Health Administration

### School Psychology

School Psychology, M.S.

Psychology Specialist, Psy.S.

### Social Work

Social Work, M.S.W.

School Social Work Certification

### Speech-Language Pathology

Speech-Language Pathology, M.S.

### Taxation

Taxation, M.S.T.

## Student Life and Services

### Student Life

Student life at Grand Valley State University reaches far beyond the typical college activity list to make life on campus exciting, enjoyable, and to help students get involved outside the classroom. The Office of Student Life challenges students to be engaged through a department campaign: Become More. Students can take advantage of a great variety of clubs and organizations, including cultural organizations, performing arts groups, recreational clubs, interfaith groups, social organizations, fraternities and

sororities, professional associations, special interest groups, leadership groups, and community service organizations.

### Campus Life Night

[www.gvsu.edu/campuslifeneight](http://www.gvsu.edu/campuslifeneight)

Campus Life Night, held the Tuesday evening after Labor Day in Parking Lot H across from the library, provides students with the opportunity to find out about their extensive choices for involvement on campus. Student organizations, campus departments, volunteer agencies, and area businesses set up displays and provide information.

### Community Service Learning Center

[www.gvsu.edu/service](http://www.gvsu.edu/service)

The Community Service Learning Center (CSLC), located in 1108 Kirkhof Center, prepares students to become active, global citizens and challenges them to be committed to a life of community engagement and democratic participation. This is accomplished through campus-wide volunteer/service activities, community issues education, community agency partnerships, and various civic learning initiatives. Students are encouraged to become a part of the activities of the CSLC to enhance their understanding of civic responsibility now and in the future. Every student can become an active citizen and can connect with the CSLC by coming into the center or visiting the website.

### Festivals and Events

Student organizations and special committees work with professional staff in sponsoring and planning campus events such as the Renaissance Festival, Make a Difference Day, Community Outreach Week (COW), and Relay for Life. In addition, many other cultural celebrations are held throughout the year.

**Asian Festival:** Each February the Asian Student Union sponsors a variety of events, the most celebrated being the annual celebration honoring the Asian New Year. An authentic and diverse type of Asian food is provided to festival participants. In addition, the festival coordinators provide traditional New Year's dances and songs presented by professional artists.

**Black History Month:** Each February the campus community offers a comprehensive series of programs to celebrate black history.

**Hispanic Heritage Month:** Each fall the university community celebrates Hispanic history and culture with a variety of events. Students, faculty members, and staff members educate attendees on the diversity within the culture and offer campus-wide celebrations featuring traditional foods and presenting and teaching music and dance.

**Pow Wow:** The annual spring event celebrates the Native American culture. The Native American Student Association, with the leadership and permission of the Ottawa Tribal Council, shares an entire day of ceremony and trade with the campus and the general public.

### Laker Traditions Team

[www.gvsu.edu/traditions](http://www.gvsu.edu/traditions)

Many traditional Grand Valley events such as Family Weekend, Homecoming, Founders Day, Battle of the Valleys, Sibs and Kids Weekend, Presidents' Ball, Intercultural Festival, and Laker Remembrance are coordinated by a committee of students, along with their staff advisors. The Laker Traditions Team produces these high-profile events that provide team members with event planning, marketing, and collaboration skills that will transfer to their professional lives.

### Leadership Programs

#### Laker Leadership

[www.gvsu.edu/leadership](http://www.gvsu.edu/leadership)

Laker leadership programs provide opportunities for leadership development that encourage growth as lifelong leaders of integrity and social change in students' lives, students' professions, and students' societies.

### First-year Leadership Experience

The first-year leadership experience program is designed to assist newer leaders as they create and enhance their personal philosophy of leadership while developing basic leadership skills and learning about leadership opportunities the Grand Valley community has to offer. All students, especially first-year and transfer students, are encouraged to be a part of this program, particularly those who are interested in future leadership roles.

### Additional Leadership Opportunities

**Leadership Summit** is a one-day conference that provides student leaders throughout the state the opportunity to come together to discuss leadership topics with national and regional leaders, while networking and sharing ideas. With topic areas such as fraternities and sororities, student government, cultural programming, campus-wide programming, service-learning, and many others, Leadership Summit is one of the largest multifocused gatherings in the state of Michigan. Leadership Summit provides excellent networking and developmental opportunities for student leaders at any level.

**Venderbush Leadership Connection** recognizes Kenneth R. Venderbush who served as vice president of student affairs at Grand Valley State University from 1969-1973. The event features a speaker from the community or a Grand Valley alumnus sharing experiences and inspirations on the topic of leadership and service.

### Office of Student Life

[www.gvsu.edu/studentlife](http://www.gvsu.edu/studentlife)

Successful students make the most of their college experience by getting involved outside the classroom. The Office of Student Life, located in the Kirkhof Center, provides opportunities for students to “Become More” by joining a student organization, actively engaging with their communities, serving as leaders on campus, and gaining real-world experience, while enjoying the numerous activities provided on campus.

Because only 30 percent of a student’s time on campus is spent in the classroom, students should develop a plan on how to spend the other 70 percent of their time to maximize their college experience. Through the broad range of opportunities, students make connections and gain valuable competencies which make them more marketable to employers upon graduation.

Students can follow Student Life on Twitter @GVSUStudentLife and Facebook by searching Grand Valley Student Life. More information is available on the website or by calling (616) 331-2345.

### Campus Events Calendar

A comprehensive electronic calendar of events for Grand Valley is available online for easy reference. The calendar is a great resource for the campus community to stay current on the many events and programs scheduled. Check out the campus events calendar at [www.gvsu.edu/events/](http://www.gvsu.edu/events/).

For additional information on campus events, contact the Office of Student Life at (616) 331-2345 or call (616) 331-8800 for athletic event information.

### Russel H. Kirkhof Center

Named in honor of Russel H. Kirkhof, this student center provides opportunities to gather in a formal and informal setting. Kirkhof Center is charged with supporting the educational, cultural, social, and recreational needs of Grand Valley State University. Located within the center are the Office of Student Life, Event Services, 2020 Information Desk, Office of Multicultural Affairs, Milton E. Ford LGBT Resource Center, Gayle R. Davis Center for Women and Gender Equity, Student Veteran’s Lounge, and Dining Services. There are three ATM machines located near the lobby for convenience.

**Area 51** provides a venue for students to coordinate musical events and showcase student performers. There is also a big screen and projector to watch television or movies, or to participate in video-game tournaments.

### 20/20 Information Desk

[www.gvsu.edu/2020](http://www.gvsu.edu/2020)

Located in the main lobby of the Kirkhof Center, the 2020 Information Desk provides up-to-date information regarding campus events. Student staff members operate the desk and are there to answer questions and assist students. Contact the 2020 Information Desk staff at (616) 331-2020 and follow them on Twitter at @GVSU2020.

### Promotions Office

[www.gvsu.edu/promotions](http://www.gvsu.edu/promotions)

The Promotions Office provides graphic design and advertising to assist student organizations in promoting their events. The Video Team produces a variety of videos promoting campus events and educating students. Services are also available for creating and producing videos. Contact (616) 331-2340 for more information.

### Spotlight – Campus Life Programming

Spotlight Productions, the campus entertainment board, selects and organizes large-scale concerts, big-name comedians, a series of free movies, monthly coffeehouse performers, nationally recognized speakers, and aspiring artists. Visit the website at [www.gvsu.edu/studentlife/programming](http://www.gvsu.edu/studentlife/programming) or call (616) 331-2806 for more information.

### Student Organizations

The Office of Student Life is proud to host over 400 student organizations to help you “Become More.” Student organizations may be identified in any of the following ways.

**Academic and professional** organizations focus on academic disciplines or are related to a specific professional field.

**Cultural** organizations educate the campus community about world cultures to enhance students’ views. They also provide students with an avenue to explore and celebrate their own cultural heritage and provide programs and services designed to support students of various cultural heritages at the university.

**Fraternities and sororities** provide lifelong opportunities for leadership, service, academic achievement, and social involvement through association with a national organization. Learn more about fraternity and sorority life at [www.gvsu.edu/greeklife/](http://www.gvsu.edu/greeklife/).

**Graduate student** organizations are connected with a graduate program.

**Honor societies** serve to recognize students for high achievement on campus.

**Interfaith organizations** serve to enhance a student’s spiritual life while providing fellowship and outreach opportunities.

**Media organizations** provide an opportunity for students to gain hands-on experience with media, including newspaper, television production, and radio. The student campus media entities listed as follows are all located on the lower level of the Kirkhof Center.

- **GVTV:** Grand Valley State University’s own student-run broadcasting channel offers hands-on experience in technical areas of producing as well as writing, reporting, promotions, directing, and acting. The channel is noncommercial and broadcasts on cable access channel 46.1 or on the Web at [www.grandvalleytv.org/](http://www.grandvalleytv.org/). Contact GVTV at (616) 331-4888 for more information.
- **The Lanthorn:** *The Lanthorn* is an award-winning, twice-weekly student newspaper that gives students an opportunity to gain experience in the production of a newspaper. *The Lanthorn* team includes editorial, advertising, business, graphic art, staff writing, and staff photography positions. Read *The Lanthorn* online

## Student Services

at [www.lanthorn.com](http://www.lanthorn.com) or call (616) 331-2460 to find out more information.

- **WCKS The Whale:** The student-run campus radio station provides opportunities for all aspects of radio production. Listen on the Web at [www.whaleradio.org/](http://www.whaleradio.org/). Call (616) 331-2356 for more information.

**Performing arts** organizations provide opportunities for involvement and exposure to the performing arts.

**Service and advocacy** organizations are centered on positive student engagement and social change through community service and educational programming. These organizations hope to raise awareness on social issues.

**Special interest** organizations serve to enhance student life through the cocurricular involvement of special interests and hobbies.

**Sports** organizations provide opportunities for competition, personal fitness, recreational activities, and/or school spirit support. These organizations are broken down in to competitive and noncompetitive.

**Student government** organizations serve as governing bodies in various aspects of campus life.

## Student Senate

[www.gvsu.edu/studentenat](http://www.gvsu.edu/studentenat)

The Student Senate is an elected body of 50 students. The senate conveys student opinion to the Grand Valley administration and the Board of Trustees in matters of institutional policy. The senate also provides a forum for discussion, investigation, and resolution of student ideas and concerns.

The senate is responsible for the allocation of the Student Life Fund and for the appointment of student representatives to all university standing committees and advisory boards. Call (616) 331-2333 for more information.

## Student Services

### Athletics, Intercollegiate

Grand Valley is a member of the Great Lakes Intercollegiate Athletic Conference (GLIAC). Membership in the GLIAC includes Ashland, Davenport, Ferris, Grand Valley, Lake Superior, Michigan Tech, Northern Michigan, Northwood, Purdue NW, Saginaw Valley, Tiffin, and Wayne State. Grand Valley is also a member of the National Collegiate Athletic Association (NCAA Division II).

Since the creation of the GLIAC in 1972, Grand Valley has won the President's Cup — the conference all-sports trophy and symbol of athletic excellence — 23 times and has placed as a top two finisher in the past 15 years in the Director's Cup — the NCAA Division II all-sports trophy. Grand Valley's men's teams have won conference championships in football 17 times; basketball, eight; baseball, 18; wrestling, six; tennis, one; golf, six; indoor track, 16; swimming and diving, five; outdoor track, 11; and cross country, 15. In women's sports, Grand Valley has won championships in basketball eight times; cross country, 17; soccer, 12; softball, 12; tennis, three; volleyball, 10; swimming and diving, one; indoor track, 17; outdoor track, 17; women's lacrosse, four; and golf, 13. Grand Valley's teams have earned national championships as follows: men's football, four; women's basketball, one; women's cross country, five; women's indoor track, two; women's outdoor track, two; women's soccer, five; and women's volleyball, one.

Scholarships are offered in all men's and women's sports.

Grand Valley competes in 20 sports, including men's baseball, basketball, cross country, football, golf, swimming and diving, tennis, and indoor and outdoor track, and women's basketball, cross country, golf, lacrosse, soccer, softball, swimming and diving, tennis, indoor and outdoor track, and volleyball.

## Barbara and Stuart Padnos International Center

Grand Valley's mission, values, and vision statement includes references to educating students in the global community beyond Michigan or the U.S. Grand Valley recognizes that a foundation to a strong university education includes an understanding of other cultures as well as a global vision. The mission of the Padnos International Center is to engage the university community in meaningful international experiences, which foster an appreciation and awareness of diverse cultures, people, and ideas.

New populations, environmental challenges, and global interdependence add to the agenda for global competency skills. Individuals, businesses, agencies, and organizations need employees who are culturally and linguistically capable. Second-language fluency and the ability to work with various cultures are critical to the future of West Michigan.

The Barbara and Stuart Padnos International Center organizes and coordinates the university's international programs and activities, working with all academic departments, colleges, and other units. It oversees international partnership agreements, faculty-led group programs, study abroad programs, work and internship programs in other nations, and international volunteer and service-learning activities. It serves as a catalyst for international curriculum development and helps make Grand Valley's international resources and expertise available to the Grand Valley community.

The center coordinates with student affairs and the Office of Admissions to recruit, admit, and advise international students. The center also works with universities, nongovernmental organizations, and governmental agencies to develop and administer programs and services. In addition, it works with academic departments, colleges, the Center for Teaching and Learning, and the Modern Languages and Literatures department to internationalize the curriculum and provide overseas study opportunities relevant to the curriculum.

### International Partnership Agreements

Partnerships with overseas institutions create meaningful opportunities for students, faculty members, and staff members and allow for educational and living experiences in other nations. Partnerships also increase the presence of international students and faculty at Grand Valley. Currently, Grand Valley has institution-to-institution agreements with the following institutions, which offer a variety of study abroad opportunities for students:

Austria: FH Joanneum University of Applied Sciences, Graz  
Australia: University of the Sunshine Coast, Queensland; Macquarie University, Sydney  
China: China-Japan Friendship Hospital, Beijing; East China Normal University, Shanghai  
Chile: Universidad del Bío Bío, Concepcion  
England: Kingston University, Kingston-on-Thames; University of Brighton, Brighton  
France: Groupe ESC Grenoble, Grenoble; L'Ecole Supérieure Des Sciences Commerciales of Angers l'Université, Angers; Catholique de L'Ouest, Angers; L'Université de Versailles, Saint-Quentin-en Yvelines  
Germany: Duale Hochschule Baden Württemberg, Mosbach Pädagogische Hochschule Schwabisch Gmünd Fakultät I, Schwabisch Gmünd  
Ghana: University of Cape Coast  
Hungary: University of Debrecen, Debrecen  
Italy: Università degli Studi di Perugia, Perugia; Università per Stranieri di Perugia, Perugia.  
Japan: International Christian University, Mitaka; Ritsumeikan Asia Pacific University, Beppu  
Mexico: Universidad de las Américas-Puebla  
Norway: University of Oslo  
Poland: Cracow University of Economics, Cracow  
Romania: Babes-Bolyai University

Spain: Universidad Carlos III de Madrid, Madrid  
 South Korea: Seoul National University of Science and Technology, Seoul  
 Switzerland: Zurich University of Applied Sciences, Zurich  
 Taiwan: National Taiwan Normal University, Taipei  
 Turkey: Middle East Technical University, Ankara

#### Consortia Programs

Japan Center for Michigan Universities (JCMU), Hikone, Japan  
 Consortium for Overseas Student Teaching (COST), various locations

#### Affiliate Programs

Academic Programs International (API), various locations  
 American Institute for Foreign Studies (AIFS), various locations  
 Council on International Education Exchange (CIEE), various locations  
 Cultural Experiences Abroad (CEA), various locations  
 Edge Hill University (EHU), Ormskirk, England  
 European Study Abroad (EUSA), various locations  
 Global Semesters, various locations  
 Hellenic International Studies of the Arts (HISA), Paros, Greece  
 International Studies Abroad (ISA), various locations  
 University of Deusto (CIDE), Bilbao, Spain

#### International Student Services Program

Grand Valley recognizes the importance of international students to the campus community. Accordingly, the program serves as the organizer, promoter, and facilitator of various crosscultural exchange activities. Also, the program provides support services that include assistive orientation, crosscultural adjustment seminars, housing assistance, and overseas immigration regulations and work authorization.

#### Study Abroad

The Padnos International Center (PIC) supports the academic programs in all departments, divisions, and schools by offering and coordinating study abroad opportunities in countries around the world. Semester and year-long academic programs are available to all degree-seeking students in all academic majors and minors.

Grand Valley offers various scholarship and grant opportunities, including the Barbara H. Padnos Study Abroad Scholarship (year-long study with preference given to majors in the arts and humanities), The Mark A. and Elizabeth E. Murray Study Abroad Scholarship (related to financial need), and the PIC Study Abroad Grant (open to both graduate and undergraduate students). The Padnos International Center also maintains a roster of other scholarships and grants for study abroad.

The Padnos International Center maintains a fully staffed resource room, where students can explore participation in overseas opportunities throughout the world. Guidance, enrollment support, financial aid coordination, and credit transfers are services offered by PIC staff members. Students are encouraged to visit the center's resource room early in their academic studies, so that appropriate planning can be undertaken.

#### IS 380

International Studies 380 is the special topics course in which students enroll when they study abroad. Students on study abroad programs enroll in this "placeholder" course until the transcript arrives from the overseas institution, at which time the course is converted to an equivalent Grand Valley course (replacing IS 380 on the transcript). In cases where there is no comparable Grand Valley course, the original IS 380, with an appropriate subtitle, remains on the transcript. Students may enroll in one to 16 credits of IS 380 per academic term, if approved for study abroad through an application process administered by the Padnos International Center.

#### IS 680

International Studies 680 is similar to IS 380, but serves the role of placeholder for graduate credit, for Grand Valley graduate students participating in study abroad programs.

#### Faculty-led Programs

Students can acquire international experience through a variety of short-term, Grand Valley-sponsored programs, generally led by Grand Valley faculty members. There are more than 25 programs per year. Summer programs may include:

Bordeaux, France: French language and culture  
 Capetown, South Africa: Women and gender studies  
 Central London, England: Urbanization/geography and British culture  
 El Salvador, Central America: Social work  
 Kingston, England: Art  
 Oman 38 UAE: Business Arabic and Middle East culture  
 Osaka, Japan: Japanese language and culture  
 Schwäbisch-Gmünd, Germany: German language and culture  
 Shanghai, China: Eastern philosophy, language, and civilization

PIC assists students with their plans and participation in these programs. It coordinates programs with the financial aid and registrar's offices to ensure academic credit and financial aid for program participation. It also maintains a comprehensive file of authorized international study programs throughout the world, assists with the coordination of faculty exchanges, and provides information on opportunities for research, teaching, and working abroad.

#### Academic Activities

The Padnos International Center organizes various academic activities, including lecture series, break roundtables, conversation series, and research forums during fall and winter semesters.

For more information, contact the Padnos International Center, 130 Lake Ontario Hall, or call (616) 331-3898.

## Career and Employment Resources Career Center

The Career Center helps you explore career options, develop short- and long-term career action plans, and connect with employers and professionals in your field of study. Through a variety of programs and one-on-one appointments, we can help you develop strategies that will lead to meaningful careers.

#### Individual Assistance

Career Center advisors help undergraduate students, graduate students, and alumni determine their interests and values as they relate to career choices and provide career guidance or job/internship search assistance.

Services include:

- Career testing and self-assessment
- Career planning
- Career and major exploration
- Graduate and professional school exploration
- Internships and cooperative education
- Interviewing and resume/cover letter writing skills
- Job and internship search strategies
- Networking strategies

To schedule an appointment, call or stop by one of our two primary locations: 206 Student Services Building and 101B DeVos Center, (616) 331-3311, careers@gvsu.edu. Appointments can be made between 8 a.m. and 5 p.m., Monday through Friday. Walk-in sessions are also available. Time for Ten is a walk-in program that allows for a 10-minute individual consultation without an appointment during the academic year. Services are also available at the L. William Seidman Center, L.V. Eberhard Center, and at the Cook-DeVos Center for Health Sciences in Grand Rapids; the Meijer Campus in Holland; the Muskegon Regional Center at Muskegon Community College; and the Traverse City Regional Center by appointment. Visit our website at [www.gvsu.edu/careers/](http://www.gvsu.edu/careers/).

## Student Services

### LakerJobs

LakerJobs is an online job search tool for students and alumni that contains thousands of internships, as well as part- and full-time career opportunities with Grand Valley employer partners. New opportunities are posted daily and it is free to use.

Login with your GVSU network ID and password at [www.gvsu.edu/lakerjobs/](http://www.gvsu.edu/lakerjobs/).

You can also use LakerJobs to

- get information on and register for upcoming career fairs, workshops, and information sessions;
- participate in on-campus interviews;
- make your resume available to employers through resume books;
- have jobs automatically emailed to you with search agents and job blasts; and
- research employers that recruit at Grand Valley.

### Focus II

Focus II is a free, personalized career and education planning tool. It is designed to help you explore careers and majors by identifying those that best fit your career interests, values, personality, and skills. From the results, you can explore in-depth information related to specific careers.

Create an account at [www.gvsu.edu/careers/focus2/](http://www.gvsu.edu/careers/focus2/).

### Employer Connections

Engaging with employers early and throughout a student's college career is critical to successful career development, along with gaining experience, and obtaining postgraduate employment. The Career Center has dedicated resources to help you discover and nurture local, regional, and national employer connections. This is done through on- and off-campus events offering opportunities to meet and network with a wide variety of employers. Employers also come to campus throughout the year to conduct on-campus interviews for internships, cooperative education, and full-time employment.

### Career Courses

The Career Center offers both career exploration (US 102) and job and internship search (US 301) classes.

## Employment Statistics for 2014-2015

Grand Valley State University is focused on ways to enhance the success of our graduates, with success defined as advancing graduates to the next step along the career path of their choice. For students whose immediate postgraduation plans are to enter the workforce, success is securing a paid position that allows them to advance toward their long-term career goals. For students whose career choice requires an advanced degree, success is gaining admission to graduate or professional school. For other students, the next step may be military service, volunteer work, a focus on family, or some other activity that is unique to achieving their chosen personal and professional goals. It is important for the university to get feedback on how we are doing in preparing students for success in achieving their postgraduation plans. One source of feedback is responses to our annual First Destination Survey.

Results of this survey show that placement rates for Grand Valley graduates continue to be high; 93.83 percent of 2014-2015 graduates report being employed and/or enrolled in graduate school.

A breakdown of placement rates by GVSU college is included as follows. For more detailed information on reported statistics or assistance with preparation for the employment search, please contact the Career Center at [career@gvsu.edu](mailto:career@gvsu.edu) or (616) 331-3311.

GVSU College	Employed Only	Employed and in Graduate School	Graduate School Only	Placement Rate
Brooks College of Interdisciplinary Studies (BCOIS)	70.37%	8.64%	11.11%	90.12%
College of Community and Public Service (CCPS)	82.64%	5.99%	4.55%	93.18%
College of Liberal Arts and Sciences (CLAS)	72.07%	7.18%	11.93%	91.19%
College of Health Professions (CHP)	77.32%	7.56%	13.06%	97.94%
College of Education (COE)*	83.80%	4.93%	3.17%	91.90%
Kirkhof College of Nursing (KCON)	84.26%	10.19%	1.85%	96.30%
Seymour and Esther Padnos College of Engineering and Computing (PEEC)	89.51%	4.94%	2.47%	96.91%
Seidman College of Business (SCOB)	87.03%	6.31%	3.24%	96.59%
<b>University Total</b>	<b>79.51%</b>	<b>6.53%</b>	<b>7.79%</b>	<b>93.83%</b>

\*College contains graduate programs only. Undergraduate employment statistics for teachers are reported in the college of their major.

## Internships, Cooperative Education, and Experiential Education Programs

GVSU employer partners agree – students benefit from having career-related experience in addition to a college degree. The Career Center provides assistance in preparing for and obtaining internships and other meaningful work experiences.

### Internships

An internship is a supervised work experience directly related to an academic discipline taking place outside of the classroom and directed by a field supervisor. An internship typically lasts one semester, may be full- or part-time, a paid or unpaid work experience, and may be completed for-credit or not-for-credit.

### Cooperative Education (co-op)

A co-op is a specific type of work training experience in which students have at least two full- or part-time supervised and paid work experiences related to their major, each lasting at least one semester. The co-op program is specifically designated as such by the academic department.

### Benefits

In addition to the possibility of earning college credit, internships/co-ops provide opportunities to learn new skills and apply learned theory to the world of work. Other benefits include exploring available career options, developing realistic career goals and expectations, building relationships with professionals and employers, gaining career-related experience, supplementing grades, and receiving possible employment offers or recommendations for future employment.

### Academic Requirements and Credits

Each academic department determines the academic requirements for internships and cooperative education experiences. Unless an academic department requires completion of an internship/co-op, it is up to an individual student to decide whether or not they wish to pursue receiving

credit for their experience (occasionally, employers require interns to receive college credit for their experience). When seeking credit for an experience, a faculty advisor within each academic department is responsible for final approval of internships/co-ops to ensure that the experience meets specific departmental criteria. A maximum of 15 internship/cooperative education credits may be applied toward graduation. The nature of the academic component of an internship/cooperative education experience is defined by the academic department. A student may not use a single work experience to generate both internship/cooperative education credit and other forms of credit, e.g., independent study credit.

### Criteria

Internships and co-ops may be initiated by a faculty advisor, employer, student, or the Career Center. The work setting for internships/co-ops must provide an opportunity for learning that is relevant to the student's academic field as well as a field supervisor to oversee and evaluate the work.

The length of the internship/co-op is determined prior to the beginning of the internship by the employer, the student, and the internship coordinator. An internship/cooperative education experience can be terminated prior to completion by the internship coordinator, field supervisor, or student. However, permission for course withdrawal is vested exclusively in the faculty for credit-bearing internships. In 2015-16, 8,275 students participated in some type of experiential education program.

## Student Employment

The Student Employment office assists students in obtaining employment that will help finance their education and develop valuable work skills needed for their future careers. The office is a resource for students seeking employment opportunities while attending Grand Valley. The staff works directly with on-campus departments and off-campus employers. LakerJobs is our online database that contains both student and professional jobs in one convenient place, including on-campus, off-campus, work study, part-time, internship, co-op, and full-time career opportunities.

Visit LakerJobs at [www.gvsu.edu/studentjobs](http://www.gvsu.edu/studentjobs) to search for current job postings. Jobs are posted daily. For more information, contact the Student Employment Office by phone at (616) 331-3238 or email at [studentjobs@gvsu.edu](mailto:studentjobs@gvsu.edu). The office is located at 100 Student Services Building.

## Children's Enrichment Center

The Children's Enrichment Center enriches the lives of Grand Valley's youngest students. Located on West Campus Drive, the center serves young children 2 to 12 years of age from the Allendale Campus and the nearby community. The program is designed to help children nurture habits of intellectual growth, curiosity, and a love for learning. To learn more about enrollment or volunteer opportunities, call (616) 331-KIDS (5437) or visit the website at [www.gvsu.edu/child/](http://www.gvsu.edu/child/). Hours are from 7 a.m. to 6 p.m., Monday through Friday, year-round.

## Communications

WGVU Public Media is a multiplatform Public Media organization licensed to the Board of Trustees, Grand Valley State University. WGVU Public Media provides content across TV, radio, mobile, and Web and in the community that offers a hands-on experience for students in broadcasting, communications, journalism, marketing, business, and nonprofit leadership.

WGVU-TV 35/WGVU-DT 11 and WGVK-TV 52/WGVK-DT 5, affiliated with the Public Broadcasting Service (PBS), present a variety of educational, informative, and entertaining programs, including children's shows, public affairs, cultural offerings, and sports. The stations also supply educational programming for thousands of elementary and secondary school children and produce several local programs for west and southwest Michigan.

WGVU 88.5 FM Grand Rapids and 95.3 FM Whitehall are National Public Radio (NPR) stations licensed to the Board of Trustees, Grand Valley State University. The stations broadcast news and information programs from NPR, PRI, and Michigan Association of Public Radio. A strong commitment to local news is emphasized. Evenings and overnight hours broadcast jazz, with the weekends adding blues. WGVU 1480 AM Grand Rapids and 850 AM Muskegon are NPR stations also licensed to the Board of Trustees, Grand Valley State University. The stations broadcast music with NPR and local news.

WGVU.org provides news, local information, and community outreach as well as local and national PBS programming. WGVU Public Media also produces and facilitates a variety of community engagement initiatives and events throughout the year through WGVU Engage delving into the areas of inclusion, health, arts, veterans, and education.

For those planning careers in broadcasting or nonprofit leadership, the television and radio stations offer many intern positions through which students can gain practical on-the-job training under actual broadcast conditions. Our television and radio stations also provide employment opportunities and professional experience for students, and two annual Grand Valley tuition scholarships are awarded. The offices and studios are located in the Meijer Public Broadcast Center on the Robert C. Pew Grand Rapids Campus.

You can learn more at [www.WGVU.org](http://www.WGVU.org) or call WGVU Public Media at (616) 331-6666 or (800) 442-2771.

## Computer Support

Grand Valley has more than 50 SMART technology classroom/computer labs (computer, LCD projector, document camera, DVD, and VCR) with Windows and Macintosh computers running more than 270 software applications. In accordance with the Americans with Disabilities Act (ADA), accessible stations are available in most labs. SMART technology is available in more than 440 classrooms and labs. There is wireless connectivity in all academic buildings and housing locations. All classroom and student living areas are networked for Internet access, email, courseware, registration, and many other student services. Digital media assistance is available to students and faculty members. Free printing is available in the labs, as well as cloud printing services from on/off campus. Microsoft Office 365 is available for all students and faculty and staff members free of charge; also, there is free antivirus software for all GVSU-owned computers including enrolled student-owned computers. Computing and technology support services are available to all faculty and staff members and students.

## Division of Student Services

The Division of Student Services, led by the vice provost for student affairs and dean of students, is comprised of more than 150 employees and graduate staff members. The nine units in the division reflect a variety of functional areas in student affairs, including Campus Recreation, Career Center, Children's Enrichment Center, Health Center (Allendale), Housing and Residence Life, Student Academic Success Center, Student Life, the University Counseling Center, and the Dean of Students Office. The division has a very close working relationship with the Division of Inclusion and Equity; the assistant vice president for inclusion and equity also serves as the associate vice provost for student affairs.

The mission of the Division of Student Services is to foster lifelong learning through programs and services that engage all students in the university community; support their academic, personal, and professional goals; and positively impact student success. Our ultimate goal is to create an unparalleled educational experience that creates engaged and independent students who are prepared to be active, principled contributors and leaders within their professions and communities.

## Student Services

### Dean of Students Office:

#### University Conduct, Intervention, and Support

Grand Valley State University strives to provide a safe and healthy environment where all students can successfully learn and grow. In the Dean of Students Office, our goal is to help students develop a greater sense of self-awareness and to provide support on their paths toward becoming engaged and productive global citizens.

We recognize that issues may arise when students make choices that conflict with the values and policies of the university. We work with students to address these issues, while focusing on what may be causing the behavior. We focus on informing students about all aspects of the conduct process, while ensuring fair treatment of everyone involved.

In addition to working with student conduct, the Dean of Students Office also coordinates intervention and support for students who may be struggling on campus. In some cases, students might be confronting certain issues for the first time, while for others these issues may be ongoing. We focus on helping these students get connected with campus resources and we provide outreach and follow-up to support student success.

The Dean of Students Office serves as a resource for the campus community — students and faculty and staff members.

The Student Code lists Grand Valley rules and regulations and outlines campus conduct processes. People attending Grand Valley automatically place themselves under the rules and regulations published in the Student Code. Infraction of these rules is dealt with by campus conduct bodies comprised of students, faculty members, and staff members. The Student Code also outlines academic grievance and nonacademic grievance processes. For more information regarding conduct and grievance processes, please refer to [www.gvsu.edu/conduct](http://www.gvsu.edu/conduct) and/or [www.gvsu.edu/studentcode/](http://www.gvsu.edu/studentcode/).

#### Student Ombuds

The ombuds strives to promote fairness and foster a positive campus environment by offering students a number of mechanisms for early conflict resolution and problem-solving. Students may contact the ombudsman at any time during a conflict for assistance. The ombuds will listen, help them come up with next steps, and discuss other resources that might be helpful. Typical concerns brought to the student ombudsman include disciplinary concerns, academic concerns, discrimination, harassment, cultural conflicts, financial concerns, administrative issues (procedural questions), roommate concerns, housing issues, supervisor/employee concerns, workplace issues, professionalism (or lack thereof), and interpersonal communications.

#### Veterans Network

The Veterans Network provides support services and resources to active service members, military veterans, guards/reservists, and family members. The Veterans Network coordinates Grand Valley's Peer Advisor for Veteran Education (PAVE) program, which pairs a returning student veteran with each entering student. Additionally, the network provides training for faculty and staff members; outreach with community and governmental agencies; event coordination for military veterans; and maintenance of a comprehensive website. Additionally, the Veterans Network provides support and assistance to Grand Valley State University's Chapter of the Student Veterans of America (SVA) in creating a channel for student veterans to connect with and support one another.

### Division of Inclusion and Equity

Through collaboration, consultation, and leadership with students, faculty and staff members, administrators and community partners, the Division of Inclusion and Equity advances Grand Valley's social justice framework for equity and inclusion. The division coordinates sustainable and strategic institutional efforts to engage all members of the community, while also intentionally supporting and advocating for historically underrepresented communities. The division's work furthers the university's liberal

education and student-centered mission. Offices in the division fall under two main units:

- Inclusion, Service, and Social Justice Centers
- Equity, Planning and Compliance

### Inclusion, Services, and Social Justice Centers Campus Interfaith Resources

The university provides opportunities for positive interfaith engagement around the religious, spiritual, and secular diversity of students, staff members, and faculty members. The aim of this work is to foster a campus climate inclusive of various identities and communities, to ensure that students are able to develop their worldviews in an affirming environment, and to promote an open and pluralist understanding of our increasingly diverse schools, workplaces, and communities.

Some of the religious and interfaith services and resources at Grand Valley:

- **Faith-based, spiritual, and secular student organizations**, including Campus Ministry (interdenominational), Center for Inquiry, Hillel, Mindfulness and Meditation, Muslim Students Association, and more.
- **An inclusive prayer and meditation space** located in 2243 Kirkhof Center, available as an open, silent space for all students, staff members, and faculty members.
- **Interfaith community service projects** both on campus and with community partners.
- **On-going opportunities for intergroup dialogue.**

Campus Interfaith Resources are provided through the Division of Inclusion and Equity and supported by the Kaufman Interfaith Institute. Information on campus interfaith efforts can be found at [www.gvsu.edu/campusinterfaith](http://www.gvsu.edu/campusinterfaith), and information on community interfaith efforts can be found at [www.gvsu.edu/interfaith/](http://www.gvsu.edu/interfaith/). Katie Gordon, Campus Interfaith Resources coordinator and Kaufman Interfaith Institute program manager, can be reached by calling (616) 331-5702 or emailing [gordonk1@gvsu.edu](mailto:gordonk1@gvsu.edu).

#### Gayle R. Davis Center for Women and Gender Equity

The mission of the Gayle R. Davis Center for Women and Gender Equity is to create meaningful learning about women and gender and to advocate for gender justice through the education, engagement, and empowerment of women students and the greater Grand Valley community. The center creates an environment where students and faculty, staff, and community members can increase self-awareness about gender justice, connect with resources, apply skills through conducting research or internships, and perform service learning.

The center works to achieve the following:

##### **Make connections to campus and community resources.**

The center serves as a welcome starting place for any student needing assistance with personal and/or academic challenges. Staff members are trained to help connect students with those who can best assist them. The center also offers food resources, as well as personal care items, at no cost to support students dealing with food and financial insecurity.

##### **Engage the campus community in antiviolence work.**

The center houses the campus victim advocate who provides resources and support for victim/survivors of gender-based violence. It collaborates with numerous campus partners to work toward ending instances of sexual assault, dating/domestic violence, and stalking.

##### **Provide internship and service-learning opportunities.**

The center works with numerous nonprofits in the community that seek to advance gender justice. Through the Women's Community Collaborative, Activate (the center's service learning training system), and the South Africa study abroad program, students can make a meaningful difference by engaging with our center, our campus, and our community.

**Foster leadership and advocacy.**

The center engages students in leadership development and works with students to advocate for gender justice. This is done through the ATHENA leadership program, the ambassador program, the Gender Justice House (a living/learning residential community), Niara (a mentoring program for women of color), and internship experiences in the center.

The center is located in 1201 Kirkhof Center. Contact us by phone at (616) 331-2748, visit our website at [www.gvsu.edu/women\\_cen](http://www.gvsu.edu/women_cen), or email us at [womenctr@gvsu.edu](mailto:womenctr@gvsu.edu).

**Kaufman Interfaith Institute**

The Sylvia and Richard Kaufman Interfaith Institute at Grand Valley works to promote interfaith understanding and mutual respect in West Michigan through programs and conferences. As a community-focused organization housed at the university, the Kaufman Interfaith Institute organizes events, service opportunities, and trainings in the community and works closely with religious and nonprofit organizations in West Michigan. The Kaufman Interfaith Institute seeks to promote a vibrant and diverse community, benefiting people of all generations, through interfaith dialogue and service. Learn more about the Kaufman Interfaith Institute at [www.gvsu.edu/interfaith](http://www.gvsu.edu/interfaith).

**Milton E. Ford Lesbian, Gay, Bisexual, and Transgender (LGBT) Resource Center**

The Milton E. Ford LGBT Resource Center is committed to educating, supporting, and empowering students to lead authentic lives, to challenge systems of gender and sexuality, and to work for social justice.

The center strives to create an inclusive and just environment where the many expressions of gender and sexuality are celebrated within the complex identities of all students. We support and challenge LGBT students on their developmental journey, as well as create a space for all students to confront and overcome personal bias. We envision our students becoming dynamic leaders in the social justice community who demonstrate solidarity with other marginalized communities by working together to challenge intersecting systems of oppression.

The center also provides resources, services, education, and leadership programs related to gender and sexuality in order to meet the many needs of the diverse LGBTQIA and allied communities. The center

- supports several student groups, including First-year Queer Alliance, Loud and Queer, and T2, a group for transgender and nonbinary-identified students;
- provides social and educational programming throughout the year; and
- delivers training to students and faculty, staff, and community members on topics related to gender and sexuality.

The Milton E. Ford LGBT Resource Center is located in 1161 Kirkhof Center. Contact us by phone at (616) 331-2530, visit our website at [www.gvsu.edu/lgbtrc](http://www.gvsu.edu/lgbtrc), or email us at [lgbtcenter@gvsu.edu](mailto:lgbtcenter@gvsu.edu).

**Office of Multicultural Affairs**

The Office of Multicultural Affairs (OMA) is committed to building an inclusive campus that promotes acceptance and appreciation of the diversity, background, and perspective of each individual. Through our signature Professionals of Color Lecture Series, cultural heritage celebrations, and social justice programs, OMA enhances student learning and development by fostering an appreciation for the history, tradition, and culture of different ethnic groups and empowering students to be active and engaged learners.

OMA also provides retention programs that engage all students, while also intentionally advocating for students from historically underrepresented communities. These programs assist students in achieving personal and academic success by promoting a smooth transition from high school to college, creating a sense of belonging, and connecting students to resources and mentors. High-impact learning outcomes are integrated

into programs' activities to offer an array of opportunities for students to develop lifelong skills that will benefit their lives and careers after college.

OMA offers a welcoming environment with a gathering space at 1240 Kirkhof Center on the Allendale Campus. Call (616) 331-2177, email [oma@gvsu.edu](mailto:oma@gvsu.edu), or visit our website at [www.gvsu.edu/oma/](http://www.gvsu.edu/oma/).

**Social Justice Education**

The mission of the Social Justice Education program is to advance the application of Grand Valley's framework for inclusion and equity by supporting and providing transformational self and professional development for all community members. The Social Justice Education program provides regularly scheduled training opportunities and fulfills requests for trainings tailored to the specific needs of a department, class, or campus group. In addition, the Social Justice Education program partners with the Affirmative Action and EEO office on trainings for Inclusion Advocates. Request a training or view scheduled opportunities at [www.gvsu.edu/socialjustice/](http://www.gvsu.edu/socialjustice/).

**Equity, Planning, and Compliance**

The Equity, Planning, and Compliance (EPC) unit ensures the university's compliance with all federal and state laws related to civil rights; investigates complaints of discrimination, harassment, and sexual misconduct in accordance with university policy; provides consultation to university departments on accessible, equitable, and inclusive practices and processes; and oversees the division's strategic planning process. Equity, Planning, and Compliance includes the Affirmative Action and Equal Employment Opportunity (EEO) office, the Title IX office, and Disability Support Resources (DSR).

**Affirmative Action and Equal Employment Opportunity (EEO)**

Affirmative Action and Equal Employment Opportunity provide leadership to the campus for all facets of promoting and monitoring equal employment opportunity and the university's affirmative action program. They also monitor the implementation of the Board of Trustee's Equal Opportunity/Affirmative Action Policy, develop educational programs on affirmative action and equal opportunity laws, policies, and procedures, as well as issues of harassment and discrimination, and investigate and address related complaints. Affirmative Action and Equal Employment Opportunity is located in 4035 Zumberge Hall. Contact us by phone at (616) 331-2242, visit our website at [www.gvsu.edu/affirmative](http://www.gvsu.edu/affirmative) or email us at [ayottesc@gvsu.edu](mailto:ayottesc@gvsu.edu).

**Disability Support Resources**

Disability Support Resources (DSR) provides support services and accommodations that enhance the environment for persons with disabilities and helps educate the university community on disability issues. The office also provides access to programs and facilities for faculty members, staff members, and students. Grand Valley promotes the full inclusion of individuals with varying abilities as part of our commitment to creating a diverse, intercultural community. It is the policy of Grand Valley to comply with the Americans with Disabilities Act as amended by the ADA Amendment Act (2008), Section 504 of the Rehabilitation Act of 1973, and other applicable federal and state laws that prohibit discrimination on the basis of disability. Grand Valley will provide reasonable accommodations to qualified individuals with disabilities upon request. DSR is located in 4015 Zumberge Hall. Contact us by phone at (616) 331-2490, visit our website at [www.gvsu.edu/dsr](http://www.gvsu.edu/dsr), or email us at [dstrgvsu@gvsu.edu](mailto:dstrgvsu@gvsu.edu).

**Title IX**

Title IX protects any person from sex-based discrimination, regardless of their real or perceived sex, gender identity, and/or gender expression. Female, male, and gender nonconforming students, faculty members, and staff members are protected from any sex-based discrimination, harassment, and violence. Grand Valley State University is committed under Title IX to address incidents involving acts of sex-based discrimination and sexual misconduct, which includes sexual assault,

## Student Services

dating and domestic violence, and stalking against students, faculty members, and staff members. The Title IX coordinator is responsible for the monitoring and oversight of the overall implementation of the university's Title IX compliance, including the coordination of training, education, communications, and the administration of grievance procedures for faculty and staff members, students, and other members of the university community. Theresa Rowland, Title IX coordinator and equity officer/director, can be reached by calling (616) 331-9530 or emailing rowlanth@gvsu.edu. You may also visit the Title IX website at [www.gvsu.edu/titleix/](http://www.gvsu.edu/titleix/).

### Grand Valley Department of Public Safety

Grand Valley Department of Public Safety (GVDPS) is a multidisciplinary department. We provide police, security, emergency management, and parking services to the campus community. We strive to provide a safe and secure environment in which to work, live, and learn.

The Grand Valley Police Department (GVPD) is a full-service law enforcement agency responsible for enforcing the laws of the State of Michigan and the university rules and regulations. Officers have full police authority and are licensed by the Michigan Commission on Law Enforcement Standards. Services provided by GVPD include, but are not limited to, criminal investigations, traffic and parking enforcement, community policing, and educational programming. Additionally, we provide emergency management for the university with respect to preparedness, awareness, and education.

Our Security Department is based at the Robert C. Pew Grand Rapids Campus, from which we provide 24/7 security patrol and nonsworn response to calls for service. We partner with the Grand Rapids Police Department for law enforcement services and emergency response.

GVDPS is located in the Service Building in Allendale, on the north end of campus. We can be reached at (616) 331-3255. In the event of an emergency, always dial 911.

To learn more about our department and the services we offer, please visit our website at [www.gvsu.edu/gvpd/](http://www.gvsu.edu/gvpd/).

### Parking

Parking at Grand Valley requires a permit, unless opting to pay to park at conveniently located meters or pay stations. Annual permits are available for students to purchase online or from Parking Services after July 1 each year. Temporary permits are also available to visitors. All permits may be obtained at the Grand Valley Department of Public Safety in Allendale or at Grand Valley Campus Security Department on the Pew Campus in the L.V. Eberhard Center. All permits are available during Parking Services business hours only.

**Americans with Disabilities Act (ADA) Parking:** A State of Michigan ADA plate or tag and a GVSU parking permit are required to park on campus in any ADA space. In addition to allocating a number of designated ADA parking spaces, Grand Valley has instituted a shuttle service through Disability Support Resources. There are designated lots on both the north and south sides of the Allendale Campus to accommodate a "park and ride" service for those needing ADA accommodations. For additional information, please visit our website and click on the Disability Parking tab or call Disability Support Resources at (616) 331-2490.

Parking Services strives to provide excellent customer service and communicate changes concerning parking to the Grand Valley community. For more information about parking, including our hours of operation, please visit our website at [www.gvsu.edu/parking](http://www.gvsu.edu/parking) or call (616) 331-PARK (7275).

### GVSU Laker Store

[lakerstore.gvsu.edu](http://lakerstore.gvsu.edu)

Textbooks for classes taught at Grand Valley State University are available through GVSU Laker Store with locations in Allendale and Grand Rapids.

Students attending classes on the Allendale Campus will find their textbooks and required supplies at the store in the Marketplace located across from the Student Services Building. In addition, the GVSU Laker Store offers a large selection of Grand Valley imprinted clothing and gifts, as well as classroom supplies, computers, technology and software, and books for leisure reading. The Allendale store also provides textbooks for students who attend classes at locations throughout Michigan, including Detroit, Holland, Muskegon, and Traverse City. Textbooks and merchandise may be ordered on the Web at [lakerstore.gvsu.edu/](http://lakerstore.gvsu.edu/).

GVSU Laker Store in Allendale is open from 8 a.m. to 6 p.m. Monday through Thursday, 8 a.m. to 5 p.m. on Friday, and 10 a.m. to 5 p.m. on Saturday. Hours are extended the first week of the semester. Telephone (616) 331-2450.

Students who attend classes on the Robert C. Pew Grand Rapids Campus can purchase textbooks at the GVSU Laker Store adjacent to the plaza on the first floor of the Richard M. DeVos Center. Hours are 8 a.m. to 6 p.m. Monday through Thursday, 8 a.m. to 5 p.m. on Friday, and 8 a.m. to 2 p.m. on Saturday. Telephone (616) 331-6602.

### Health Services

The Campus Health Center is located at 10383 A 42nd Avenue on the Allendale Campus. The center is designed to provide health care for students, faculty members, staff members, and their families on a walk-in basis. Services include (but are not limited to) the diagnosis and treatment of illnesses and accidents, physical exams, immunizations, women's health services, STD testing, and referrals. Physician assistants and nurses staff the center Monday through Friday during fall and winter semesters. The center is closed when classes are not in session. The Campus Health Center accepts all major health insurance plans and will bill them accordingly.

### Housing and Residence Life and Campus Dining

Although Grand Valley does not require on-campus residency for any classification of student, the university does consider residential living to be particularly beneficial in helping all students become oriented and adjusted to college life. A university staff member for each living center, together with student resident assistants, arrange educational, diversity, and recreational programs that serve to foster and maintain pleasant living and study conditions. Our full-time staff members work in conjunction with a graduate assistant and student resident assistants. Two students are assigned to a room, and students are allowed to choose their roommates whenever possible. **Traditional-style living centers** accommodate approximately 900 freshman students. Traditional-style living centers accommodate two people per room with semiprivate bathrooms in the hallway for all floormates to access. **Suite-style living centers** accommodate 1,000 students. The centers are divided into suites of two double rooms (for four students) and a shared bathroom. **Cluster-style living centers** offer student rooms that are similar to traditional-style (but are the size of suite-style units) and feature two- and three-person units. Resident rooms are clustered around shared bathroom and lounge spaces. **Apartment-style living centers** provide two students with bedrooms, a private bathroom, and a small kitchen. There are approximately 1,000 apartment-style living center beds. On-campus apartments are available for upperclass students and range from studios to four bedroom units.

Room and board may be paid in full at the beginning of each semester or, for a service charge, in four installments. All room-and-board rates are subject to change by action of the Board of Trustees.

Admission to Grand Valley does not guarantee housing of any kind, and students must make their own arrangements by contacting the Office of Housing and Residence Life. This should be done immediately upon acceptance for admission as living centers are filled on a first-come, first-served basis. Applications, contracts, and housing information are available at [www.gvsu.edu/housing/](http://www.gvsu.edu/housing/). Approximately 3,000 spaces in

the living centers are reserved for freshmen; the remaining spaces are available for upperclass students. All rooms are smoke-free.

### Apartments

Grand Valley has apartment living available on both our Allendale Campus and the Robert C. Pew Grand Rapids Campus. The apartment complexes on the Allendale Campus provide housing for students who have completed at least one full year of living on campus or have earned a minimum of 30 semester hours. There are four-bedroom, two-bedroom, one-bedroom, and efficiency apartments. A university staff member living in the complex, together with graduate assistants and student resident assistants, arranges educational, diversity, and recreational programs that foster pleasant living and study conditions.

Our apartments range from town home communities to more traditional apartment living, each providing a community building or lounge/common area. Apartments include a stove and refrigerator, beds, dresser, desks, chairs, and a sofa. Students provide other furnishings to suit their tastes. All apartments are smoke-free. Rent may be paid in full at the beginning of the semester or, for a service charge, spread out in four installments.

Apartments located on the Pew Grand Rapids Campus include furnished one-, two-, three-, four-bedroom, and single/double efficiency units. Winter Hall offers an on-site fitness center. Students residing here may select a meal plan at an additional cost.

Housing and Residence Life offers **living-learning communities** in a number of our on-campus apartments. Students living in these buildings have chosen to expand their education through shared learning experiences. Each community is built upon a specific theme, major, or area of interest. Professional and graduate staff members work closely with a faculty coordinator in these communities to provide a rich living-learning experience that extends outside of the classroom (programs, events, field trips, research, etc.). The living-learning communities offered are: Art Housing, Honors College, International House, Movement Science House, W.I.S.E (Women in Science, Engineering, and Math), and Women's Leadership House.

All of our units resemble privately developed apartments in every way, yet are conveniently located right on campus and offer support services that are highly beneficial to residents. Students must apply for housing each year. We accept applications daily and encourage any interested student to apply for housing. Applications and contracts are available online at [www.gvsu.edu/housing/](http://www.gvsu.edu/housing/).

### Housing Application Process

New students who want to live on campus should apply to the Office of Housing and Residence Life upon acceptance to Grand Valley. All first-year students are encouraged to apply before May 1 for the fall semester in which they plan to attend. Spaces are filled on a first-come, first-served basis. To be considered for on-campus residency, students must submit a housing application, contract, and \$150 security deposit. Housing applications are accepted and encouraged at any time and are available at [www.gvsu.edu/housing/](http://www.gvsu.edu/housing/).

Grand Valley offers housing options 12 months per year, with applications available for fall and winter, winter only, and spring/summer semesters. Specific building availability varies from fall/winter to summer semesters, though is offered on both campuses year-round. Residents may cancel their contract with written notice and will be charged according to our cancellation breakage schedule. This schedule is available on our website.

### Additional Housing

Additional living accommodations near the campus, including rooms, apartments, houses, and mobile homes are available at a wide variety of costs. Grand Valley does not involve itself in negotiations for off-campus rentals. The university does not inspect the units available, and students are advised to exercise normal caution in making rental agreements.

## Campus Dining

[www.gvsufood.com](http://www.gvsufood.com)

Nine meal plans are available to all Grand Valley students. Students living on north campus can choose from the 10 Plus, 14 Plus, and 19 Plus plans. Other on-campus and commuting students can select any plan.

### Meals

Meals are offered in six of the nine meal-plan options. Meals provide the opportunity to enjoy all-you-care-to-eat dining in the Fresh Food Company or can be used to purchase meal combos at 14 dining locations. One meal is subtracted from the meal balance each time a meal is eaten in the Fresh Food Company or a meal combo is used. Students on weekly meal plans may use up to three meals per day.

### Dining Dollars

All nine meal plans offer Dining Dollars. Dining Dollars are a debit account attached directly to a student's meal plan. Dining Dollars are accepted in all Campus Dining restaurants, C-Stores, coffee shops, and concession stands. It works like a debit card and can be used for beverages, snacks, or full meals at any time. Students may check their account balance online, at Campus Dining registers, or by using the GV mobile app. Students may add dollars at [www.gvsufood.com](http://www.gvsufood.com) or by visiting the Campus Dining office in 100 Commons on the Allendale Campus. Dining Dollars carry over from the fall to winter semester.

### Meal Plan Options 2017-2018

**Weekly Plans:** Meals are per week and do not transfer to the next week.

**19+:** 19 meals/week plus \$150 Dining Dollars

**14+:** 14 meals/week plus \$250 Dining Dollars (included with north campus housing contract)

**10+:** 10 meals/week plus \$350 Dining Dollars

**7+:** 7 meals/week plus \$325 Dining Dollars

**5+:** 5 meals/week plus \$150 Dining Dollars

**Semester Plans:** Meals can be used at your discretion throughout the semester.

**VALUE+:** 80 meals plus \$450 Dining Dollars

**CASUAL:** \$725 Dining Dollars

**CASUAL+:** 40 meals plus \$350 Dining Dollars

**EXPRESS:** \$300 Dining Dollars

Meals and Dining Dollars must be used before they expire at the end of the academic year. Purchases are nonrefundable. Visit [www.gvsufood.com](http://www.gvsufood.com) for more information.

Meal plans and Dining Dollars are accepted at all Campus Dining restaurants, C-stores, coffee shops, and concessions.

### Allendale Campus Dining Locations

**Au Sable Hall:** C3 Express

**Commons:** Bleeker Street, Einstein Bros. Bagels, Fresh Food Company, Freshens, Jump, Papa John's Express

**Holton Hooker Learning and Living Center:** Einstein Bros. Bagels

**Kirkhof Center:** Ciao, Croutons, Grille Works, Lobby Shop, Panda Express, Subway, Zoca

**Kleiner:** Bene, Center Plate, C3 Convenience Store, Croutons, ecoGrounds, Grille Works, Late Night, Montague's Deli, Qdoba, The Bistro

**Mackinac Hall:** P.O.D. Express

**Mary Idema Pew Library:** Argo Tea

**The Connection:** 42nd St. Deli, Croutons, Green Plate, Late Night, P.O.D., Papa John's Pizza

**The Marketplace:** Starbucks, WhichWich

### Pew Grand Rapids Campus Dining Locations

**DeVos Center:** Asian Kitchen, Bene, Grille Works, Trattoria, Starbucks

**Seidman College of Business:** Seidman Cafe

### Office of Undergraduate Research and Scholarship

The Office of Undergraduate Research and Scholarship (OURS) offers a variety of opportunities and resources for undergraduates to pursue research and scholarship in various disciplines under the direction of a faculty mentor. These intensive research and scholarship opportunities enrich students' academic experiences and challenge them to strengthen their critical, analytical, and writing skills.

Some of the hallmark programs of OURS:

- Student Summer Scholars, an opportunity for mentored, student-driven research and reflection on diverse and intersecting disciplines
- Student Scholars Day, a year-end discussion and celebration of the academic and creative accomplishments of GVSU students
- OURS Grant, a mini-grant opportunity designed to encourage collaborative scholarly research and creative work between undergraduate students and faculty on a semester project
- Academic Conference Fund, a grant program established to provide travel funds for GVSU students to present/perform at an academic conference
- Academic and Professional Enrichment Fund, a grant program established to provide travel funds for GVSU students to accompany an eligible faculty member to an academic conference

Participating in undergraduate research and scholarship will expand your academic experience at GVSU. Research is a process of careful inquiry leading to the discovery of new information. Although there are some differences in how research is conducted across disciplines, research is not restricted to certain disciplines and occurs in all programs at GVSU.

For more information, visit [www.gvsu.edu/ours/](http://www.gvsu.edu/ours/).

### Pew Campus Student Services

Working closely with students, faculty members, and staff members, the goals of this office are to enhance learning opportunities, engage students, and foster a sense of community by expanding opportunities for all students. By working closely with many departments, including the dean of The Graduate School, Center for Adult and Continuing Studies, Inclusion and Equity, Gayle R. Davis Center for Women and Gender Equity, Student Life, Housing and Residence Life, and other stakeholders, we identify and solve problems collaboratively. Within the office located in 101B DeVos Center, students can contact the assistant dean of students, obtain general assistance, career planning and job seeking information, personal counseling, and find support for students who have previously served, or currently serve in the U.S. military.

For more information, visit our website at [gvsu.edu/pewcampus](http://gvsu.edu/pewcampus) or call (616) 331-7220.

### Recreation

**Get involved. Be active. Live healthy.** GVSU Campus Recreation has a wide variety of recreational, wellness, competitive, and educational resources for the Grand Valley community. Our values include providing inclusive and diverse recreational opportunities that inspire participation, promote health and well-being, and encourage student development and success. The Student Recreation Center provides access to exercise equipment, as well as multipurpose courts. For those who are looking to participate in organized sports, there are both recreational and competitive level options through intramural sports and club sports programs. Also, there are organized fitness offerings through Fitness and Wellness services, including group exercise classes, small group training programs, instructional clinics, personal training services, massage appointments, swim lessons, and nutrition services. In addition, outdoor recreation options, trips, and bike rentals are offered through the Climbing Center and Outdoor Adventure program. A full list of offerings and schedules are available on our website, along with information on student employment, internships, and fieldwork positions.

### Outdoor Adventures

Outdoor Adventures (OA) strives to empower and inspire the Grand Valley community through outdoor and adventure based activities. Whether you're looking for gear for your next epic adventure, a fun trip with friends, or an educational clinic to improve future outdoor experiences, OA can help!

OA oversees the 26.5-foot-tall artificial climbing wall inside the Fieldhouse, which offers three styles of climbing and accommodates participants of all abilities. Best of all, it's FREE to Grand Valley students! The Climbing Center is also home to OA's outdoor gear rental inventory, which covers all your basic needs for a camping trip with friends at unbelievable prices. Items include hammocks, backpacks, tents, sleeping bags, snowshoes, and more!

OA also operates the GVSU Bike Shop located in Laker Village. The Bike Shop strives to develop a positive biking culture and offer services that support an educated and active cycling community. Services currently include affordable used bike rentals, free self-service maintenance, as well as educational and recreational programming. We will soon be adding drop-off maintenance/basic parts sales. The Bike Shop has played a significant role in GVSU's silver level award as a Bicycle Friendly University.

For more information, please visit [www.gvsu.edu/outdooradventures/](http://www.gvsu.edu/outdooradventures/).

### Club Sports

Club sports provide an exciting athletic alternative that bridges the gap between intramural play and varsity athletics. There are 55 club sports and 20 intramural sports that range from recreational to highly competitive levels. Many of our team sports are affiliated with national associations and compete on a regional and national level. Competitive teams often have coaches, as well as faculty advisors, travel regularly, and some are nationally ranked. If you are interested in joining a club sport, you can visit the website ([www.gvsuclubsports.com](http://www.gvsuclubsports.com)) and fill out the "Recruit Me" form, which will be sent to the appropriate sport's coach to let someone know that you are interested in joining a team. Some club teams hold try-outs, depending on the level of play. You can also visit [www.orgsync.com](http://www.orgsync.com) to look through the various sports, health, dance, and recreation organizations that are offered at Grand Valley. For more information, visit [www.gvsuclubsports.com/](http://www.gvsuclubsports.com/).

### Fitness and Wellness Center

The Fitness and Wellness Center is located on the lower level of the Recreation Center. Learn how to safely and effectively train, be active, and live a healthy lifestyle. Services include a free UFit exercise program for students, in addition to personal training, fitness testing, equipment orientations, nutritional services, massage, and more. Group exercise classes are offered during the fall and winter semesters. Certified instructors teach more than 50 group exercise classes weekly, including land, mind/body, spinning, and functional fitness. Passes are available for purchase to students, faculty and staff members, and GVSU alumni Recreation Center members. For more information, visit [www.gvsu.edu/rec](http://www.gvsu.edu/rec), email [rec@gvsu.edu](mailto:rec@gvsu.edu), or call (616) 331-3659.

### Intramural Sports

The intramural sports program provides a quality recreational sports experience for a diverse university community, including students and faculty and staff members. The intramural sports program offers events in the fall, winter, and spring semesters that include men's, women's, and co-recreation leagues. The intramural sports program offers more than 15 sports, including basketball, flag football, softball, soccer, and volleyball. For more information or to get an updated list of our offerings, visit [www.gvsu.edu/rec](http://www.gvsu.edu/rec), email [gvintra@gvsu.edu](mailto:gvintra@gvsu.edu), or call (616) 331-1REC.

### Injury Care Clinic (ICC)

The ICC exists to provide free injury care services to the campus community. Metro Health, Campus Recreation, and Movement Science have teamed up to offer athletic training services right on campus. The

ICC is located in B-145 of the Fieldhouse near the Recreation Center and Climbing Center. The ICC provides injury assessment and evaluations, acute injury care, and short-term rehabilitation services. Individuals can opt to bring their own supplies for treatment or supplies are available on site for a minimal cost. For more information, including hours, visit [www.gvsu.edu/icc](http://www.gvsu.edu/icc) or email [injurycc@gvsu.edu](mailto:injurycc@gvsu.edu).

### Recreation Facilities

The Fieldhouse Complex houses the Aquatic Center, Arena, Climbing Center, Outdoor Adventure (OA) program, Fitness and Wellness Center, Injury Care Clinic, and the Recreation Center. Access to the Recreation Center, Aquatic Center, and OA is free to students for drop-in use when they present their student ID card. Within the Recreation Center, there are multisport courts, racquetball courts, strength training equipment, functional fitness areas, cardiovascular machines, an elevated track, and locker rooms. The Kelly Family Sports Center is also available for use of the indoor turf field space and the track. There are many outdoor facilities available to students, as well, including multiple turf fields, tennis courts, basketball courts, sand volleyball courts, roller hockey space, The Meadows golf course, an outdoor track, softball fields, walking and running trails, and the ravines. For more information, including hours, visit [www.gvsu.edu/sportsfacilities](http://www.gvsu.edu/sportsfacilities) or call (616) 331-3313.

### Transportation Services

Transportation between, within, and around the Robert C. Pew Grand Rapids Campus and the Allendale Campus is easy, convenient, and free.

Grand Valley State University offers five designated routes for students, faculty members, and staff members. All Grand Valley and The Rapid routes are free to ride with your student or faculty/staff ID card. All Grand Valley routes are listed as follows. Please view other routes at [www.ridetherapid.org/](http://www.ridetherapid.org/).

#### Campus Connector Route (Route 50)

The Campus Connector provides service between the Allendale Campus and Pew Grand Rapids Campus with runs Monday through Friday during fall, winter, and spring/summer semesters. The Campus Connector (Route 50) makes round trips from the Cook DeVos Center for Health Sciences (CHS) to Russel H. Kirkhof Center on the Allendale Campus with stops in downtown Grand Rapids, along Lake Michigan Drive, and at Mackinac Hall. Connections to The Rapid Central Station can be made through several routes including the Silver Line and Route 12.

#### North Campus Apartment Shuttle (Route 37)

The North Campus Express provides service between a variety of private apartment complexes immediately adjacent to the northwest portion of the Allendale Campus. The North Campus Apartment Shuttle runs Monday through Friday during fall and winter semesters only.

#### South Apartment Shuttle (Route 48)

The South Campus Express provides service between a variety of private apartment complexes immediately adjacent to the southwest portion of the Allendale Campus. The South Campus Apartment Shuttle runs Monday through Friday during fall and winter semesters only.

#### Weekend Connector (Route 50)

The Weekend Connector (Route 50) provides late night and weekend service between Kirkhof Center and CHS. The Weekend Connector is only offered during fall and winter semesters.

#### Apartment Connector (Route 85)

On early mornings and weekends, the two apartment shuttles combine into one loop, called Route 85. The Apartment Connector (Route 85) is only offered during fall and winter semesters.

Schedules and frequencies for all services are subject to change. Current schedules can be found online at [www.gvsu.edu/transportation/](http://www.gvsu.edu/transportation/). Please note that frequencies of service are reduced during spring/summer semesters and Grand Valley State University break periods. Questions

about the shuttle bus services should be directed to the Pew Campus Operations office at (616) 331-6700 or to [bus@gvsu.edu](mailto:bus@gvsu.edu).

### University Counseling Center

The University Counseling Center supports the well-being of individual students and the campus community through a broad spectrum of services, including individual counseling, group counseling, and outreach. The center is staffed by a diverse team of professional counselors committed to recognizing the unique needs and experiences of each student.

#### Concerns that might benefit from counseling:

- Feelings of anxiety or depression
- Thoughts of harming yourself or someone else
- Problems in relationships
- Issues related to cultural, sexual, or gender identity
- Recent or past trauma
- Death or loss of a loved one
- Drug or alcohol use
- Academic difficulties

#### Individual and Group Counseling Services

The University Counseling Center offers counseling services on both the Allendale and Pew campuses at no cost to enrolled Grand Valley students. Counselors and students work together to determine the best course of treatment, which may include individual counseling, group counseling, or referral to a community provider. Students can schedule an initial screening appointment by phone at (616) 331-3266 or in person on the Allendale Campus in 204 STU.

The center also offers urgent care services for students experiencing a mental health crisis. More information about urgent care and emergency mental health resources is available on the University Counseling Center website at [www.gvsu.edu/counsel/emergency-services-100.htm](http://www.gvsu.edu/counsel/emergency-services-100.htm) or by calling the center during business hours.

#### Outreach Services

Outreach workshops and events are scheduled throughout the academic year and equip students with the knowledge, skills, and resources necessary to maximize their emotional and physical health. Presentations related to well-being may also be requested on behalf of a student group or organization at any time. To view the outreach calendar or to submit a request for a presentation, please visit the University Counseling Center website at [www.gvsu.edu/counsel/outreach-141.htm/](http://www.gvsu.edu/counsel/outreach-141.htm/). In addition, counselors are available to provide consultation to students with concerns about a roommate, classmate, or other member of the Grand Valley community.

More information about the University Counseling Center and its services can be found at [www.gvsu.edu/counsel/](http://www.gvsu.edu/counsel/).

#### Alcohol and other drugs Campus Education Services (ACES)

Alcohol and other drug use (especially underage and dangerous drinking and illegal drug use) can affect all aspects of a student's life. ACES is devoted to developing and promoting opportunities for students to increase existing knowledge and skills necessary to make healthy and responsible choices regarding alcohol and other drugs.

ACES is a multidisciplinary program coordinated through the University Counseling Center. ACES provides services for individuals who

- want to be informed about the facts regarding substance use;
- may be struggling with alcohol or other drug issues;
- want to explore ways to have fun and enjoy life without substances; and
- are concerned or impacted by someone else's behavior and wish to help.

ACES has three main areas of focus: 1) prevention and education, 2) intervention, and 3) recovery. Our staff provides prevention and educational presentations on campus to various groups and organizations. The presentations can be tailored to specific needs and may be requested

## Community Resources

by using the contact information listed as follows. We also facilitate alcohol and marijuana education workshops. These workshops were developed for students who have had an alcohol or marijuana offense and are required to attend an educational group as a part of their legal or university sanction.

Students who are in need of substance abuse counseling, assessment, or support for their recovery can access counseling services at the University Counseling Center located in the Student Services Building, room 204. The counseling center has staff members who specialize in outpatient individual and group substance abuse counseling. The staff can provide community referral information if more intensive or longer term services are deemed necessary, or if counseling services have been court-ordered or mandated. Counseling services are available and free for currently enrolled Grand Valley students only. Please contact the University Counseling Center for the most current information. Students may call (616) 331-3266 for an appointment or visit us online at [www.gvsu.edu/counsel/](http://www.gvsu.edu/counsel/).

The ACES office also supports 12-Step meetings for students in recovery. For the most up-to-date information about 12-step meetings, visit [www.gvsu.edu/aces/](http://www.gvsu.edu/aces/). Our website also provides listings of other local counseling and recovery services and agencies.

If you have additional questions or would like to request a presentation, please contact us at (616) 331-2537 or [aces@gvsu.edu](mailto:aces@gvsu.edu). General information about programs and services may be found at [www.gvsu.edu/aces/](http://www.gvsu.edu/aces/). You can also drop by our office at the Student Services Building, room 204.

## Community Resources

### Autism Education Center

The focus of the Autism Education Center (AEC) is helping individuals with Autism Spectrum Disorders (ASD) to become fully integrated members of their communities. The center is committed to developing and supporting the use of evidence-based practices in partnership with individuals on the autism spectrum and their families, educational providers, health care professionals, and community stakeholders to ensure that individuals with ASD receive evidence-based information, support, and services that will assist them throughout their lives.

The primary work of the AEC is conducted through the Statewide Autism Resources and Training Project (START), a state-funded grant project designed to provide training and technical assistance to educators in Michigan who serve students with ASD. The START Project has been in place since 2001 through the support of the Michigan Department of Education, Office of Special Education. The START Project serves as a coordinating and supporting entity for schools across the State of Michigan to better service students with ASD. One major emphasis of the START Project is coordination of 17 regional collaborative networks that serve as the infrastructure for collaboration and coordination across school districts, intermediate school districts, and community stakeholders, allowing shared training and resources and systemic planning on a broad scale that leads to more effective educational programming for students with ASD. The START Project addresses both the individual and system-wide needs of students with ASD including the classroom, building, district, and regional levels. All students with ASD have the right to a high-quality education and services that enhance their potential to become fully participating citizens. School professionals working with students with ASD learn to implement and promote evidence-based concepts and practices such as early intervention, educational supports and strategies, positive behavioral interventions and supports, teaming and collaboration, and peer supports. Educators also need to provide programming that prepares students with ASD for paid work and community integration in adulthood through early job experiences in the community. Throughout the educational process, parents are included as active, contributing members of any team supporting a student with ASD.

The AEC is involved in other projects to support individuals with ASD in the community, including facilitation of summer camp integration, the GVSU Campus Links program for students with Autism Spectrum Disorders, implementation of the Michigan ASD State Plan, the development of the Autism Resources and Information Center website, program development with state autism organizations, and applied research projects. Presentations are provided to the community on various topics related to ASD.

The Autism Education Center's website is [www.gvsu.edu/autismcenter/](http://www.gvsu.edu/autismcenter/).

### Center for Scholarly and Creative Excellence (CSCE)

**Vice Provost for Research Administration and Executive**

**Director:** Robert P. Smart, Ph.D.

**Website:** [www.gvsu.edu/csce](http://www.gvsu.edu/csce)

The Center for Scholarly and Creative Excellence (CSCE) promotes a culture of active scholarship, encourages innovation and enterprise, facilitates collaborations, and serves as an advocate for university scholarship and creative practice. The CSCE sponsors workshops, colloquia, lectures, and discussions. It provides help with developing a scholarly agenda, mentoring by senior faculty members, assistance in finding collaborations, and publishing as a scholar.

The center coordinates the efforts of the following units within the university:

- The Office of Sponsored Programs serves as the university's central office that supports faculty and staff members in the identification, development, submission, and administration of externally sponsored agreements for scholarly research and creative activity.
- Research Protections oversees compliance awareness and accountability within the research culture of the university through assistance, education, and communication. The office is responsible for activities involving human subjects, animal welfare, biohazards, and chemical safety.
- The Office of Undergraduate Research and Scholarship offers a variety of opportunities for undergraduates to pursue research and scholarship in various disciplines under the direction of a faculty mentor.
- The Technology Commercialization Office is a resource and partner for university faculty members, staff members, and students developing technologies with commercial potential. The office acts as a bridge to coordinate efforts between industry and the GVSU community advancing ideas through partnerships.

### Center for Adult and Continuing Studies

Through an ever-changing, ever-evolving array of programs, the Center for Adult and Continuing Studies helps the university expand beyond the classroom to build communities of lifelong learners who are more informed, better prepared, and uniquely engaged in their work, leisure, and the world in which they live.

#### Grand Forum

Grand Forum is an educational outreach program for adults 55 and older and is a division of the Center for Adult and Continuing Studies at Grand Valley. Grand Forum provides the opportunity for individuals of diverse backgrounds to meet in an academic setting for the purpose of intellectual stimulation and social engagement.

Led by university faculty members and administrators, community leaders, Grand Forum members, independent scholars, and local professionals, topics are offered in such fields as the arts, business, current events, history, and science.

Through presentations and discussions, held both on and off campus, Grand Forum provides a broad spectrum of stimulating programs in a setting that encourages lively discussion. An interest in learning is an essential part of membership.

Another feature of Grand Forum membership includes the monthly Grand Forum Book Discussion Group, which meets the first Wednesday of the month. Information on Grand Forum is available by calling (616) 331-6615 or visiting [www.gvsu.edu/grandforum/](http://www.gvsu.edu/grandforum/).

### Workforce Development

The Center for Adult and Continuing Studies sponsors select training and professional development activities to serve business and professional communities in West Michigan. Contract and custom training opportunities are available and can be offered on the site of the organization. Seminars and workshops are also available online. These programs are not for academic credit and are offered to meet professional and personal development needs of individuals, corporations, and organizations. For more information, please call (616) 331-7180 or visit [www.gvsu.edu/learn/professional/](http://www.gvsu.edu/learn/professional/).

### Professional Development Partnership Program (PDP)

Coordinated through the Center for Adult and Continuing Studies, the PDP creates and maintains partnerships with schools, agencies, and businesses throughout the state of Michigan. PDP offers the opportunity to receive graduate academic credit and State Board CEUs for educators and is a provider of continuing education for social workers through the Michigan Social Work Continuing Education Collaborative. For more information, please contact (616) 331-6522 or visit [www.gvsu.edu/learn/professional/](http://www.gvsu.edu/learn/professional/).

### Design, Optimization, Evaluation, and Redesign (DOER) Center

The Design, Optimization, Evaluation, and Redesign (DOER) Center was founded in 2006. The DOER Center serves as a community resource to facilitate the industrial application of technical expertise in the School of Engineering at Grand Valley. The DOER Center matches potential clients with faculty members and students capable of completing applied projects. Past clients of the DOER Center include Roman Manufacturing, Lorin Lighting, and Emerald Spa. Students involved in the DOER Center gain experience in applied research and product development. Faculty members are able to apply their knowledge to solve advanced industrial problems. More information and a flyer are available via email to [doer@gvsu.edu](mailto:doer@gvsu.edu).

### Dorothy A. Johnson Center for Philanthropy

Established in 1992 with support from the W.K. Kellogg Foundation and named for Dorothy A. Johnson in honor of her distinguished career, the Dorothy A. Johnson Center for Philanthropy is a university-based center serving nonprofits, grantmaking institutions, and others seeking to transform their communities for the public good. The Johnson Center helps grantmaking institutions, nonprofits, and professionals across the country and internationally navigate the field. Through original research, tools, trainings, and more, the center provides trusted guidance for doing good. You can find out more about the center at [johnsoncenter.org/](http://johnsoncenter.org/).

The Johnson Center is a department in the College of Community and Public Service. As part of the College of Community and Public Service, the center supports university efforts to promote the study of philanthropy and nonprofit leaders in the School of Public, Nonprofit, and Health Administration. As a public service and as a resource for classroom studies, the center provides resources for improving nonprofit leadership and management and assisting with acquisition of new community and regional information and technical skills.

#### Johnson Center for Philanthropy Programs:

- **Capacity Building for Nonprofits:** Grants are just one part of strong philanthropy. Organizations with healthy teams and good tools are also key. Our Nonprofit Services team works directly with nonprofit organizations and also helps grantmakers plan and manage grantee capacity building on strategic planning, governance, collaboration, and more.

- **Education for Grantmaking Organizations:** As a staff member of a grantmaking institution, research becomes more meaningful when you can use it in your daily work. The Grantmaking School helps professionals bridge research and good practice with customized curricula and courses available nationwide.
- **Research Design and Analysis:** The Community Research Institute partners with nonprofit and neighborhood groups to gather, interpret, and share national and local data. This original research assists local and regional leaders with decision-making, grant writing, program evaluation, and more.
- **Information and Insight for the Field:**
  - The Foundation Review is the first peer-reviewed journal of philanthropy. It is written by and for foundation staff and board members, and those who work with them.
  - LearnPhilanthropy.org is an online marketplace of knowledge, tools, and connections to help philanthropic professionals learn about the field and improve their work.
  - We house the Frey Chair for Family Philanthropy, the nation's first endowed chair on family philanthropy and the W.K. Kellogg Community Philanthropy Chair, also the first of its kind. Both support original research in the field, with a focus on how new data and ideas can be put to work at grantmaking organizations across the country.

### Hauenstein Center for Presidential Studies

Inspired by Ralph Hauenstein's life of leadership and service, the Hauenstein Center for Presidential Studies at Grand Valley State University is dedicated to raising a community of ethical, effective leaders for the 21st century. Our world-class initiatives and resources include the following:

The **Peter C. Cook Leadership Academy** serves university students at all levels of their development. Emerging leaders strive to become more ethical and effective in their communities through mentorships and frequent engagement with experienced professionals. The Cook Leadership Academy, within the Hauenstein Center, has become one of the Midwest's preeminent centers for the exploration and development of leadership excellence.

Our **Common Ground Initiative** hosts lectures and debates that engage thought leaders to confront the political and cultural challenges our diverse communities face. Partnering with organizations at Grand Valley and around the state and nation, we host world-class talks, debates, seminars, and conferences. Our programs challenge humanities scholars, culture commentators, and political leaders from the left and right to explore the possible common ground between their respective camps. In short, we promote common ground for the common good.

Our **website and social media presence** opens a window to the world on the scholarship we have produced as a presidential studies center, and the programs we have offered through our leadership academy. More than 27 years' worth of video, transcripts, and original scholarship grows daily. Our website and social media have drawn more than 30 million hits from around the globe.

Our **book collections** have been recognized by the Library of Congress as "a uniquely valuable resource." No other place on earth houses, in one room, all the books written by U.S. presidents. We are proud to have one of the Midwest's leading espionage and intelligence collections. We also have recently received a collection of books authored by many of our first ladies.

The **Col. Ralph W. Hauenstein Fellowship** is a prestigious award inspired by Col. Hauenstein's extraordinary life, which exemplified the service and leadership that Grand Valley State University seeks to cultivate in its students and graduates. Past recipients include President Gerald R. Ford, 64th Secretary of State Madeleine Albright, 61st Secretary of State James A. Baker III, and National Security Advisor Brent Scowcroft.

### Kutsche Office of Local History

The Kutsche Office of Local History is a humanities-based learning initiative that blends academics with service. Through this office, students studying in all disciplines are offered opportunities to blend classroom knowledge with hands-on experience in the field of public, local history. Our mission is to use history to foster an earnest appreciation of our common challenges, common destiny, and common humanity.

Our strategy for achieving our mission is three-dimensional.

First, the office will assist groups that have been understudied and underrecognized to document, preserve, and disseminate their knowledge of history. Second, the office will reinforce Grand Valley students' understanding of public, local history by engaging students in hands-on, history-driven community service projects and internships.

Finally, the office will support the work of local history institutions and organizations in West Michigan by providing faculty and student research assistance, opportunities for networking and collaboration, and providing information to help local history organizations improve their delivery of public history to the citizens in West Michigan and beyond. For more information, call (616) 331-3692.

### Muskegon Innovation Hub

The Muskegon Innovation Hub at Grand Valley serves as a beacon that celebrates the innovative spirit of entrepreneurs in West Michigan. The hub provides coaching, funding, networking, and a synergistic work environment to help businesses and entrepreneurs maximize their growth potential. As a key partner in the region's innovation ecosystem, the Muskegon Innovation Hub supports startup businesses, entrepreneurs, and corporate innovation teams. Through our business incubator, CoLaunch coworking space, funding assistance programs, and training and event spaces, we offer the breadth of support necessary for success!

The hub's business incubator fosters emerging entrepreneurs to transform their ideas into successful companies through support of a dynamic team specializing in an array of critical business skills. Clients of the incubation program receive ongoing support to spur innovative business growth, which may also include office space located at the hub when required. We understand that every entrepreneur and early-stage company has unique needs requiring customized solutions, which is why we provide tailored programming specific to each of our clients.

CoLaunch, our coworking site, is the newest feature at the hub. Within the 4,200 square feet of CoLaunch space, members can experience an innovative workplace community culture. Whether you are a freelancer, entrepreneur, or a remote corporate professional, CoLaunch offers creative thinkers a community-driven work environment to spur individual or collaborative projects. Grand Valley students and alumni are always welcome to use CoLaunch for free during regular business hours. Visit [www.colaunch.works](http://www.colaunch.works) to find out more or stop by to see firsthand our on-site business training tools and resources designed to turn your idea into a business.

As an additional benefit, CoLaunch members receive access to an array of innovative programs and events at the hub. From creative conversations with highly successful entrepreneurs, collaborative workshops, and networking opportunities, CoLaunch creates the innovative atmosphere perfect for inventors and business owners at any stage.

Funding is always one of the most challenging yet vital parts of building a new business. The hub's funding assistance programs uniquely position us to help clients pursue competitive funding through programs such as the Business Accelerator Fund for high-tech and advanced technology companies and other state funding channels. In 2016 alone, the hub helped many early stage companies receive services valued at nearly \$120,000. With a history of guiding businesses from startup to success, the hub team welcomes entrepreneurs, inventors, and startups alike.

The hub is also proud to offer more than 4,000-square-feet of training and event space that area organizations and corporations can rent. Ready to be configured to meet your event needs, the hub's meeting spaces are equipped with state-of-the-art technology necessary to conduct modern presentations effectively.

To learn more about the Muskegon Innovation Hub's services and resources, visit [www.gvsu.edu/mihub](http://www.gvsu.edu/mihub), email [mihubinfo@gvsu.edu](mailto:mihubinfo@gvsu.edu), or call (616) 331-6900.

### Regional Math and Science Center

The Regional Math and Science Center serves the science and mathematics education needs of elementary and secondary schools in West Michigan. The center focuses on providing professional development opportunities for practicing teachers and enrichment activities for precollege students. Preservice teachers are also encouraged to participate in center activities. The Regional Math and Science Center supports the Michigan K-12 curriculum and standards in science and mathematics. The center's staff is available for consultation, professional development resources, and collaboration on grants and science and mathematics programs.

The center administers such popular programs as Science Olympiad, Discovering STEM kits, and STEM summer camps for students as well as the Fall Science Update and professional development opportunities for teachers. These offerings are content-rich and utilize best practice in science and mathematics teaching and learning.

**SCI 580 Special Topics in Science and Mathematics.** Lecture and/or laboratory courses or workshops in interdisciplinary studies relating to more than one science and/or mathematics discipline. One to three credits.

### Robert and Mary Pew Faculty Teaching and Learning Center

Guided by the ideals of liberal education and the principles of inclusive excellence, the Robert and Mary Pew Faculty Teaching and Learning Center supports the university in carrying out its primary mission of teaching and learning. The center presents programs for faculty throughout the calendar year, including workshops, mentoring programs, conferences, and consultations. Its staff offers leadership on teaching and learning issues across the university, promotes scholarly and reflective approaches to teaching, and provides support to full-time and part-time faculty. The Pew Faculty Teaching and Learning Center also provides tangible support and recognition of teaching excellence through a grants program and campus-wide teaching awards. The Pew Faculty Teaching and Learning Center is located in Zumberge Hall. For more information, call (616) 331-3498.

### Robert B. Annis Water Resources Institute

The Robert B. Annis Water Resources Institute (AWRI) is a multidisciplinary research organization committed to the study of freshwater resources. The mission of the institute is to integrate research, education, and outreach to enhance and preserve freshwater resources.

AWRI seeks to accomplish this mission through

- research into major questions about our water resources, including ecosystem structure and function; contaminants and toxicology; hydrology; land use; watershed, stream, and wetland ecology; water quality; and basic and applied limnology;
- public education for a variety of groups ranging from school children to adults; and
- outreach to ensure that decision makers are equipped with the best available knowledge on environmental and water resource-related issues, to reduce the uncertainty associated with their resource management decisions.

The institute occupies the Lake Michigan Center and Annex on Muskegon Lake in Muskegon, MI. Facilities include classrooms, conference areas, analytical labs, research labs, mesocosms, dockage, and ship support and storage. AWRI also promotes collaborative research and educational programming and offers research space and equipment, as well as ship support facilities to advance such collaborative efforts. AWRI operates its own research vessels, the *D. J. Angus* and the *W. G. Jackson*, and offers the Water Resources Outreach Education Program for K-12 schools and community groups.

The institute consists of three main programmatic areas:

- (1) The Ecological Research Program, which consists of environmental biology and environmental chemistry groups, addresses questions about water resources, hydrology, watershed ecology and management, environmental chemistry and toxicology, aquatic ecosystem structure and function, aquatic conservation, land use change, pollution prevention, and aquatic food webs.
- (2) The Information Services Center, which uses state-of-the-art geospatial technology to collect and analyze data, and condense it into useful information for those who make critical decisions about natural resource management.
- (3) The Education and Outreach Program, which includes the use of AWRI's two research vessels, and provides scientific information to K-12 students, policymakers, educators, college students, and community groups.

Grand Valley students and faculty members have the opportunity to participate in AWRI activities as volunteers, paid assistants, interns, research associates, or graduate students. The AWRI office is located at the Lake Michigan Center, 740 West Shoreline Drive, Muskegon, Michigan 49441. Telephone (231) 728-3601. More information can be obtained from the website: [www.gvsu.edu/wri/](http://www.gvsu.edu/wri/).

## Seidman Business Services

### Koeze Business Ethics Initiative

The center provides a forum for members of the local business community and Grand Valley faculty members to exchange ideas on ethical questions for the benefit of the university, business community, and the West Michigan community in general. Entrepreneurs, corporate managers, and faculty members interested in participating in the dialog groups should contact Michael DeWilde.

### Family-Owned Business Institute (FOBI)

The mission of Grand Valley's Family-Owned Business Institute (FOBI) is to champion and serve family owned businesses through education, research, and advocacy. The creation of the institute was born out of the collective belief that family businesses are the cornerstone of a community's prosperity and a vital ingredient in its quality of life. Our national and regional history has demonstrated that it is in the best interest of communities to foster the creation, growth, and continuation of family owned businesses because they are the leaders in job creation, innovation, and in providing stable employment opportunities with superior wages and benefits for their employees.

Despite their tremendous contributions, family businesses face a unique set of challenges that can limit their impact and threaten their very survival. By providing support through research, curriculum, and knowledge management, the Family-Owned Business Institute serves to develop, retain, and expand the influence of family businesses within our communities. The institute fosters research through its research scholars programs, its professional relationships and data sources, and its affiliation with local organizations such as the Grand Rapids Family Business Alliance, as well as national and international organizations.

### Michigan Small Business Development Center – West Michigan

The Michigan Small Business Development Center (MI-SBDC) West Michigan Region provides no-cost counseling, training, market

research, and advocacy for small businesses in Kent, Ottawa, Muskegon, Allegan, Ionia, Barry, Montcalm, Mecosta, Newaygo, Oceana, Mason, Lake, and Osceola counties. It is a partnership between the U.S. Small Business Administration and Grand Valley. Companies receive business consultation services from an experienced team. Visit the website at [www.sbdcmichigan.org/](http://www.sbdcmichigan.org/).

### Michigan Small Business Development Center – State Headquarters

In 2001, Grand Valley was awarded the State Headquarters for the Michigan Small Business Development Center (MI-SBDC). As host of the MI-SBDC State Headquarters, the Seidman College of Business oversees the 12-region MI-SBDC network. Examples of assistance provided include: business plan development, market research, raising capital, business workshops, technology commercialization, financial management, export strategy, and strategic planning. Entrepreneurs and small business owners can access the services of their nearest MI-SBDC by calling (616) 331-7480. Visit the website at [www.sbdcmichigan.org/](http://www.sbdcmichigan.org/).

### Richard M. and Helen DeVos Center for Entrepreneurship and Innovation

The Richard M. and Helen DeVos Center for Entrepreneurship and Innovation (CEI) in the Seidman College of Business is dedicated to developing best practices in entrepreneurship education and community engagement that enhance and impact the creation of new ventures and opportunities.

**Student support:** Through a combination of courses, curriculum, peer-to-peer networking, competitions, and mentorship, CEI provides all students an environment that fosters entrepreneurship and enhances entrepreneurial activities.

**Community support:** CEI is committed to supporting and enriching the entrepreneurial community by providing an essential hub where entrepreneurs can connect to resources, mentorship, networking opportunities, regional and national conferences, and workshops, and gain access to capital.

Full descriptions of CEI's activities can be found at [www.gvsu.edu/cei/](http://www.gvsu.edu/cei/).

### U.S. Department of Commerce Export Assistance Center

The U.S. Department of Commerce Export Assistance Center (USEAC) provides practical international trade information and export counseling throughout West Michigan. The USEAC is housed in the Seidman College of Business at Grand Valley. The USEAC regularly hosts student interns, and works together with the Van Andel Global Trade Center to hold trade education events for businesses such as the West Michigan World Trade Week which is held annually.

### Van Andel Global Trade Center

The Van Andel Global Trade Center is an outreach center of the Seidman College of Business. The mission of the Van Andel Global Trade Center (VAGTC) is to strengthen the community through increased global business by providing international consulting, training, and resources. Grand Valley State University founded the center in 1999 and is currently located in the L. William Seidman Center on the Pew Grand Rapids Campus.

Van Andel Global Trade Center is recognized as an effective source of international resources, training, and assistance services for business and academic communities in Michigan. VAGTC enters into strategic partnerships with universities, state and federal organizations, as well as the business community across the state to accomplish global objectives supporting international growth.

VAGTC services include a series of seminars, workshops, programs, and conferences encompassing many different international business topics. In addition, the center provides vital customized import/export and consulting services for all types of businesses. The center has created global reference materials utilizing many international trade resources to assist businesses. VAGTC also provides a membership program which

## Community Resources

offers high value, high quality networking opportunities and services to those businesses within Michigan and beyond who choose to utilize it.

Since its inception, VAGTC has assisted more than 7,000 businesses and over 21,000 individuals through its services. With a growing membership base, the VAGTC is poised to continue expanding its international impact.

The center is a conduit for students, providing opportunities for international careers through internships both within VAGTC as well as with its clients, along with opportunities to network with businesses at the events and programs it offers the community.

Benefits to the community and university:

- Increase competency within organizations to be globally successful
- Develop strategic partnership both inside and outside the university to enhance constituents and stakeholders
- Increase economic development of the region by growing international business

Services to the community:

- International consulting services, training services, resource development, and facilities; job opening connector
- Cultural education, language center, and matchmaking/trade missions/business development
- Provider of foreign trade missions, speaker series, business referral source, and intermediary of international businesses
- Advocacy, service-provider broker, statewide resource center, and research provider
- Educating Grand Valley's student community on the importance of creating international business relationships bringing hands-on experience to students doing international market research helping Michigan businesses

The Van Andel Legacy: As the founder and pioneer of international trade for Amway, Jay Van Andel was an inspiration for those in Michigan seeking to prosper in expanding overseas markets. It is in this spirit that the Van Andel Global Trade Center was named after Jay Van Andel and is quickly becoming the core facility dedicated to advancing international trade and supporting Michigan businesses as they prepare to enter and prosper in an era of global competition.

While leading Amway to record growth through international expansion, Jay Van Andel became convinced the global marketplace would be pivotal in enhancing the prosperity of the region where he began his business. Recognizing that the downtown campus would be a focal point for international business education and activity, Van Andel became a major benefactor of the building where the VAGTC originally resided. Named in his honor and dedicated to international business assistance for local companies, the Van Andel Global Trade Center is the university's commitment to fulfilling the global vision of one of Michigan's most outstanding global leaders and entrepreneurs.

### **Kent-Ottawa-Muskegon Foreign Trade Zone**

Van Andel Global Trade Center serves as the grantee administrator for the Kent-Ottawa-Muskegon Foreign Trade Zone (KOM-FTZ number 189). The center provides marketing, strategic planning, administration, and zone development support. The KOM-FTZ maintains a board of 12; three representatives from each of the counties: Kent, Ottawa, and Muskegon as well as three from Grand Valley State University. A Foreign Trade Zone (FTZ) is a secure and enclosed area, considered to be outside of the United States territory for purposes of customs duty payments. The FTZ program was designed to promote American competitiveness by encouraging companies to maintain and expand their operations in the United States. Communities that offer an FTZ see economic growth and development and are often stimulated by retaining and creating jobs in the community as businesses using the zone may see an increased cash flow, savings in fees and processes, and improved bottom line and global supply chain.

## Academic Degrees

Bachelor of Arts: B.A.  
 Bachelor of Business Administration: B.B.A.  
 Bachelor of Fine Arts: B.F.A.  
 Bachelor of Music: B.M.  
 Bachelor of Music Education: B.M.E.  
 Bachelor of Science: B.S.  
 Bachelor of Science in Engineering: B.S.E.  
 Bachelor of Science in Nursing: B.S.N.  
 Bachelor of Social Work: B.S.W.  
 Master of Arts: M.A.  
 Master of Business Administration: M.B.A.  
 Master of Education: M.Ed.  
 Master of Health Administration: M.H.A.  
 Master of Health Sciences: M.H.S.  
 Master of Philanthropy and Nonprofit Leadership: M.P.N.L.  
 Master of Physician  
 Assistant Studies: M.P.A.S.  
 Master of Public Administration: M.P.A.  
 Master of Public Health: M.P.H.  
 Master of Science: M.S.  
 Master of Science in Accounting: M.S.A.  
 Master of Science in Engineering: M.S.E.  
 Master of Science in Nursing: M.S.N.  
 Master of Science in Taxation: M.S.T.  
 Master of Social Work: M.S.W.  
 Educational Specialist: Ed.S.  
 Psychological Specialist: Psy.S.  
 Doctor of Nursing Practice: D.N.P.  
 Doctor of Physical Therapy: D.P.T.

## Course Prefixes

(AAA) African/African American Studies  
 (ACC) Accounting  
 (AHS) Allied Health Sciences  
 (ANT) Anthropology  
 (ARA) Arabic  
 (ARC) Archaeology  
 (ART) Art and Design  
 (ASL) American Sign Language  
 (ATH) Athletic Training  
 (BIO) Biology  
 (BMS) Biomedical Sciences  
 (BUS) Business  
 (CAP) Advertising and Public Relations  
 (CBR) Broadcasting  
 (CD) Clinical Dietetics  
 (CFV) Film and Video Production  
 (CHI) Chinese  
 (CHM) Chemistry  
 (CHS) Chinese Studies  
 (CIS) Computer Information Systems  
 (CJ) Criminal Justice  
 (CLA) Classics  
 (CMB) Cell and Molecular Biology  
 (CMJ) Multimedia Journalism  
 (COM) Communications  
 (CPH) Photography  
 (CTH) Theatre  
 (DAN) Dance  
 (DS) Digital Studies  
 (EAS) East Asian Studies  
 (ECO) Economics  
 (EDC) Education Counseling

(EDF) Education Foundation  
 (EDH) Education Higher Education  
 (EDI) Education Instruction  
 (EDL) Education Leadership  
 (EDR) Education Reading  
 (EDS) Education Special Education  
 (EDT) Educational Technology  
 (EGR) Engineering  
 (EMBA) Executive MBA  
 (ENG) English  
 (ENS) Environmental Studies  
 (ENT) Entrepreneurship  
 (ESL) English as a Second Language  
 (FIN) Finance  
 (FIT) Fitness, Skill, and Activity  
 (FRE) French  
 (GEO) Geology  
 (GER) German  
 (GPY) Geography  
 (GRK) Greek  
 (GSI) Global Studies and Social Impact  
 (HIM) Health Information Management  
 (HNR) Honors College  
 (HRG) Hearing  
 (HRT) Human Rights  
 (HSC) History of Science  
 (HST) History  
 (HTM) Hospitality and Tourism Management  
 (IDS) Interdisciplinary Studies  
 (IPE) Interprofessional Education  
 (IR) International Relations  
 (ITA) Italian  
 (ITC) Intercultural Training  
 (JPN) Japanese  
 (KOR) Korean  
 (LAS) Latin American Studies  
 (LAT) Latin  
 (LIB) Liberal Studies  
 (LS) Legal Studies  
 (MAT) Music, Art, Theatre  
 (MBA) Full-time Integrated MBA  
 (MES) Middle East Studies  
 (MGT) Management  
 (MKT) Marketing  
 (MLL) Modern Languages and Literatures  
 (MLS) Medical Laboratory Science  
 (MOV) Movement Science  
 (MTH) Mathematics  
 (MUS) Music  
 (NRM) Natural Resources Management  
 (NUR) Nursing  
 (OSH) Occupational Safety and Health  
 (OST) Occupational Science and Therapy  
 (PA) Public Administration  
 (PAS) Physician Assistant Studies  
 (PED) Physical Education  
 (PH) Public Health  
 (PHI) Philosophy  
 (PHY) Physics  
 (PLS) Political Science  
 (POL) Polish  
 (PSM) Professional Science Master's  
 (PSY) Psychology  
 (PT) Physical Therapy  
 (REC) Therapeutic Recreation

## Academic Programs

(REL) Religious Studies
(RIE) Radiology and Imaging Echocardiography
(RIS) Radiology and Imaging Sciences
(RIT) Radiology and Imaging Therapy
(RIU) Radiology and Imaging Ultrasound
(RMD) Radiation Medical Dosimetry
(RST) Russian Studies
(RUS) Russian
(SAT) Science and Arts for Teaching
(SCI) Science
(SLP) Speech and Language Pathology
(SOC) Sociology
(SPA) Spanish
(SST) Social Studies
(STA) Statistics
(SW) Social Work
(US) University Studies
(WAT) Water
(WGS) Women and Gender Studies
(WRT) Writing

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## Accounting

### Accounting - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

**Website:** [www.gvsu.edu/seidman](http://www.gvsu.edu/seidman)

Students who elect to major in accounting may prepare themselves for a variety of accounting careers and fulfill the education requirements for taking the Certified Public Accountant (CPA) and/or the Certified Management Accountant (CMA) examination. Accountancy also provides an excellent undergraduate background for a degree in law.

### Bachelor of Business Administration in Accounting

Requirements for the B.B.A.

#### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

#### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3
- **AND** ECO 211 - Introductory Microeconomics Credits: 3

#### **OR** ECO 200 - Business Economics Credits: 3

- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

#### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

#### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

#### Requirements for a Major in Accounting

Accounting majors must complete all requirements for the B.B.A. degree (the business core, three business electives and one ethics requirement course) and take additional credit hours, as follows:

All of the following:

- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- ACC 240 - Financial Accounting Applications Credits: 1
- ACC 310 - Intermediate Accounting I Credits: 3
- ACC 311 - Intermediate Accounting II Credits: 3
- ACC 321 - Cost Strategy and Decision Making Credits: 3
- ACC 340 - Accounting Systems Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

One of the following two courses:

- ACC 317 - Individual Income Taxation Credits: 3
- ACC 318 - Entity Taxation Credits: 3

And one of the following two courses:

- ACC 413 - Internal Auditing Credits: 3
- ACC 414 - Auditing Theory and Practice Credits: 3

#### Additional Requirements

A minimum of 90 hours of the total hours required for the degree must be in non-accounting courses. The required course from the auditing group of 413 or 414 will be waived for students who have completed ACC 614 with a grade of 3.0 or higher.

In order to graduate, accounting students must achieve a 2.5 minimum GPA for upper-division accounting courses. Students must receive at least a C in ACC 310 to enroll in ACC 311. If the GPA for upper-division accounting courses falls below 2.5 (after nine hours are completed) the student will not be permitted to take additional upper-division accounting courses. However, such students may repeat upper-division accounting courses for which they received a low grade. Only upper-division accounting courses in which the student has earned a C- or better may be used to satisfy requirements for an accounting degree. Accounting students must also meet other requirements of the undergraduate business program.

Students entering the accounting program are expected to have a basic knowledge of spreadsheets before enrollment in upper-division accounting courses. Taking the intermediate sequence courses ACC 310 and ACC 311 in contiguous semesters is highly recommended. Participation in the study-abroad ACC 330 course is recommended. Internships are strongly encouraged.

## Master of Science in Accounting

This specialized accounting degree is designed for students pursuing careers in public, industry, and nonprofit accounting, including those with limited undergraduate accounting education. The M.S.A. degree meets the educational requirements for public accounting certification (CPA) in the State of Michigan.

### Admission to the Master of Science in Accounting Program

Candidates are admitted to the M.S.A. program based on criteria that have been shown to predict success. Applicants must submit official documentation of all previous college coursework, including a baccalaureate degree (or equivalent international credential). An undergraduate degree in accounting is not required, although those with limited undergraduate business education are required to complete a series of business courses that provide a foundation for advanced study in accounting. Additionally, applicants must submit:

- GMAT score
- Personal Statement
- TOEFL score (if English is not the applicant's first language)

Admission requirements are provided in detail in the Seidman College of Business section of this catalog, including conditions that qualify applicants for a GMAT waiver.

### Transfer Credit

A maximum of nine semester hours of transfer credit will be given for appropriate graduate courses completed with a grade of B or better from another AACSB-accredited college. These credits may be substituted for required or elective courses as determined by the program director. University policy on transfer of credit also governs such courses.

### Academic Review

A cumulative GPA of 3.0 or higher is required in all graduate-level courses. Additionally, a cumulative GPA of 3.0 is required in all 600-level courses that fulfill graduation requirements for the M.S.A. A grade of C or better must be earned in all graduate courses that fulfill graduation requirements for the M.S.A.

### Program Location

The M.S.A. program is offered in the Pew Grand Rapids Campus, DeVos Center in downtown Grand Rapids, Michigan.

**Website:** [www.gvsu.edu/msa](http://www.gvsu.edu/msa)

### Graduate Outcomes/Time to Program Completion

The School of Accounting faculty has identified the following learning objectives for M.S.A. students, and objectives are assessed regularly to ensure that they are being achieved.

M.S.A. graduates will be

- technically competent;
- effective accounting researchers;
- effective communicators;
- internationally literate; and
- prepared to recognize and respond to ethical questions encountered in the practice of accounting.

### Requirements for the M.S.A. in Accounting

All M.S.A. students must complete at least 33 credits at the 600-level that include at least 18 credits in accounting.

### Foundation

Foundation requirements may be met by completion of either the 500-level accelerated courses or the undergraduate courses indicated as follows:

Background Area	Background Course	GVSU Undergraduate Course(s)
Accounting	ACC 511 - Financial and Managerial Accounting Concepts (3 credits)	ACC 212 and 213 (6 credits)
Accounting	ACC 601 - Corporate Financial Reporting I (3 credits)	ACC 310 (3 credits)
Legal Environment	BUS 531 - Legal Environment of Business (2 credits)	BUS 201 (3 credits)
Statistics	FIN 520 - Statistics and Mathematics of Finance (3 credits)	STA 215 and FIN 320 (6 credits)
Economics	ECO 542 - Economic Reasoning (3 credits)	ECO 210 and 211 (6 credits)

ACC 511 or its equivalent must be completed before taking any 600-level course. It is highly recommended that all foundation courses be completed at the beginning of the program. Students who have completed the GVSU undergraduate courses previously listed or the equivalent courses at another university are not required to complete additional 500-level courses in the respective areas.

In addition, all students are required to have completed a course in corporate finance with a grade of C or better. This course may be taken at either the undergraduate level prior to or while enrolled in the M.S.A. program. If taken at the graduate level, this course may be used as an elective in the M.S.A. program with the approval of the student's faculty advisor.

Required Course	GVSU Graduate Course	Undergraduate Course(s)
Corporate Finance	FIN 621	FIN 320

### Accounting Core

The following three credit courses are required of all M.S.A. students:

Required Course	GVSU Graduate Course	Undergraduate Course(s)
Intermediate Accounting	ACC 602	ACC 311
Managerial Accounting, including Cost Accounting	ACC 611	ACC 321 or 322
Accountant's Legal Environment	ACC 612	No equivalent GVSU course
Auditing	ACC 614	ACC 414
Federal Income Taxation	ACC 609 or 615	ACC 317 or 318
Accounting Systems	ACC 616	ACC 340
Advanced Accounting	ACC 618	No equivalent GVSU course

- ACC 607 - Ethics for Accountants Credits: 3
- ACC 613 - Financial Statement Analysis Credits: 3
- ACC 617 - International Accounting Credits: 3
- ACC 620 - Accounting Theory Credits: 3

All M.S.A. students must complete at least two additional 600-level courses in accounting. These additional courses may be applied to other requirements for the M.S.A. degree or the taxation emphasis.

### Accounting Exposure

Accounting exposure courses may be taken at either the undergraduate level prior to or while enrolled in the M.S.A. program. Their purpose is to ensure that all M.S.A. graduates have basic competencies in each major area of accounting. For the exposure requirement, all students are required to complete with a grade of C or better six credits in intermediate

## Accounting

accounting, and at least one course in cost or managerial accounting, the accountant's legal environment, auditing, federal income taxation, accounting information systems, and advanced accounting. The following GVSU courses fulfill this basic competency requirement:

Required Course	GVSU Graduate Course	Undergraduate Course(s)
Intermediate Accounting	ACC 602	ACC 311
Managerial Accounting, including Cost Accounting	ACC 611	ACC 321 or 322
Accountant's Legal Environment	ACC 612	No equivalent GVSU course
Auditing	ACC 614	ACC 414
Federal Income Taxation	ACC 609 or 615	ACC 317 or 318
Accounting Systems	ACC 616	ACC 340
Advanced Accounting	ACC 618	No equivalent GVSU course

Credit earned for ACC 601 will not be counted toward the 18-credit 600-level accounting course minimum or the 33-credit 600-level course M.S.A. degree minimum.

If students have satisfactorily completed an undergraduate course in intermediate accounting II, U.S. individual taxation, external auditing, entity taxation, accounting systems, or advanced accounting, they will not be granted credit for ACC 602, 609, 614, 615, 616, or 618, respectively. Students who have not taken intermediate accounting prior to matriculating in the program should take ACC 601 or ACC 310 in the first semester of graduate work after the course prerequisite (ACC 511 or equivalent) has been met. ACC 602 should be taken in the first semester of attendance after the ACC 601 or ACC 310 prerequisite has been met.

A course in advanced accounting must include coverage of both consolidated financial statements and governmental/non-profit accounting to satisfy the accounting exposure requirement. At the discretion of the student's faculty advisor, a combination of courses may be used to satisfy this requirement.

### Minimum Accounting and Business Content

All students must complete a minimum of 24 credits in accounting and auditing and 24 credits in general business subjects, including economics and statistics as well as accounting credits in excess of the minimum 24 accounting credits. This requirement may be met through a combination of undergraduate and graduate courses taken prior to or during enrollment in the M.S.A. program.

### Individualized Plan of Study/Time to Program Completion

All admitted students must meet with an advisor prior to or during their first semester of graduate coursework to obtain an individualized plan of study specifying the coursework required for the M.S.A. degree and any emphases elected by the student. The individualized plan of study (IPS) will be developed by the student's advisor based upon review of the student's previous coursework, program requirements, and the student's interests. Students will generally fall into the following categories:

### Undergraduate Degree in Accounting

Students entering the M.S.A. program with an undergraduate degree in accounting may generally expect to complete a 33-credit program. These students must meet the accounting core and exposure requirements and may expect to take up to 21 credits of 600-level electives selected from among Seidman graduate offerings or, with permission of the student's faculty advisor, from graduate program offerings outside the Seidman College of Business courses.

### Nonaccounting Business Degree

Students entering the program with a degree in business, but with six or fewer hours in accounting may expect an IPS listing of all the accounting core and exposure courses, and a single three-semester hour 600-level

elective with a program length of 36 credits. Students who have previously completed more than six hours in accounting may be able to complete the program in 33 credits.

### Nonbusiness Degree

Students entering the program with a nonbusiness degree and no prior coursework in business or accounting will receive a standard plan of study totaling approximately 50 semester hours consisting of all courses listed previously (foundation, core, and accounting exposure).

Any subsequent changes to the IPS must be approved by the faculty advisor. Students with an undergraduate degree in accounting or business can generally complete the program in one calendar year. Students with no or limited accounting coursework can complete the program in two calendar years.

### Taxation Emphasis

A student may elect to complete the M.S.A. degree with an emphasis in taxation. This emphasis is intended for students who desire advanced knowledge and skills in taxation, but not at the depth and breadth of the Master of Science in Taxation degree. The taxation emphasis will be listed on the student's transcript.

The student must elect the emphasis and complete the following courses:

- ACC 622 - Tax Research and Writing Credits: 3
- ACC 624 - Corporate Tax I Credits: 3
- ACC 627 - Estate, Gift, and Trust I Credits: 3
- ACC 629 - Partnership Taxation Credits: 3

At least three of the previously listed courses must be completed at GVSU. These courses may be used to either fulfill required electives in the program or extend the number of hours required for the degree, depending on the student's individual circumstances. For students with undergraduate accounting degrees, it may be possible to complete the degree with a taxation emphasis in 33 credits. Other students desiring a tax emphasis should expect to complete additional credits beyond what is required for the degree.

With the approval of the student's faculty advisor, a different 600-level course in taxation may be substituted for any of the previously listed tax courses.

To elect the taxation emphasis, the student must request that their advisor add the emphasis to the student's individualized plan of study.

### Finance Emphasis

A student may elect to complete the M.S.A. degree with an emphasis in finance. This emphasis is intended for students who desire advanced knowledge and skills in finance in addition to accounting. This emphasis prepares students for positions in the corporate finance function, leading to the positions of controller, treasurer, and chief financial officer (CFO). The finance emphasis will be listed on the student's transcript.

The student must elect the emphasis and complete the following courses:

- FIN 624 - Investment and Portfolio Management Credits: 3
- FIN 626 - Advanced Managerial Finance Credits: 3
- FIN 629 - International Finance Credits: 3
- FIN 627 - Derivative Assets and Markets Credits: 3

At least three of the previously listed courses must be completed at GVSU. These courses may be used to either fulfill required electives in the program or extend the number of hours required for the degree, depending on the student's individual circumstances. For students with undergraduate accounting degrees, it may be possible to complete the degree with a finance emphasis in 33 credits. Other students desiring a finance emphasis should expect to complete additional credits beyond what is required for the degree.

FIN 621 - Corporate Finance or equivalent is the prerequisite for these courses. With the approval of the student's faculty advisor, FIN 680 - Special Topics may be substituted for one of the previously listed courses.

To elect the finance emphasis, the student must request that their advisor add the emphasis to the student's individualized plan of study.

## Combined B.B.A./M.S. in Accounting

### Overview

Qualified undergraduate accounting students may be admitted to an accelerated bachelor's/master's program and obtain both a B.B.A. and an M.S. in Accounting within an accelerated time frame. Students admitted to this program may take graduate courses after completing 90 undergraduate credits, and up to 12 credits of graduate work may be used in partial satisfaction of the requirements for the undergraduate degree (in alignment with university policy, a maximum of 12 credit hours of graduate work will count toward both the graduate and undergraduate degrees). During their fourth year, students can select up to four courses from the following graduate accounting courses:

Course	GVSU Graduate Course
Intermediate Accounting II	ACC 602
Individual Income Taxation and Research	ACC 609
Entity Taxation - Theory and Practice	ACC 615
Auditing	ACC 614
Financial Accounting Systems	ACC 616

If students earn at least a grade of B in each of these classes, they are granted advanced standing in the master's program and must then complete an additional 21 credits to receive the master's degree. All other master's degree requirements must be met. After completing 120 credits and all requirements for the bachelor's degree, students are awarded a bachelor's degree. A minimum of 21 graduate credits must be completed after the 120 credits for the bachelor's degree are completed (the M.S. program requires 33 hours).

Undergraduate accounting majors with an overall GPA of at least 3.25 may apply to the combined bachelor's/master's program after

- completion of the following business core requirements with a grade B or higher in each: ECO 210 and 211, BUS 201, and MGT 268;
- completion of the following undergraduate accounting requirements with a grade B or higher in each: ACC 212, 213, 240, 310, and 321; and
- 75 hours of academic credit - with at least 30 credits at GVSU - have been completed or are in progress.

### Admission Procedure

Students will normally apply for the combined B.B.A./M.S. in accounting degree program during their third academic year (for a complete list of application requirements and to apply, see [www.gvsu.edu/msa](http://www.gvsu.edu/msa)).

Admissions are competitive and between 15 and 25 of the top applicants will be admitted in a single semester. Acceptance recommendations will be made by the School of Accounting's admissions committee after evaluation of the application and the completion of all application requirements.

### Requirements During Undergraduate Studies

An undergraduate student enrolled in the combined degree program is required to successfully complete, defined as follows, a minimum of 12 credits each regular semester until all undergraduate courses required for the degree have been completed (except when completing an internship or other extenuating circumstances).

- Students will maintain a cumulative undergraduate GPA of at least 3.25, earning a C or higher in each undergraduate course attempted; and
- Students will earn a B or higher in each graduate course attempted.

All university requirements, including general education courses, must be completed before the final (graduate) year of the combined B.B.A./M.S. in accounting program. In the final undergraduate year, students will

take 12 credits of graduate-level courses. If any courses are dual-listed, students in the combined B.B.A./M.S. in accounting program must complete all assignments expected of graduate students and they will be evaluated in the same way as graduate students.

### Graduation Without Completion of the Combined Program

If a student decides at some point to pursue only the undergraduate portion of the combined degree, the School of Accounting will still recognize the graduate courses taken in lieu of undergraduate courses. Credit from the undergraduate degree cannot be used toward a graduate degree at a later date.

## Accounting Minor

### Requirements for a Minor in Accounting

Eligible business majors who elect to complete one of the business minors may be required to extend their degree programs beyond the minimum 120-semester hour university requirement.

The undergraduate accounting minor program is open to all students except accounting majors. The minor complements major fields of study in other departments or schools and enables students to choose a concentration of courses in a particular area of accounting, such as financial, managerial, and tax.

The accounting minor consists of 18 credit hours. The six courses are made up of two required courses (ACC 212 and 213) and four upper-division accounting courses. Transfer students must complete at least three upper-division accounting courses at the Seidman College of Business. Independent research and internship credits do not count toward the requirements for the minor. Only upper-division accounting courses in which the student has earned a C- or better may be used to satisfy requirements for the accounting minor. Students must achieve a cumulative 2.5 GPA in these courses to receive the accounting minor designation. Courses cannot be taken on a credit/no credit basis.

## Advertising and Public Relations - Program Description

For additional information about opportunities your college offers, please refer to the School of Communications or the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/soc](http://www.gvsu.edu/soc)

The advertising and public relations (APR) major values integrating theory with practice. Our curriculum follows the recommendations of industry organizations such as the American Advertising Federation (AAF) and the Commission on Education in Public Relations (CEPR). Also, students work with actual clients from the community on a regular basis in four different courses. The program also requires at least one three-credit internship to gain experience.

## Bachelor of Arts or Bachelor of Science in Advertising and Public Relations

The School of Communications core, B.A./B.S. degree requirements, and emphasis requirements total 57 credits.

### Requirements for a Major in Advertising and Public Relations

#### B.A./B.S. Degree Requirements Credits: 9

All undergraduate programs in the School of Communications offer both the B.A. degree and the B.S. degree. All students selecting majors in the School of Communications must choose either the B.A. or B.S. degree requirement that is intended for a particular undergraduate program.

#### B.A. Degree Requirements

The B.A. degree requires a third semester proficiency in a foreign language of the student's choice.

## African/African American Studies

### B.S. Degree Requirements

- STA 215 - Introductory Applied Statistics Credits: 3
- COM 275 - Foundations of Communication Research Credits: 3
- COM 375 - Communication Research Credits: 3

### School of Communications Core Credits: 9

All students majoring in the School of Communications must complete the following core courses, for a total of nine credits:

- COM 101 - Concepts of Communication Credits: 3
- COM 201 - Speech Credits: 3
- COM 295 - Communication Theory Credits: 3

### Advertising Emphasis (core + electives + Capstone = 39 credits)

#### Advertising Core Credits: 30

- CAP 105 - Technology in Public Relations and Advertising Credits: 3
- CAP 115 - Research Basics for Advertising and Public Relations Credits: 3
- CAP 210 - Fundamentals of Advertising Credits: 3
- CAP 220 - Fundamentals of Public Relations Credits: 3
- CAP 310 - Advertising Management and Cases Credits: 3
- CAP 315 - Advertising Copywriting Credits: 3
- CAP 413 - Media Planning Credits: 3
- CAP 490 - Internship in Advertising/Public Relations Credits: 1 to 6 (minimum of 3 credits required for the major)
- WRT 219 - Introduction to Creative Writing Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3
- **OR** CAP 325 - Advertising and Public Relations Ethics and Law Credits: 3

#### Electives Credits: 6 minimum

With advisor approval, select a minimum of two courses at the 200 level or above that complement your studies in advertising and public relations. Courses may be from other departments. (See list of suggested electives on the advertising and public relations major advising information at [www.gvsu.edu/soc/advertising-public-relations-major-47.htm](http://www.gvsu.edu/soc/advertising-public-relations-major-47.htm).)

#### Capstone Credits: 3

- CAP 495 - Advertising and Public Relations Campaign Credits: 3

### Public Relations Emphasis (core + electives + Capstone = 39 credits)

#### Public Relations Core Credits: 30

- CAP 105 - Technology in Public Relations and Advertising Credits: 3
- CAP 115 - Research Basics for Advertising and Public Relations Credits: 3
- CAP 210 - Fundamentals of Advertising Credits: 3
- CAP 220 - Fundamentals of Public Relations Credits: 3
- CAP 320 - Public Relations Management and Cases Credits: 3
- CAP 321 - Media Relations Writing Credits: 3
- CAP 423 - Writing Corporate Communications Credits: 3
- CAP 490 - Internship in Advertising/Public Relations Credits: 1 to 6 (minimum of 3 credits required for the major)
- CMJ 256 - News Reporting Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3
- **OR** CAP 325 - Advertising and Public Relations Ethics and Law Credits: 3

#### Electives Credits: 6 minimum

With advisor approval, select a minimum of two courses at the 200 level or above that complement your studies in advertising and public relations. Courses may be from other departments. (See list of suggested electives on the advertising and public relations major advising information at [www.gvsu.edu/soc/advertising-public-relations-major-47.htm](http://www.gvsu.edu/soc/advertising-public-relations-major-47.htm).)

#### Capstone Credits: 3

- CAP 495 - Advertising and Public Relations Campaign Credits: 3

## Advertising and Public Relations Minor

### Requirements for Minor in Advertising and Public Relations

Requirements for a minor in advertising and public relations include 21 credits, including the following courses:

- CAP 105 - Technology in Public Relations and Advertising Credits: 3
- CAP 115 - Research Basics for Advertising and Public Relations Credits: 3
- CAP 210 - Fundamentals of Advertising Credits: 3
- CAP 220 - Fundamentals of Public Relations Credits: 3
- CAP 310 - Advertising Management and Cases Credits: 3
- **OR** CAP 320 - Public Relations Management and Cases Credits: 3

In addition, the minor requires six credits (two courses) of electives, which must be approved by a faculty advisor. Often, courses in the APR major not required for the minor are a good choice (e.g. CAP 315, CAP 321, CAP 413, CAP 423). Additional suggested electives are listed on under the advertising and public relations link on the School of Communications website: [www.gvsu.edu/soc/](http://www.gvsu.edu/soc/).

## African/African American Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/aaas](http://www.gvsu.edu/aaas)

In keeping with Grand Valley State University's liberal education commitment, the African and African American studies program administers an interdisciplinary minor whose goal is to academically prepare students for a better understanding of the variety and complexity of Africa, a deep appreciation of the African American experience and, more generally, an enriching knowledge of the various historical trajectories and contributions of the global African diaspora.

A minor in African and African American studies is an ideal complement to many disciplinary majors. Two tracks or areas of emphasis are possible, allowing students to tailor the minor to their own interests and needs. Students can choose to minor either in track I (Africa) or in track II (African American).

Students minoring in African and African American studies are encouraged to take full advantage of excellent study abroad opportunities available through GVSU partner institutions or COUNCIL programs. For more information, please consult the Padnos International Center or the program director. As a socially engaged discipline, African and African American studies, is committed to fostering social and civic engagement, particularly in Grand Rapids communities.

## African/African American Studies Minor

### Requirements for a Minor in African and African American Studies

Students seeking a minor in African and African American studies are required to complete 21 to 22 credit hours. Students will be required to choose between two tracks: track I (Africa) and track II (African American).

All minors will be required to complete two core courses (six credits):

- AAA 200 - Understanding Africa
- **OR** AAA 201 - Introduction to African American Studies
- AAA 302 - African Diaspora

#### Track I: Africa

Students choosing the Africa track will be required to

1. Successfully complete:

- FRE 202 - Intermediate French II: Language and Culture
- **OR** ARA 202 - Intermediate Arabic II: Language and Culture or higher.

Note: students who enter the university competent in French or Arabic at the 202 level or higher will take one extra elective course for a total of 21 credits.

2. Complete four elective courses (12 credits) from the following list:

- AAA 319 - African Politics Credits: 3
- AAA 300 - US-Africa Relations Credits: 3
- AAA 333 - Study Abroad-African/African American Studies Credits: 1 to 6
- AAA 337 - Contemporary Black Literature Credits: 3
- AAA 341 - Civil Conflicts in Africa Credits: 3
- AAA 343 - Black Feminist Thought Credits: 3
- AAA 380 - Special Topics in African/African American Studies Credits: 1 to 3
- AAA 399 - Independent Readings Credits: 1 to 3
- AAA 499 - Independent Study and Research Credits: 1 to 4
- GPY 351 - Geography of Africa Credits: 3
- HST 335 - Africa Before 1870 Credits: 3
- HST 336 - Africa After 1870 Credits: 3

## Track II: African American

Students choosing the African American track will be required to

1. Successfully complete:

- AAA 490 - Practicum: Career-Service in Community Building

2. Complete four elective courses (12 credits) from the following list:

- AAA 231 - Early African American Literature Credits: 3
- AAA 232 - Modern African American Literature Credits: 3
- AAA 305 - Perspectives on the Black Arts Movement Credits: 3
- AAA 315 - Field to Factory: African American Migration Credits: 3
- AAA 333 - Study Abroad-African/African American Studies Credits: 1 to 6
- AAA 340 - African American Culture and Social Thought Credits: 3
- AAA 350 - African American Identity and Communication Credits: 3
- AAA 351 - Perspectives on African American Males Credits: 3
- AAA 352 - Black Women's Culture and Communities Credits: 3
- AAA 355 - History of Underground Railroad Credits: 3
- AAA 357/HST 357 - The Black Diaspora and the Meaning of Sports, 1800 to the Present Credits: 3
- AAA 380 - Special Topics in African/African American Studies Credits: 1 to 3
- AAA 399 - Independent Readings Credits: 1 to 3
- AAA 499 - Independent Study and Research Credits: 1 to 4
- LIB 320 - Voices of the Civil Rights Movement in the United States Credits: 3
- HST 314 - African American History Credits: 3
- HST 372 - From Slavery to Freedom Credits: 3
- HST 316 - U.S. Civil Rights Movement History Credits: 3
- SOC 333 - Sociology of the Civil Rights Movement Credits: 3
- SOC 313 - Race and Ethnicity Credits: 3

Note: No more than two courses from any department other than African and African American studies can be counted toward the minor for the students who choose the African American track.

## Additional Information

- No more than three credit hours of AAA 399 - Independent Readings **OR** AAA 499 - Independent Study and Research may count toward the minor.
- New African or African American-related courses in each of the two tracks may count toward the minor as they become available. Please consult the program director concerning the eligibility of any particular course. Students should be particularly alert to the presence of courses offered through the vehicle of special topics courses (AAA 380 and 390).
- Transfer credits from approved study abroad programs and from other U.S. colleges and universities may be counted toward the minor upon verification by the program director. However, of the 21-22

credits required, a minimum of six credits must be taken in residence at GVSU.

## Aging and Adult Life - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Knowledge of aging can improve your interactions with older people; it can prepare you to make sound plans for your own later life. It can help you understand what public policy development is needed for the elderly and prepare you for employment in the field of aging. The courses in the sequence are designed to be taken by undergraduates as well as interested persons from the community at large.

This minor is designed to appeal to students whose major academic preparation is in sociology, psychology, social work, business, education, nursing, public administration, biology, economics, political science, health sciences, or recreation.

## Aging and Adult Life Minor

Please contact the Sociology Department at 2172 Au Sable Hall, (616) 331-3730.

Knowledge of aging can improve interactions with those at various and different stages in the adult life course. In the process, it can help the individual understand and anticipate their own adult lives. The available courses in the minor open up the world of public policy development in preparation for employment in fields related to aging or that work with aging populations. They also include the biological and cultural aspects of aging and the end of life that teaches students about the complex interaction of individual perspective, socio-cultural contexts, and the physical realities of the human body through the latter part of the life course.

This minor is designed to appeal to those students whose major academic preparation is in any field that may work with older populations. Examples include sociology, psychology, social work, business, education, nursing, public administration, biology, economics, political science, health sciences or recreation.

## Requirements for a Minor in Aging and Adult Life

Students who wish to minor in aging and adult life are required to complete 21 hours in the minor. At least three credit hours (one course) must be completed in each category.

### Category 1- Aging

- BMS 375 - The Biology of Aging Credits: 3
- NUR 344 - Healthy Aging: A Lifelong Journey Credits: 3
- PSY 366 - Perspectives on Aging Credits: 3
- REC 316 - Therapeutic Recreation with the Elderly Credits: 3
- SOC 388 - Middle Age and Aging Credits: 3

### Category 2 - End of Life

- BMS 374 - Physiological Aspects of Death and Dying Credits: 3
- ENG 386 - Literary Responses to Death and Dying Credits: 3
- PHI 341 - Philosophy of Death and Dying Credits: 3
- SOC 386 - Death and Dying Credits: 3
- SPA 307 - Death and Dying in Hispanic Literature Credits: 3

### Category 3 - Healthcare Institutions and Policy

- AHS 321 - Ethical and Legal Responsibilities in Health Care Credits: 3
- AHS 340 - Health Care Management Credits: 3
- COM 209 - Health Communication Systems Credits: 3
- ECO 343 - Health Economics Credits: 3
- HST 370 - History of Medicine and Health Credits: 3
- PA 310/PLS 310 - Politics and Health Policy Credits: 3
- PA 330 - Health Care Financing Credits: 3
- SOC 286 - Sociology of Health Care Credits: 3

## Allied Health Sciences - Program Description

### Degree Offered

#### Bachelor of Science in Allied Health Sciences

The B.S. in allied health sciences (AHS) degree serves two functions:

1. Prepare students for entry into graduate programs in health professions with preparatory emphases (e.g., prehealth professional emphases preparing students to apply for graduate programs in physician assistant studies, physical therapy, dosimetry and speech-language/audiology). The preparatory emphases for dosimetry and speech-language pathology have a secondary admission requirement.
2. Prepare students for a career in the health care field should the student decide not to pursue a graduate level program. Additional emphases are offered to prepare the student to advance into a health care career. These include health information and reimbursement and histotechnology. These aforementioned emphases each have a competitive secondary admission requirement for students to meet. Declaration of allied health sciences as a major does not assure acceptance into these emphases. There is also a “general” allied health sciences emphasis, which is not preparatory for any particular graduate or specific undergraduate career route. It is for those who are truly undecided about their health career path. It is strongly recommended that all students discuss their options with their assigned advisor to determine what emphasis to select.

#### Allied Health Sciences Goals

- Prepare students with an educational foundation to succeed in the allied health sciences professions.
- Instill in students the general abilities required for professional conduct.
- Instill in students the critical thinking and problem solving skills necessary to be effective in providing interventions and services.
- Instill in students the understanding of the role of research and scientific inquiry as applied to the practice, education, and leadership of their chosen profession.

Grand Valley State University is ideally suited to educate a wide variety of health care professionals. The university’s geographic location, access to high quality clinical environments, strong relationships with the regional medical education community, excellent faculty, supportive administration, experience in the education of health care professionals, and a growing student population all combine to form an ideal environment for allied health care professional education programs.

## Bachelor of Science in Allied Health Science

### Requirements for a Major in Allied Health Sciences

The allied health sciences degree requires a minimum of 120 credits and includes general education requirements, Bachelor of Science course requirements, AHS core courses, and required courses for the completion of an emphasis. Once students declare the allied health sciences major, typically during their sophomore year, they will be assigned a major academic advisor who will assist in selecting the AHS emphasis that best meets their career goals. An approved internship/practicum/clinical experience may be required in a specific emphasis or will be strongly recommended for students not planning to attend graduate school. A minor may be required as a part of the emphasis the student elects or is secondarily admitted into (see table). If the student is in an emphasis that does not require a minor, the student may, under advisement, declare a minor if he or she has sufficient elective credit available or chooses to earn credits beyond the number required for graduation.

Emphasis Within AHS Major	Minor Required	Secondary Admission Required	Capstone Course
General Allied Health Science Emphasis	Yes	No	AHS 495
Prehealth Professional Emphasis in Physical Therapy	No	No	AHS 495
Prehealth Professional Emphasis in Physician Assistant Studies	No	No	AHS 495
Prespeech Language Pathology Emphasis	No	Yes	SLP 405
Prehealth Professional Emphasis in Pre Dosimetry	No	Yes	AHS 495
Health Professional Degree Completion	No	Yes	AHS 495
Histotechnology Emphasis	No	Yes	AHS 490 (Winter Semester, Year 4)
American Sign Language Interpreting Emphasis	No	Yes	
Respiratory Care Emphasis	No	Yes	AHS 495

### B.S. in Allied Health Sciences Major Core Courses (22 credits)

- BIO 120 - General Biology I Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3
- AHS 100 - Medical Terminology Credits: 3
- AHS 110 - Introduction to Health Care Credits: 3
- AHS 301 - Introduction to Health Care Research Credits: 3
- AHS 321 - Ethical and Legal Responsibilities in Health Care Credits: 3
- AHS 340 - Health Care Management Credits: 3

Individual emphases will require a Capstone course.

- AHS 495 - Issues in Health Professions Credits: 3 for the Prehealth Professional emphasis in physical therapy, the prehealth professional emphasis in physician assistant studies, the prehealth professional emphasis in dosimetry, general allied health sciences emphasis, and health information and reimbursement emphasis.
- SLP 405 - Clinical Methods Credits: 3 for the prespeech-language pathology emphasis
- AHS 490 - Health Care Internship Credits: 1 to 12 for the histotechnology emphasis

### Bachelor of Science Course Requirements

- BIO 120 - General Biology I Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3
- AHS 301 - Introduction to Health Care Research Credits: 3
- **OR** PSY 300 - Research Methods in Psychology Credits: 3

### Emphasis in the AHS Program

**In order to graduate with a B.S. in allied health sciences, each student is required to select or apply to an emphasis in the AHS program.**

Each emphasis is designed to be either preparatory to apply to a graduate level professional health care program or to prepare students for career entry upon bachelors’ degree completion.

### Emphasis in General Allied Health Sciences – Minor Required, Secondary Admission not Required

The general emphasis is for students who are undecided as to their career/education/employment goals. A minor, selected and approved by the student’s academic advisor, is required for this emphasis.

**Emphasis Courses**

- AHS 495 - Issues in Health Professions Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- BIO 355 - Human Genetics Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 250 - Anatomy and Physiology I Credits: 4
- **AND** BMS 251 - Anatomy and Physiology II Credits: 4 (used in calculation of emphasis)
- **OR** BMS 208 - Human Anatomy Credits: 3
- **AND** BMS 290 - Human Physiology Credits: 3
- **AND** BMS 291 - Laboratory in Human Physiology Credits: 1
- CHM 231 - Introductory Organic Chemistry Credits: 4
- CHM 232 - Biological Chemistry Credits: 4
- PHY 200 - Physics for the Life Sciences Credits: 4

Minor	18 - or greater credits (a minor is required for this emphasis, 21 credits used in calculation)
Electives	12 - 15 credits (based on a 21-credit minor and if MTH 110 taken or not — includes six credits AHS 490 elective internship, 15 credits used in calculation)
Emphasis Total	70 credits
AHS Core	22 credits
General Education (unduplicated)	28 credits
Total	120 credits (121 credits if MTH 110 is taken)

**Suggested Curriculum Sequence (assumes a 21-credit minor)**

<b>Fall Year One</b>		<b>Winter Year One</b>	
AHS 110 - Introduction to Health Care	3 cr	BIO 120 - General Biology I	4 cr
CHM 109 - Introductory Chemistry	4 cr	WRT 150 - Strategies in Writing	4 cr
MTH 110 - Algebra (or 4 cr elective)	4 cr	General Education Arts	3 cr
General Education Social/Behavioral	3 cr	General Education Philosophy	3 cr
Total	14 cr	Total	14 cr
<b>Fall Year Two</b>		<b>Winter Year Two</b>	
AHS 100 - Medical Terminology	3 cr	BIO 355 - Human Genetics	3 cr
BMS 208 - Human Anatomy *	3 cr	BMS 290 and BMS 291 - Laboratory in Human Physiology *	4 cr
(or BMS 250 - Anatomy and Physiology I)		(or BMS 251 - Anatomy and Physiology II)	
CHM 231 - Introductory Organic Chemistry	4 cr	Minor Course	3 cr
Minor Course	3 cr	Minor Course	3 cr
General Education World Perspectives	3 cr	General Education U.S. Diversity	3 cr
Total	16 cr	Total	16 cr
<b>Fall Year Three</b>		<b>Winter Year Three</b>	
CHM 232 - Biological Chemistry	4 cr	AHS 340 - Health Care Management	3 cr
PHY 200 - Physics for the Life Sciences	4 cr	BMS 212/BMS 213 - Laboratory in Microbiology	4 cr
AHS 321 - Ethical and Legal Responsibilities in Health Care (SWS)	3 cr	STA 215 - Introductory Applied Statistics	3 cr

General Education Social/Behavioral	3 cr	Issues	3 cr
Total	14 cr	Minor Course Total	3 cr 16 cr
<b>Fall Year Four</b>		<b>Winter Year Four</b>	
AHS 301 - Introduction to Health Care Research	3 cr	AHS 495 - Issues in Health Professions (Capstone)	3 cr
Minor Course	3 cr	Minor Course	3 cr
General Education History	3 cr	Elective (AHS 490 - Health Care Internship advised)	6 cr
Minor Course	3 cr	Elective	3 cr
Elective	3 cr	Total	15 cr
Total	15 cr		

**Total Credits\* 120**

\*BMS 250 - Anatomy and Physiology I (4 cr) and BMS 251 - Anatomy and Physiology II (4 cr) may be taken in place of BMS 208, 290, and 291. Student is responsible for earning one additional credit if BMS 208/290/291 sequence of anatomy and physiology is used. The student is responsible for earning 120 credits. A three-credit elective should be taken if MTH 110 is not.

Student must also take one additional SWS course in either a general education, minor, Issues, or elective course.

**Prehealth Professional Physical Therapy Emphasis - Minor not Required, Secondary Admission not Required**

Physical therapists (PTs) are health care professionals who diagnose and treat individuals with health-related conditions, illnesses, or injuries that limit their ability to move and perform normal daily activities. Employment projections are far greater than normal growth (30-percent growth between 2008 and 2018) based on changes in health care laws and the aging American population. The American Physical Therapy Association's (APTA) accrediting body, The Commission on Accreditation of Physical Therapy Education (CAPTE), only accredits graduate programs; however, a baccalaureate degree and the necessary undergraduate preparation is highly recommended for admission into a Doctor of Physical Therapy program. The courses in this emphasis were developed in cooperation with GVSU's graduate Doctor of Physical Therapy (D.P.T.) program. This emphasis also provides a curriculum that generally aligns with entrance recommendations for graduate physical therapy programs across the country. Students need to consult the prerequisites of D.P.T. programs outside of GVSU for specific requirements. Students will be advised that the GVSU D.P.T. program requires a minimum GPA of 3.20 and that GVSU, as do most D.P.T. programs in other institutions, admit students with an overall and science GPA far in excess of 3.2. Students are strongly encouraged to meet periodically with their academic advisor to determine their eligibility for continuing the prehealth professional PT emphasis.

The student should be advised that progression through the prehealth professional physical therapy emphasis does not represent the only route of preparation for application to this graduate program. Other majors are also suitable, so long as the student closely follows the prerequisite science curriculum set forth by the GVSU D.P.T. graduate program.

**Prehealth Professional Physical Therapy Emphasis Curriculum**

- AHS 495 - Issues in Health Professions Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- CHM 109 - Introductory Chemistry Credits: 4
- CHM 231 - Introductory Organic Chemistry Credits: 4
- CHM 232 - Biological Chemistry Credits: 4
- MOV 304 - Introduction to Exercise Physiology Credits: 3

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- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3 (or MTH 125 or MTH 201)
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- PSY 101 - Introductory Psychology Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3
- SOC 101 - Introduction to Sociology Credits: 3 (ANT 204 or SOC 105 acceptable here also to fulfill general education Soc/Beh)

Students should choose one of the following anatomy and physiology sequences:

### Sequence A

- BMS 208 - Anatomy Credits: 3
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Human Physiology Laboratory Credit: 1  
(Students may consider BMS 309 - Human Anatomy Laboratory as a recommended elective in this sequence.)

### OR

### Sequence B

- BMS 250/251 - Anatomy and Physiology I and II Credits: 8

Electives	21 credits (a minor can be elected with advisement, if desired)
Total in Emphasis	76 credits
AHS Core	22 credits
General Education (unduplicated)	22 credits
Total in Degree	120 credits

### Suggested Curriculum Sequence

Fall Year One		Winter Year One	
AHS 110 - Introduction to Health Care	3 cr	BIO 120 - General Biology I	4 cr
CHM 109 - Introductory Chemistry	4 cr	PSY 101 - Introductory Psychology (General Education Soc/Beh)	3 cr
MTH 110 - Algebra (or 4 cr elective)	4 cr	WRT 150 - Strategies in Writing	4 cr
General Education Arts	3 cr	General Education Philosophy	3 cr
Total	14 cr	Total	14 cr
Fall Year Two		Winter Year Two	
AHS 100 - Medical Terminology	3 cr	BMS 290 and BMS 291 - Laboratory in Human Physiology	4 cr
BMS 208 - Human Anatomy	3 cr	(or BMS 251 Anatomy and Physiology II )	(4 cr)
(or BMS 250 - Anatomy and Physiology I )	(4 cr)	MTH 123 Trigonometry (prerequisite for PHY 220)	3 cr
CHM 231 - Introductory Organic Chemistry	4 cr	SOC 101, SOC 105, or ANT 204 (PT required - fulfills Gen Ed Soc/ Beh)	3 cr
MTH 122 - College Algebra	3 cr	General Education History	3 cr
Elective	3 cr	General Education U.S. Diversity	3 cr
Total	16 (17) cr	Total	16 cr
Fall Year Three		Winter Year Three	
AHS 340 - Health Care Management	3 cr	BMS 212/BMS 213 - Laboratory in Microbiology	4 cr
PHY 200 - Physics for the Life Sciences	5 cr	STA 215 - Introductory Applied Statistics	3 cr

CHM 232 - Biological Chemistry	4 cr	PHY 221 General Physics II	5 cr
PSY 364 - Life Span Developmental Psychology	3 cr	MOV 304 - Introduction to Exercise Physiology	3 cr
BMS 309 - Laboratory in Human Anatomy (recommended)	1 cr	Total	15 cr
Total	16 cr		
Fall Year Four		Winter Year Four	
AHS 321 - Ethical and Legal Responsibilities in Health Care	3 cr	General Education World Perspectives	3 cr
AHS 301 - Introduction to Health Care Research	3 cr	AHS 495 - Issues in Health Professions (Capstone)	3 cr
Issues	3 cr	Elective	9 cr
Electives (SWS)	5 cr	Total	15 cr
Total	14 cr		
<b>Total Credits 120</b>			

Prehealth Professional Physician Assistant Studies Emphasis - Minor not Required, Secondary Admission not Required  
Physician assistants (PAs) are health care professionals who practice under the supervision of physicians. PAs are formally trained to provide diagnostic, therapeutic, and preventative health care services as well as treating minor injuries. The Bureau of Labor Statistics predicts that the PA profession will grow much faster than average between 2008 and 2018. Physician assistant programs provide this graduate-level education. The prehealth professional emphasis in physician assistant studies provides those courses necessary to enhance a student's science background needed for applicant consideration. The courses in this emphasis were developed in cooperation with GVSU's graduate physician assistant studies (PAS) program. This emphasis also provides a curriculum that generally aligns with entrance recommendations for graduate physician assistant programs across the country. Students need to consult the course entry requirements of PAS programs outside of GVSU for specific requirements. Students will be advised that while most PAS graduate programs require an overall and science GPA of 3.0 for application, a GPA far in excess of 3.0 is usually needed for admission. Students are strongly encouraged to periodically meet with their academic advisors to determine their eligibility for continuing the prePAS emphasis.

The student should be advised that progression through the prehealth professional physician assistant studies emphasis does not represent the only route of preparation for application to this graduate program. Other majors are also suitable, so long as the student closely follows the prerequisite science curriculum set forth by the GVSU PAS graduate program.

### Prehealth Professional Physician Assistant Studies Emphasis Courses

- AHS 495 - Issues in Health Professions Credits: 3
- BIO 328 - Biomedical Ethics Credits: 3
- BIO 355 - Human Genetics Credits: 3
- **BOTH** BMS 208 - Human Anatomy Credits: 3  
**AND** BMS 290 Human Physiology Credits: 3  
**AND** BMS 291 Laboratory in Human Physiology Credits: 1  
**OR BOTH** BMS 250 - Anatomy and Physiology I Credits: 4  
**AND** BMS 251 - Anatomy and Physiology II Credits: 4
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 305 - Clinical Nutrition Credits: 3
- BMS 310 - Basic Pathophysiology Credits: 3
- BMS 311 - Pharmacological Aspects of Biomedical Sciences Credits: 3

- CHM 109 - Introductory Chemistry Credits: 4
- CHM 231 - Introductory Organic Chemistry Credits: 4
- CHM 232 - Biological Chemistry Credits: 4
- PHY 200 - Physics for the Life Sciences Credits: 4
- PSY 101 - Introductory Psychology Credits: 3

Electives	25 credits (a minor can be elected with advisement, if desired)
Total in Emphasis	73 credits (calculated using BMS 208/290/291 sequence)
AHS Core	22 credits
General Education (unduplicated)	25 credits
Degree Total	120 (121) credits

### Suggested Curriculum Sequence

Fall Year One		Winter Year One	
AHS 110 - Introduction to Health Care	3 cr	BIO 120 - General Biology I	4 cr
CHM 109 - Introductory Chemistry	4 cr	PSY 101 - Introductory Psychology	3 cr
MTH 110 - Algebra (or 4 cr elective)	4 cr	WRT 150 - Strategies in Writing	4 cr
General Education U.S. Diversity	3 cr	General Education Art	3 cr
Total	14 cr	Total	14 cr
Fall Year Two		Winter Year Two	
AHS 100 - Medical Terminology	3 cr	BMS 290 and BMS 291 - Laboratory in Human Physiology	4 cr
BMS 208 - Human Anatomy	3 cr	(or BMS 251 - Anatomy and Physiology II )	(4 cr)
(or BMS 250 - Anatomy and Physiology I)	(4 cr)	BIO 355 - Human Genetics	3 cr
CHM 231 - Introductory Organic Chemistry	4 cr	Elective	2 cr
Elective	3 cr	General Education Social/Behavioral	3 cr
General Education World Perspectives	3 cr	General Education Philosophy	3 cr
Total	16 (17) cr	Total	15 cr
Fall Year Three		Winter Year Three	
AHS 340 - Health Care Management	3 cr	BMS 212/BMS 213 - Laboratory in Microbiology	4 cr
CHM 232 - Biological Chemistry	4 cr	STA 215 - Introductory Applied Statistics	3 cr
PHY 200 - Physics for the Life Sciences	4 cr	BMS 305 - Clinical Nutrition	3 cr
BIO 328 - Biomedical Ethics	3 cr	Elective	3 cr
Elective	1 cr	General Education History	3 cr
Total	15 cr	Total	16 cr
Fall Year Four		Winter Year Four	
AHS 301 - Introduction to Health Care Research	3 cr	AHS 495 - Issues in Health Professions (Capstone)	3 cr

AHS 321 - Ethical and Legal Responsibilities in Health Care(SWS)	3 cr	Issues	3 cr
BMS 310 - Basic Pathophysiology	3 cr	BMS 311 - Pharmacological Aspects of Biomedical Sciences	3 cr
Electives	3 cr	Electives	6 cr
Total	15 cr	Total	15 cr
<b>Total Credits 120 (121 if BMS 250/251 taken)</b>			

Students are responsible for one additional SWS course, which can be from electives or general education courses.

### Prespeech Language Pathology Emphasis - Minor not Required, Secondary Admission Required

This undergraduate emphasis prepares students for admission into a graduate program in speech-language pathology or audiology. Speech-language pathologists assess, diagnose, and treat disorders related to speech and language as well as cognitive-communication, voice, swallowing, and fluency. Audiologists identify hearing and balance disorders, provide rehabilitative services, assess amplification devices and instruct patients in their care, and consult with industry and the government regarding noise and hearing conservation. Speech and hearing scientists conduct research seeking to improve our understanding of speech, language, and hearing so as to improve the quality of services provided to those with communication impairments.

### Career Opportunities

Graduates of entry-level programs are employed in all levels of education, rehabilitation facilities, hospitals, extended care and clinical facilities. According to the Bureau of Labor Statistics, 28,900 additional speech-language pathologists will be needed to fill the demand between 2014 and 2024 — a 21-percent increase in job openings. The Department of Labor also projects that employment of audiologists is expected to grow 29 percent from 2014 to 2024, much faster than average for all occupations.

### Admission into the Speech-Language Pathology Emphasis

Students typically apply for admission into the emphasis the second semester of the sophomore year. Prerequisites include 3.0 GPA; application form; official transcript(s) from all nonGVSU colleges/universities attended. Application forms can be found on the department of Communication Sciences and Disorders (CSD) website. All completed materials must be sent directly to the CSD department. Admitted students begin the emphasis in the fall semester. The emphasis must be completed over a minimum of two academic years.

### Required Courses for the Speech-Language Pathology Emphasis

The AHS/BS degree with a SLP emphasis provides those courses necessary to enhance a student's science background needed for applicant consideration. The GVSU Department of Allied Health Sciences (AHS) developed this set of courses in cooperation with the graduate SLP program; it meets the preferred educational requirements for admittance to GVSU's graduate SLP program and many other similar graduate programs of study at other institutions. These courses have been designed to ensure that students acquire knowledge and skills in areas that are prerequisite for graduate-level study in speech-language pathology and audiology.

### Required Coursework for Students Who Do Not Wish to Earn a Major in Allied Health Sciences

Undergraduate students who wish to complete a GVSU major other than Allied Health Sciences (AHS) can also enroll in the courses that fulfill prerequisite coursework requirement for most graduate schools in SLP or audiology. NonAHS students must complete and submit an emphasis application and be admitted to the program to enroll in the courses. The coursework can be completed in two or four semesters. Courses listed as follows with an asterisk (\*) fulfill the prerequisite requirements

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for most graduate programs and make up the curriculum for nonAHS major students.

The two-semester sequence is abbreviated, can be completed in a short time period and consists of all of the courses with asterisks, with the following modification: SLP 403 and SLP 405 are not offered.

- PSY 101 - Introductory Psychology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- PSY 301 - Child Development Credits: 3 or PSY 364 - Life Span Developmental Psychology Credits: 3
- SLP 200 - Introduction to Communication Disorders Credits: 3
- \*SLP 302 - Anatomy and Physiology of the Speech and Hearing Mechanism Credits: 3
- \*SLP 303 - Language Development Credits: 3
- \*SLP 304 - Phonetics Credits: 3
- \*SLP 305 - Introduction to Hearing Science Credits: 3
- \*SLP 306 - Speech Science Credits: 3
- \*SLP 307 - Language Disorders Credits: 3
- \*SLP 308 - Articulation and Phonological Disorders Credits: 3
- \*SLP 309 - Basic Audiology Credits: 3
- \*SLP 401 - Neurological Foundations of Communication Disorders Credits: 3
- \*SLP 402 - Voice and Fluency Credits: 3
- \*SLP 403 - Diagnostics in Communication Disorders Credits: 3
- \*SLP 404 - Aural Rehabilitation Credits: 3
- \*SLP 405 - Clinical Methods Credits: 3

Emphasis Total	56 credits
AHS core Total	22 credits
Electives	9 credits
General Education (unduplicated)	33 credits
Total in Degree	120 credits

### Suggested Curriculum Sequence

Fall Year One		Winter Year One	
WRT 150 - Strategies in Writing	4 cr	General Education Arts	3 cr
CHM 109 - Introductory Chemistry	4 cr	SLP 200 - Introduction to Communication Disorders	3 cr
AHS 110 - Introduction to Health Care	3 cr	BIO 120 - General Biology I	4 cr
MTH 110 - Algebra (or 4 cr Gen Ed elective)	4 cr	PSY 101- Introductory Psychology	3 cr
		AHS 100 - Medical Terminology	3 cr
Total	15 cr	Total	16 cr
Fall Year Two		Winter Year Two	
BMS 250 - Anatomy and Physiology I	4 cr	BMS 251 - Anatomy and Physiology II	4 cr
SLP 303 - Language Development	3 cr	STA 215 - Introductory Applied Statistics	3 cr
PSY 301 or PSY 364	3 cr	SLP 305 - Introduction to Hearing Science	3 cr
General Education History	3 cr	General Education Philosophy	3 cr
General Education World Perspectives	3 cr	Elective	3 cr
Total	16 cr	Total	16 cr
Fall Year Three		Winter Year Three	
AHS 321 - Ethical and Legal Responsibilities in Health Care (SWS)	3 cr	General Education Social/Behavioral	3 cr

SLP 302 - Anatomy and Physiology of the Speech and Hearing Mechanism	3 cr	SLP 306 - Speech Science	3 cr
SLP 304 - Phonetics	3 cr	SLP 309 - Basic Audiology	3 cr
AHS 301 - Introduction to Health Care Research	3 cr	General Education EDF 315 - U.S. Diversity	3 cr
Elective	3 cr	Issues	3 cr
Total	15 cr	Total	15 cr
Fall Year Four		Winter Year Four	
SLP 308 - Articulation and Phonological Disorders	3 cr	AHS 340 - Health Care Management	3 cr
SLP 307 - Language Disorders	3 cr	SLP 403 - Diagnostics in Communication Disorders	3 cr
SLP 401 - Neurological Foundations of Communication Disorders	3 cr	SLP 404 - Aural Rehabilitation	3 cr
SLP 402 - Voice and Fluency Credits: 3	3 cr	SLP 405 - Clinical Methods (Capstone)	3 cr
Electives	3 cr	Electives	3 cr
Total	15 cr	Total	12 cr
<b>Total Credits 123</b>			

### Prehealth Professional Dosimetry Studies Emphasis - Minor not Required, Secondary Admission Required

Dosimetry is a specialization within the field of radiology. Dosimetrists calculate the dosage used in radiation treatments under the guidance of an oncologist and medical physicist. The profession requires both licensure and certification. The field of dosimetry is projected to grow much faster than average with a growth of 27 percent between 2008 and 2018. The AHS Prehealth professional dosimetry emphasis was developed in conjunction with the Department of Diagnostic and Treatment Sciences within the College of Health Professions. The predosimetry curriculum aligns with prerequisites required for admission to the graduate dosimetry program.

### Summary of Requirements: Secondary Admissions Criteria for the Predosimetry Emphasis

The prehealth professional dosimetry emphasis is a secondary competitive admission emphasis within the AHS major. The admissions process will take place at the end of the sophomore year, and require an application by the student. The minimum criteria for application will be:

1. A minimum overall GPA of 3.0
2. A completed application form
3. Completion of 45 semester hours, including current enrollment verified by transcripts

This emphasis is limited to an enrollment of 18 students per year due to limitations of laboratory space.

### Prehealth Professional Dosimetry Emphasis Courses

- **BOTH** BMS 250 - Anatomy and Physiology I Credits: 4
- **AND** BMS 251 - Anatomy and Physiology II Credits: 4
- **OR BOTH** BMS 202 - Anatomy and Physiology Credits: 4
- **AND** BMS 208 - Human Anatomy Credits: 3
- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- RIT 401 - Radiologic Information Technology Credits: 3
- RIU 322 - Principles of Radiologic Imaging Sciences Credits: 3
- RIT 302 - Radiation Protection Physics Credits: 2
- RIT 441 - Gross Human Sectional Anatomy Credits: 4

- RIT 458 - Neoplasms Credits: 3
- RIT 330 - Radiation Therapy Principles and Practices I Credits: 4
- RIT 331 - Radiation Therapy Principles and Practices I Laboratory Credits: 1
- RIT 361 - Radiation Therapy Clinical Education I Credits: 2  
OR RIT 334 - Simulations in Radiation Therapy Credits: 2
- AHS 495 - Issues in Health Professions Credits: 3

Emphasis Total	54 credits (calculated with BMS 250/251)
Electives	13 credits (if MTH 110 - 4 cr not taken or 14 credits)
AHS Core Courses	22 credits
General Education	31 credits
Total	120 credits

### Suggested Curriculum Sequence

Fall Year One		Winter Year One	
BIO 120 - General Biology I	4 cr	BMS 250 - Anatomy and Physiology I (or BMS 202 - Credits: 4)	4 cr
General Education Art	3 cr	MTH 123 - Trigonometry	3 cr
MTH 110 - Algebra (or elective)	4 (3) cr	General Education Social/Behavioral (PSY 101 - advised)	3 cr
WRT 150 - Strategies in Writing	4 cr	MTH 122 - College Algebra	3 cr
Total	15 (14) cr	General Education History	3 cr
		Total	16 cr
Fall Year Two		Winter Year Two	
PHY 220 - General Physics I	5 cr	PHY 221 - General Physics II	5 cr
STA 215 - Introductory Applied Statistics	3 cr	AHS 110 - Introduction to Health Care	3 cr
BMS 251 - Anatomy and Physiology II (or BMS 208, Credits: 3)	4 cr	General Education World Perspectives	3 cr
AHS 100 - Medical Terminology	3 cr	General Education Social/Behavioral	3 cr
Total	15 cr	Total	14 cr
Fall Year Three		Winter Year Three	
RIT 401 - Radiologic Information Technology	3 cr	RIU 322 - Principles of Radiologic Imaging Sciences	3 cr
RIT 302 - Radiation Protection Physics	2 cr	RIT 441 - Gross Human Sectional Anatomy	4 cr
AHS 301 - Introduction to Health Care Research	3 cr	AHS 340 - Health Care Management	3 cr
MTH 201 - Calculus I	5 cr	Issues	3 cr
General Education U.S. Diversity	3 cr	Elective	3 cr
Total	16 cr	Total	16 cr
Fall Year Four		Winter Year Four	
RIT 330 - Radiation Therapy Principles and Practices I	4 cr	General Education (SWS)	3 cr
RIT 331 - Radiation Therapy Principles and Practices I Laboratory	1 cr	AHS 321 - Ethical and Legal Responsibilities in Health Care (SWS)	3 cr
RIT 458 - Neoplasms	3 cr	General Education Philosophy	3 cr

AHS 495 - Issues in Health Professions (Capstone)	3 cr	Electives	5 cr
RIT 361 or RIT 334	2 cr		
Elective	2 cr	Total	14 cr
Total	15 cr		

**Total Credits 120**

### Health Professional Degree Completion Emphasis - Minor not Required, Secondary Admission Required

Health professionals whose disciplines have an entry education preparation at the associate's or Associate's of Applied Science degree level constitute an important population of health care workers today. These professions include medical assisting, occupational therapy assistant, surgical technology, dental hygiene, and dozens more. The health professional degree completion emphasis is designed to complement that associates degree professional education with a path to earn a Bachelor's of Science in allied health sciences (AHS), using both the students' professional education and the essential components of upper division baccalaureate education to maximum effectiveness and efficiency. Not only is there career enhancement for the health care professional with a Bachelor's of Science, but also earning a baccalaureate provides the prerequisite knowledge for the expansion of skills to graduate programs.

A transfer student wishing to enter the AHS health professional degree completion emphasis must meet three criteria prior to starting the program:

- Possess an earned Associate of Science or Associate of Applied Science from a school accredited by the Higher Learning Commission.
- The Associate's of Science or Associate's of Applied Science must be in a health profession program requiring external accreditation by the professional body regulating that particular profession.
- The health profession offers national voluntary credentialing or requires state licensing and the student either possesses or is eligible for earning that credential or license.

Up to 80 associate's or Associate's of Applied Science credits can apply toward earning the AHS bachelor's degree. Transferability of credit will be done on an individual basis through transcript evaluation. If the associate or Associate of Applied Science degree being used in this transfer is less than 80 credits, the additional credits needed to meet 120 credits for the bachelor's degree must be completed at GVSU. The student must earn 40 credits at GVSU with a total of 120 required for the bachelor's degree. Admission to GVSU requires a minimum cumulative GPA of 2.5 for admission consideration. Precollege preparation courses that transfer as less than 100 level in GVSU's course numbering system cannot be applied to the possible 80 transfer credits.

There is no admission deadline for this emphasis. Enrollment will occur on a continuing basis over the academic year at the start of the next semester. The procedure for application requires the following:

- Application for admission and acceptance to GVSU with a minimum cumulative GPA of 2.5.
- Demonstrate transcript and professional documentation fulfilling the three criteria previously listed.
- Complete the AHS health professional degree completion application form found at the Allied Health Sciences website [www.gvsu.edu/ahs/](http://www.gvsu.edu/ahs/).

All students will need to fulfill the AHS core course requirements, unless suitable transfer credit is arranged.

### All Students in the AHS Health Professional Degree Completion Emphasis are Required to Complete the Following Core Courses

- BIO 120 - General Biology I Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3
- AHS 301 - Introduction to Health Care Research Credits: 3

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- AHS 321 - Ethical and Legal Responsibilities in Health Care Credits: 3
- AHS 340 - Health Care Management Credits: 3
- A Capstone course is also a part of this Health Professional Degree Completion Emphasis: AHS 495 - Issues in Health Professions Credits: 3

A minor is not required in the AHS health professional degree completion emphasis.

Students in the AHS health professional degree completion emphasis must also complete all general education foundation categories, upper division general education Issues requirements by taking the coursework at GVSU.

The AHS bachelor's degree requires that 40 of the 120 credits be taken at GVSU. During the GVSU application process students will submit official transcripts from all colleges and universities attended. Upon acceptance to GVSU the admissions offer will provide a formal evaluation of credits for transfer. The academic advisor and student will use this information to build an academic plan outlining courses required for completion of the allied health sciences emphasis and general education components of the degree. The remaining credits applied toward the Bachelor's of Science degree in allied health sciences (up to 80 total) will come from the professional coursework successfully completed in the respective associate or Associate of Applied Science health profession. Since each student's transcript will be different, depending on the school attended and the health profession pursued, the planning of what courses are required to earn the baccalaureate degree will be individually determined.

The AHS department recognizes that many students earning a bachelor's degree through this emphasis are concurrently working in their respective health profession. Every effort will be made to advise students to enroll in online/hybrid and evening course sections to lessen commuting and/or daytime presence.

The "course of studies" as follows is intended only as an example. It is formatted as a full-time student schedule. A part-time schedule would be different. Each individual student's plan of progress will vary as to the exact courses being taken each semester.

### Suggested Curriculum Sequence

Semester One - GVSU		Semester Two - GVSU	
General Education	3 cr	General Education	3 cr
General Education	3 cr	General Education - Issues (advise nonAHS SWS*)	3 cr
BIO 120 - General Biology I	4 cr	AHS 301 - Introduction to Health Care Research	3 cr
STA 215 - Introductory Applied Statistics	3 cr	AHS 321 - Ethical and Legal Responsibilities in Health Care	3 cr
		AHS 340 - Health Care Management	3 cr
<b>Total</b>	<b>13 cr</b>	<b>Total</b>	<b>15 cr</b>
Semester Three - GVSU			
General Education	3 cr		
AHS 495 - Issues in Health Professions (SWS*) (Capstone)	3 cr		
General Education	3 cr		
Elective (advise General Education nonAHS Issues Course)	3 cr		
<b>Total</b>	<b>12 cr</b>		
<b>Total from Semesters One, Two, and Three: 40 credits</b>			
<b>Transferred from Community College: 80 credits (potential)</b>			
<b>Total for AHS Bachelor's Degree: 120 credits</b>			

The student is responsible to remain in close contact with either the College of Health Professions Student Services Office advisers or AHS faculty advisers when fulfilling the requirements of this emphasis. Students can refer to [www.gvsu.edu/gened](http://www.gvsu.edu/gened) for an outline of the required general education courses. Students are responsible for fulfilling all general education Foundations, Issues, SWS, and AHS major course requirements, as outlined previously, needed for the bachelor's degree in AHS.

\*SWS stands for Supplemental Writing Skills. GVSU requires that two classes designated SWS be completed with a grade of at least C for graduation. The two SWS classes cannot have the same course prefix, i.e. AHS.

### Histotechnology Emphasis - Minor not Required, Secondary Admission Required

Histology is a laboratory science concerned with the demonstration of cellular morphology, chemical composition, and function of normal and abnormal tissue. The histotechnologist cuts tissues removed through surgical procedures, mounts the tissue sections on glass slides, and stains them with special dyes to make the cell details visible under the microscope. With the information learned from the section of tissue biopsy, the pathologist and the patient's physician can make appropriate diagnoses and determine the best course of treatment for the patient.

The histotechnologist emphasis requires students to complete a minimum of 96 credits at GVSU and 24 credits of clinical practicum (AHS 490) at an affiliated hospital that has a nationally accredited histotechnology program, e.g., William Beaumont Hospital in Royal Oak, MI.

National certification in histotechnology requires the completion of a baccalaureate degree and completion of clinical training in a nationally accredited program. The accredited program at William Beaumont Hospital is a 10-month 40 hour per week educational experience. Students will spend their senior year at the hospital (known as the 3+1 model). This 3+1 educational model is used by a number of universities for their laboratory-based programs; e.g., medical laboratory science, histotechnology, cytotechnology, cytogenetics technology. The 24 credits of AHS 490 will serve as the student's Capstone course in the major.

To become a certified histotechnologist (HTL), students must complete a baccalaureate degree that includes a clinical practicum in a NAACLS-accredited histotechnology program (National Accrediting Agency for Clinical Laboratory Sciences; 5600 N. River Rd. Suite 720; Rosemont, IL 60018-5119.) Upon completion of the baccalaureate degree requirements and the clinical requirements, students are eligible to take the American Society for Clinical Pathology (ASCP) certification exam for histotechnology (HTL).

Acceptance into an accredited histotechnology program for the required clinical education experience (AHS 490) is a competitive process that includes applying to the clinical site at William Beaumont Hospital. Availabilities are limited and the Beaumont program officials will determine those admitted to the clinical phase. A cumulative grade point average and a science/math grade point average of 3.0 are required for admission into the clinical program. Applicants are also required by NAACLS to complete the following courses prior to the start of their clinical experience: anatomy, physiology, microbiology, immunology, organic chemistry, biochemistry, and intermediate algebra. The application process occurs during the sophomore year. Students must work closely with their academic advisor regarding the application process.

### Required Courses for the AHS B.S. with Histotechnology Emphasis

- BIO 355 - Human Genetics Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 208 - Human Anatomy Credits: 3
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1

- (BMS 250 /251 Anatomy and Physiology I and II can substitute for BMS 208/290/291)
- BMS 310 - Basic Pathophysiology Credits: 3
- BMS 410 - Immunology Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- CHM 231 - Introductory Organic Chemistry Credits: 4
- CHM 232 - Biological Chemistry Credits: 4
- MLS 102 - Introduction to Medical Laboratory Sciences Credits: 1
- MLS 416 - Hematology Credits: 3 and MLS 417 - Clinical Hematology Laboratory Credits: 1
- PHY 200 - Physics for the Life Sciences Credits: 4
- AHS 490 - Health Care Internship Credits: 1 to 12

Electives	5 credits
Emphasis Total (a minor is not required)	70 credits
AHS Core	22 credits
General Education	28 credits
Total	120 credits

### Suggested Curriculum Sequence

Fall Year One		Winter Year One	
CHM 109 - Introductory Chemistry	4 cr	CHM 231 - Introductory Organic Chemistry	4 cr
MTH 110 - Algebra or Math Equivalent	4 cr	BIO 120 - General Biology I	4 cr
AHS 110 - Introduction to Health Care	3 cr	WRT 150 - Strategies in Writing	4 cr
General Education Art	3 cr	MLS 102 - Introduction to Medical Laboratory Sciences	1 cr
Total	14 cr	General Education History	3 cr
		Total	16 cr
Fall Year Two		Winter Year Two	
CHM 232 - Biological Chemistry	4 cr	PHY 200 - Physics for the Life Sciences	4 cr
BMS 208 - Human Anatomy	3 cr	BMS 212/BMS 213 - Laboratory in Microbiology	4 cr
(or BMS 250 - Anatomy and Physiology I)	(4 cr)	Elective	1 cr
General Education Social/Behavioral	3 cr	BMS 290 and BMS 291 - Laboratory in Human Physiology	4 cr
BIO 355 - Human Genetics	3 cr	(or BMS 251 - Anatomy and Physiology II)	(4 cr)
AHS 100 - Medical Terminology	3 cr	General Education Philosophy	3 cr
Total	16 cr	Total	16 cr
Fall Year Three		Winter Year Three	
BMS 410 - Immunology	3 cr	AHS 301 - Introduction to Health Care Research	3 cr
MLS 416/MLS 417 - Clinical Hematology Laboratory	4 cr	AHS 340 - Health Care Management	3 cr
AHS 321 - Ethical and Legal Responsibilities in Health Care (SWS)	3 cr	General Education Social/Behavioral SWS	3 cr
STA 215 - Introductory Applied Statistics	3 cr	Issues	3 cr
General Education U.S. Diversity	3 cr	General Education World Perspectives	3 cr
Total	16 cr	Total	15 cr

### Spring/Summer Year Three

BMS 310 - Basic Pathophysiology	3 cr
Total	3 cr

Fall Year Four		Winter Year Four	
AHS 490 - Health Care Internship - Beaumont Hospital (Capstone)	12 cr	AHS 490 - Health Care Internship - Beaumont Hospital (Capstone)	12 cr
Total	12 cr	Total	12 cr

**Total Credits: 120**

### American Sign Language (ASL) Interpreting Emphasis - Minor not Required, Secondary Admission Required

This emphasis prepares students to serve as interpreters for the deaf and/or hard of hearing. The emphasis is designed to educate students in advanced signing skills and the application of those skills to typical settings that frequently require an interpreter, including health care, social services, business, and the legal systems. Each basic course in health care, social services, business, and the legal systems has a signing-associated seminar where the vocabulary needed to be successful in that area is learned and students have opportunities to discuss effective interpreting, business practice, and best practices for the profession.

### Secondary Admission Process

Students will apply for competitive admission into the ASL emphasis the second semester of the sophomore year. Prerequisites include 2.0 GPA overall and a grade no less than a C in any of the pre-emphasis courses as follows; completion of 45 semester hours (may be in progress); and application form. The ASL emphasis will not accept more students than there are community practicum sites (25 students currently) available, thus admission to the emphasis is competitive.

### Required Courses for the American Sign Language Interpreting Emphasis

Pre-emphasis required coursework:

- ASL 201 - American Sign Language 1 Credits: 3
- ASL 202 - American Sign Language 2 Credits: 3
- ASL 203 - American Sign Language 3 Credits: 3
- ASL 210 - Introduction to American Sign Language Interpreting Credits: 3

Emphasis required coursework:

- PSY 101 - Introductory Psychology Credits: 3
- ASL 321 - Medical and Developmental Interpreting Credits: 1
- ASL 323 - Business Interpreting Credits: 3
- ASL 324 - Legal Interpreting Credits: 1
- ASL 325 - Social Services Interpreting Credits: 3
- ASL 326 - Educational Interpreting Credits: 1
- ASL 327 - ASL to English Credits: 3
- ASL 420 - American Sign Language Linguistics Credits: 3
- ASL 421 - Deaf History and Culture Credits: 3
- ASL 422 - Deaf History and Culture Practicum Credits: 3
- ASL 423 - ASL Interpreting Practicum Credits: 6
- EDS 378 - Universal Design for Learning: Elementary Credits: 3
- LS 201 - Introduction to Law Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- SLP 303 - Language Development Credits: 3
- SW 150 - Human Needs in Complex Societies Credits: 3

Pre-emphasis Total	12 credits
Emphasis Total	41 credits
General Education (unduplicated)	28 credits
AHS Core Courses	22 credits
Electives (if MTH 110 is not required)	16 credits
Total	120 credits

## Allied Health Sciences

### Suggested Curriculum Sequence

Fall Year One		Winter Year One	
BIO 120 - General Biology I	4 cr	ASL 202 - American Sign Language 2	3 cr
MTH 110 - Algebra or Math Equivalent	4 cr	PSY 101 - Introductory Psychology	3 cr
ASL 201 - American Sign Language 1	3 cr	General Education History	3 cr
WRT 150 - Strategies in Writing	4 cr	General Education Arts	3 cr
Total	15 cr	Elective	3 cr
		Total	15 cr
Fall Year Two		Winter Year Two	
STA 215 - Introductory Applied Statistics	3 cr	AHS 301 - Introduction to Health Care Research	3 cr
ASL 203 - American Sign Language 3	3 cr	AHS 110 - Introduction to Health Care	3 cr
ASL 210 - Introduction to American Sign Language Interpreting	3 cr	General Education World Perspectives	3 cr
General Education Philosophy and Literature	3 cr	Elective	3 cr
General Education Nonlab Physical Science	3 cr	Elective	3 cr
Total	15 cr	Total	15 cr
Fall Year Three		Winter Year Three	
AHS 100 - Medical Terminology	3 cr	SW 150 - Human Needs in Complex Societies	3 cr
SLP 303 - Language Development	3 cr	LS 201 - Introduction to Law	3 cr
MGT 331 - Concepts of Management	3 cr	ASL 324 - Legal Interpreting	1 cr
ASL 323 - Business Interpreting	1 cr	ASL 325 - Social Services Interpreting	1 cr
ASL 321 - Medical and Developmental Interpreting	1 cr	ASL 326 - Educational Interpreting	1 cr
General Education U.S. Diversity	3 cr	EDS 378 - Universal Design for Learning: Elementary	3 cr
Elective	1 cr	Elective	3 cr
Total	15 cr	Total	15 cr
Fall Year Four		Winter Year Four	
AHS 340 - Health Care Management	3 cr	AHS 321 - Ethical and Legal Responsibilities in Health Care (SWS)	3 cr
ASL 327 - ASL to English	3 cr	ASL 423 - ASL Interpreting Practicum	6 cr
ASL 420 - American Sign Language Linguistics	3 cr	Issues	3 cr
ASL 421 - Deaf History and Culture	3 cr	Elective	3 cr
ASL 422 - Deaf History and Culture Practicum	3 cr		
Total	15 cr	Total	15 cr
<b>Total Credits: 120</b>			

Students must complete two SWS classes.

### Allied Health Sciences with Respiratory Care Emphasis - Minor not required, Secondary Admission Required

Respiratory therapists provide direct patient care for those who have trouble breathing across a broad scope of reasons. The patients of respiratory therapists range from premature infants with undeveloped lungs, children and adolescents with asthma, to elderly patients with emphysema. Respiratory therapists work in hospitals, clinics, rehabilitation facilities, and in-home care where they provide emergency care to patients suffering from pulmonary failure, heart attacks, drowning, trauma, or shock.

The allied health sciences (AHS) respiratory care emphasis is conducted in collaboration with Muskegon Community College's (MCC) fully accredited program in respiratory therapy. There are two ways to be admitted to this emphasis:

- Up to 18 qualified GVSU students will be admitted to the respiratory care emphasis each year (fall) after completing GVSU's first year science prerequisite and general education courses. The curriculum sequence is listed as follows. Admitted students will complete the professional respiratory therapy curriculum at MCC during their second and third year. Following the completion of the MCC professional respiratory therapy curriculum, students return to GVSU to complete their fourth year, simultaneously earning an Associate's of Science degree from MCC and a Bachelor's of Science degree from GVSU in allied health sciences - emphasis in respiratory care. The program sequence would include: one year GVSU + two years MCC + one year GVSU.
- Graduates of an accredited Committee on Accreditation for Respiratory Care (CoARC) associate's or Associate's of Applied Science degree respiratory therapy program may apply to the respiratory care emphasis. Up to 80 undergraduate transfer credits can apply to the AHS bachelor's degree. Transferability of credit will be done on an individual basis through transcript evaluation.

### Secondary Admission Requirements for Admissions to the GVSU-MCC Respiratory Care Program

- Completion of the following courses with no course grade less than a C and an overall GPA of 2.5:
  - BIO 120 - General Biology I Credits: 4
  - CHM 109 - Introductory Chemistry Credits: 4
  - MTH 110 - Algebra Credits: 4

(A three-credit general education course can be taken in place of MTH 110 if advanced math placement is achieved.)

  - General education social/behavioral course (recommend PSY 101)
- The following courses must be completed prior to the start of fall - year two, with no course grade less than a C and an overall GPA of 2.50 in order to begin the MCC professional respiratory therapy courses:
  - BMS 250 - Anatomy and Physiology I Credits: 4
  - WRT 150 - Strategies in Writing Credits: 4
  - General education Foundations requirement Credits: 3
  - General education Foundations requirement Credits: 3
- Application process: Students must complete and submit the following materials by February 28 for fall admission of the year of application.
  - Application for admission to the respiratory care emphasis (available at [www.gvsu.edu/ahs](http://www.gvsu.edu/ahs))
  - Demonstrated completion of and enrollment in the courses listed previously
  - Demonstrated fulfillment of minimum grade requirements for courses completed
  - Submission of 2 letters of professional reference

Students who are accepted into the emphasis must successfully complete the 1st year sciences and general education courses prior to starting the professional respiratory therapy courses in fall - year 2.

**Financial aid plans:** Students in the GVSU cohort receiving financial aid will need to meet with a designated GVSU financial aid advisor to coordinate aid between GVSU and Muskegon Community College. This is necessary because there are two consecutive semesters where students take courses only at Muskegon Community College.

**Students with an earned associate's or Associate's of Applied Science degree in respiratory therapy (Care):** Students who are graduates of an accredited respiratory therapy (care) program and have an Associate's of Science or Associate's of Applied Science may apply for admission to the AHS respiratory care emphasis. A total of 80 credits in science and general education courses that have an equivalency with GVSU courses in addition to the professional respiratory therapy courses can transfer to GVSU in fulfilling the AHS bachelor's degree requirements. The maximum transferable credits to GVSU is 80 credits; an additional 40 credits must be taken at GVSU to meet the minimum graduation requirement of 120 credits. Transcript evaluation of applicants for transfer credit will be done on an individual basis and subject to the credit transfer policies of GVSU. Students are responsible for consulting with their advisor to ensure all GVSU general education foundation, issues, and Supplemental Writing Skills (SWS) requirements are met.

#### AHS Core Course Requirements

All students in the AHS respiratory care emphasis, whether in the GVSU cohort or transferring with an earned associate's or Associate's in Applied Science degree in respiratory therapy (care), are required to complete or transfer the following AHS core courses.

- BIO 120 - General Biology I Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3
- AHS 301 - Introduction to Health Care Research Credits: 3
- AHS 321 - Ethical and Legal Responsibilities in Health Care Credits: 3
- AHS 340 - Health Care Management Credits: 3
- AHS 495 - Issues in Health Professions Credits: 3

#### Suggested Curriculum Sequence - GVSU Student Cohort (1 + 2 + 1)

Fall Year One - at GVSU		Winter Year One - at GVSU	
BIO 120 - General Biology I	4 cr	BMS 250 - Anatomy and Physiology I	4 cr
CHM 109 - Introductory Chemistry	4 cr	WRT 150 - Strategies in Writing	4 cr
MTH 110 - Algebra (or Three-credit General Education Foundations)	3-4 cr	General Education Foundations Requirement	3 cr
General Education Soc/Beh (1): Recommend PSY 101	3 cr	General Education Foundations Requirement	3 cr
Total	14-15 cr	Total	14 cr
Fall Year Two - at GVSU and MCC		Winter Year Two - at GVSU and MCC	
AH 102 - Basic Patient Care Skills	3 cr	RT 110 - Equipment and Procedures I (with lab)	3 cr
BMS 251 - Anatomy and Physiology II	4 cr	RT 111 - Intro to Respiratory Therapy (with lab) (accelerated Jan-Feb)	3 cr
RT 101 - Respiratory Therapy Physics	1 cr	RT 120 - Equipment and Procedures II (with lab)	3 cr
STA 215 - Introductory Applied Statistics	3 cr	RT 121 - Pharmacology	2 cr

General Education Foundations Requirement	3 cr	RT 122 - Clinical I (accelerated Mar-May)	2 cr
Total	14 cr	General Education Foundations Requirement	3 cr
Total	14 cr	Total	16 cr
Spring/Summer Year Two - at MCC (May- July)		Fall Year Three - at MCC	
RT 130 - Equipment and Procedures II (with lab)	3 cr	RT 141 - Pulmonary Pathophysiology	2 cr
RT 131 - Physiology	3 cr	RT 144 - Adult Mechanical Ventilation	3 cr
RT 132 - Clinical II	3 cr	RT 152 - CLI Clinical III (accelerated Aug-Oct)	5 cr
RT 134 - Intro to Mechanical Ventilation	1 cr	RT 162 - CLI Clinical IV (accelerated Oct-Dec)	7 cr
Total	10 cr	Total	17 cr
Winter Year Three - at GVSU and MCC		Spring/Summer Year Three - at GVSU and MCC	
AHS 321 - Ethical and Legal Responsibilities in Health Care (SWS)	3 cr	RT 222A - Clinical Rotation VI	7 cr
AHS 340 - Health Care Management	3 cr	AHS 301 - Introduction to Health Care Research	3 cr
RT 210 - Cardiovascular/ Renal Physiology	4 cr	Total	10 cr
RT 220C - Peds/Neonatal Critical Care	4 cr		
General Education Foundations Requirement	3 cr	Fall Year Four - at GVSU and MCC	
Total	17 cr	RT 222A - Clinical Rotation VI	3 cr*
		RT 240 - Health Care Environment	1 cr
		General Education Issues (not AHS)	3 cr
		General Education Foundations Requirement	3 cr
		AHS 495 - Issues in Health Professions (Capstone)	3 cr
		Total	13* cr
<b>Total for AHS Bachelor's Degree 122 Credits (126 if MTH 110 is needed)</b>			

#### Suggested Curriculum Sequence - Students with an A.S. or A.A.S.

Students who have an earned associate's degree in respiratory therapy or care program can transfer 80 credits in science and general education courses that have an equivalency with GVSU courses in addition to the professional respiratory therapy courses in fulfilling the AHS bachelor's degree requirements. If the transfer of credits is less than 80 then additional GVSU courses must be taken to reach 120 credits and fulfill all GVSU credit categories. Students are responsible for consulting with their advisor to ensure all GVSU general education Foundations, Issues, and Supplemental Writing Skills (SWS) requirements are met.

Winter Year Three		Fall Year Four	
General Education Art	3 cr	General Education Foundations	3 cr
General Education Foundations (recommend Soc/Beh, not PSY 101)	3 cr	General Education Issues (advise nonAHS SWS)	3 cr
BIO 120 - General Biology I	4 cr	AHS 301 - Introduction to Health Care Research	3 cr
STA 215 - Introductory Applied Statistics	3 cr	AHS 321 - Ethical and Legal Responsibilities in Health Care	3 cr
		AHS 340 - Health Care Management	3 cr
Total	13 cr	Total	15cr
Winter Year Four			
General Education Foundations	3 cr		
General Education Foundations	3 cr		
AHS 495 - Issues in Health Professions (Capstone)	3 cr		
Electives (GVSU)	3 cr		
Total	12 cr		
<b>Total Credits: 120</b>			

Students are responsible for fulfilling all general education Foundations, Issues, and SWS course requirements needed for the Bachelor's of Science degree in AHS. Individual courses needed by students in the Community College Cohort will be based on transcript evaluation and could vary from those noted previously.

### Minors Recommended for the AHS Major

If the emphasis admitted to or selected allows the election of a minor, the following are popular choices among allied health sciences students: aging and adult life, biology, business, philosophy, psychology, sociology, Spanish, and women, gender, and sexuality studies. Other minors may be applicable to the student's need. Please coordinate this choice with your major advisor. Be sure to contact the minor department and meet with an advisor to create a plan for the minor.

## Graduate Certificate in Clinical Research Trials Management

The certificate in clinical research trials management is a graduate-level program consisting of four courses, two offered by Michigan State University (MSU) and two offered by Grand Valley State University (GVSU). This program is offered online. The certificate is designed for experienced clinical researchers seeking additional coursework, or students seeking preparation for entering a clinical research trials career.

Students who do not have two or more years of professional experience related to clinical trials research are advised to choose AHS 692 - Clinical Research Trials as part of their program of study.

The certificate consists of four courses (12 credits):

- PSM 650 - Ethics and Professionalism in Applied Science Credits: 3 (GVSU)
- PHM 857/858 - Regulatory Affairs and Project Management (MSU)
- HM 868 - Integrated Clinical Research Design and Informatics (MSU)
- Choose one of the following (GVSU):
  - AHS 692 - Clinical Research Trials Practicum Credits: 3
  - PA 535 - Grant Writing Credits: 3
  - STA 610 - Applied Statistics for Health Professions Credits: 3

Applicants for the graduate certificate in clinical research trials management must:

1. Apply to the College of Health Professions. (Please note that it is not necessary to be admitted to a master's degree program at the university in order to be admitted to the certificate program.)
2. Hold an advanced degree or bachelor's degree with a minimum GPA of 3.0 in the last two years of undergraduate work from an accredited college or university.
3. Submit an official copy of transcripts from all postsecondary institutions attended.
4. Provide three letters of recommendation.
5. Submit a personal essay describing interest/experience in clinical trials research and career goals.
6. Provide a resume or curriculum vitae.
7. International students must submit evidence of English language proficiency verified by an official TOEFL score report. Minimum scores expected: TOEFL 610 or computer-based TOEFL 253.

Students who have been admitted to a master's degree or doctoral program at the university must notify both the Graduate Studies office and the program coordinator if they intend to seek this certificate in addition to the program for which they have been admitted.

## Annis Water Resources Institute - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

The Robert B. Annis Water Resources Institute (AWRI) is an academic unit within the College of Liberal Arts and Sciences (CLAS) committed to the study of freshwater resources. The mission of the institute is to integrate research, education, and outreach to enhance and preserve water resources.

**Website:** [www.gvsu.edu/wri](http://www.gvsu.edu/wri)

AWRI seeks to accomplish this mission through:

- Research into major questions about our water resources, including: ecosystem structure and function; contaminants and toxicology; fisheries; hydrology; invasive species; genomics; climatology; land use; watershed, stream, and wetland ecology; water quality; water policy; and basic and applied limnology.
- Public education for a variety of groups, including K-12, university students, and the community.
- Outreach to ensure that decision makers are equipped with the best available knowledge on environmental and water resource-related issues, to reduce the uncertainty associated with their resource management decisions.

Students interested in pursuing an aquatic sciences emphasis within the Master of Science in biology degree program at Grand Valley State University may do so at the AWRI. These students can select a faculty member at AWRI as their major advisor or as committee members for their thesis research in the aquatic sciences. Broad areas of research at AWRI include aquatic biogeochemistry, algal ecology, benthic ecology, climatology and global warming, ecological modeling, ecosystem restoration, environmental chemistry, environmental toxicology, fisheries ecology and management, invasive species, limnology and stream ecology, marine ecology, microbial ecology, molecular ecology, and watershed management. Students are encouraged to contact individual faculty members to learn more about specific areas of research.

### Fieldwork and Research Opportunities

AWRI is housed in three buildings at its Muskegon, Michigan campus on the Muskegon Lake waterfront. The Lake Michigan Center features a full analytical chemistry laboratory, research laboratories, offices, a geospatial technologies information center, and classrooms and conference space.

The R.B. Annis Field Station houses experimental mesocosm tanks, research laboratories, offices, and conference space. A storage building houses our vehicles and trailered boat fleet. Vessels at AWRI include two research vessels as well as a variety of smaller boats including an electrofishing boat. Students working at AWRI are encouraged to work in a collaborative environment, taking advantage of the physical resources and our nine principal investigators (seven faculty members, two associate research scientists), who have a passion for research and education and represent a broad spectrum of focus areas within aquatic science. This collaborative spirit at AWRI stimulates student learning, promotes an interdisciplinary research environment, and promises a rewarding experience.

### Participating Programs

AWRI works closely with faculty from other departments on campus, including biology, chemistry, geology, geography, statistics, and economics. We encourage multidisciplinary approaches, and graduate committees often include faculty from other universities or scientists from state agencies.

## Anthropology - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/anthropology](http://www.gvsu.edu/anthropology)

### Fieldwork and Research Opportunities

The anthropology program regularly sponsors field schools in archaeology and cultural anthropology. These programs are locally based and are accessible to commuters as well as on-campus students. Occasional opportunities for fieldwork abroad are also available. Postfield independent research opportunities are available through individual faculty and the anthropology lab, which houses a collection of over 200,000 artifacts from more than 200 archaeological and historic sites. Students interested in fieldwork should contact the department.

### Participating Programs

Interdepartmental minor in archaeology (Director Mark Schwartz): Students with an anthropology major might want to pursue a minor in this interdisciplinary program. For additional information view the archaeology minor.

## Bachelor of Arts or Bachelor of Science in Anthropology

### Requirements for a Major in Anthropology

The wide scope and holistic nature of anthropology mean that students should have opportunities to experience three kinds of coursework: (1) courses concerned with the discipline; (2) courses specializing in a sub-discipline of anthropology; and (3) courses in disciplines related to anthropology. Students majoring in anthropology may earn either a B.A. or a B.S. degree.

Majors must complete at least 39 to 41 hours in the following:

#### Core Courses

- ANT 204 - Peoples and Cultures of the World Credits: 3
- ANT 206 - Human Origins Credits: 3
- ANT 210 - History of Anthropological Theory Credits: 3
- ANT 215 - Origins of Civilization Credits: 3
- ANT 405 - Contemporary Anthropological Theory Credits: 3
- ANT 495 - Practicing Anthropology (Capstone) Credits: 3
- **AND one** of the following Research Methods courses:
  - ANT 305 - Methods in Biological Anthropology Credits: 3
  - OR** ANT 317 - Advanced Cross-cultural Linguistics Credits: 3
  - OR** ANT 400 - Ethnographic Methods Credits: 3
  - OR** ARC 400 - Archaeological Methods and Research Design Credits: 3

## B.A. and B.S. Degree Requirements

### B.A.

- Third-semester proficiency in a foreign language.

Additional Requirements for the B.A.

Select one course from the following; course chosen may not be used as an elective choice.

- ANT 315 - Comparative Religions Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- ANT 370 - Cross-cultural Perspectives on Gender Credits: 3

### B.S.

- STA 215 - Introductory Applied Statistics Credits: 3  
**AND** one year of science courses from the following pairs:
- BIO 120 - General Biology I Credits: 4  
**AND** BIO 121 - General Biology II Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 4  
**AND** CHM 116 - Principles of Chemistry II Credits: 5
- GEO 111 - Exploring the Earth Credits: 4  
**AND** GEO 112 - Earth History Credits: 4
- GPY 200 - Computer Cartography Credits: 3  
**AND** GPY 307 - Introduction to Geographic Information Systems Credits: 3
- NRM 140 - The Climatic Factor Credits: 4  
**AND** NRM 150 - Introduction to Natural Resources Credits: 3
- PHY 220 - General Physics I Credits: 5  
**AND** PHY 221 - General Physics II Credits: 5

Additional Requirements for the B.S.

Select one course from the following; course chosen may not be used as an elective choice.

- ANT 312 - Human Osteology Credits: 4
- ANT 313 - Primate Behavior and Ecology Credits: 3
- ANT 314 - Bioarchaeology Credits: 3

Required for both the B.A. and B.S.

Choose one of the following:

- ANT 207 - Language and Culture Credits: 3
- ANT 220 - Introduction to Archaeology Credits: 4

Choose one of the following practical and/or research experiences\*:

- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
- ANT 308 - Field Experience Abroad Credits: 1 to 6
- ANT 490 - Practicum: Career-Service Credits: 1 to 9

### \*Practical and Research Experiences

No more than six hours of ANT 307, 308 and 490 combined may count toward the major, though students are encouraged to acquire as many practical experience credits as possible. Field experiences can be obtained in any of the four sub-disciplines, or students can arrange a practicum/internship in a specific field setting of their interest. Students are strongly encouraged to consult with their advisors at an early point to begin discussing their choice of field experience. Majors are strongly encouraged to complete courses in related cognate areas, to complete an internship, and to participate in career planning events.

A major in anthropology can acquire additional experience in applied, ecological, economic, medical, or urban anthropology, ethnohistory, or a regional emphasis (e.g., Latin America, Middle East, Africa, Great Lakes archaeology). This can be arranged through the advising process, independent study courses (399 and 499), a practicum (490) or Honors Research (498). No more than six hours of 399, 498, and 499 combined may count toward the major.

### Electives

- ANT 305 - Methods in Biological Anthropology Credits: 3
- ANT 311 - Native Peoples of North America Credits: 3
- ANT 312 - Human Osteology Credits: 4
- ANT 313 - Primate Behavior and Ecology Credits: 3

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- ANT 314 - Bioarchaeology Credits: 3
- ANT 315 - Comparative Religions Credits: 3
- ANT 317 - Advanced Cross-cultural Linguistics Credits: 3
- ANT 320 - Culture and Disease Credits: 3
- ANT 325 - Archaeology of North America Credits: 3
- ANT 330 - Anthropology of Selected World Areas Credits: 3
- ANT 340 - Culture and Environment Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- ANT 350 - Archaeology of Mid-East Credits: 3
- ANT 370 - Cross-cultural Perspectives on Gender Credits: 3
- ANT 400 - Ethnographic Methods Credits: 3
- ANT 420 - Applied Anthropology Credits: 3
- ANT 421 - Anthropology of Social Movements Credits: 3
- ANT 430 - Issues in Contemporary Anthropology Credits: 3
- ANT 431 - Historical Perspectives in Anthropology Credits: 3

Note: Repeated ANT 380s, ANT 330, and ANT 430s may meet elective requirements. Consult an anthropology faculty advisor. ANT 420 and 421 can be used to meet elective requirements for the major; but not both the major and certificate in applied anthropology. If ANT 305, ANT 317, or ANT 400 are taken to meet the research methods requirement, the course cannot also be used to meet an elective requirement; although a second research methods course can be taken to meet the elective requirement.

### Suggested Order of Coursework for a Major in Anthropology (B.A.)

#### First Year

- Electives/general education
- ANT 204 - Peoples and Cultures of the World Credits: 3
- ANT 215 - Origins of Civilization Credits: 3
- Electives/general education
- ANT 206 - Human Origins Credits: 3
- ANT 207 - Language and Culture Credits: 3
- **OR** ANT 220 - Introduction to Archaeology Credits: 4

#### Second Year

- First semester language
- Electives/general education
- ANT 210 - History of Anthropological Theory Credits: 3
- Second semester language
- Electives/general education
- ANT elective requirement

#### Third Year

- Third semester language
- Electives/general education
- ANT 305 - Methods in Biological Anthropology Credits: 3
- **OR** ANT 317 - Advanced Cross-cultural Linguistics Credits: 3
- **OR** ANT 400 - Ethnographic Methods Credits: 3
- **OR** ARC 400 - Archaeological Methods and Research Design Credits: 3
- Electives/general education
- ANT elective requirement
- ANT 315 - Comparative Religions Credits: 3
- **OR** ANT 345 - Perspectives on Globalization Credits: 3
- **OR** ANT 370 - Cross-cultural Perspectives on Gender Credits: 3

#### Fourth Year

##### Spring/Summer:

- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
- **OR** ANT 308 - Field Experience Abroad Credits: 1 to 6
- **OR** ANT 490 - Practicum: Career-Service Credits: 1 to 9

##### Fall:

- ANT 405 - Contemporary Anthropological Theory Credits: 3

##### Winter:

- ANT 495 - Practicing Anthropology (Capstone) Credits: 3

### Suggested Order of Coursework for a Major in Anthropology (B.S.)

#### First Year

- Electives/general education
- ANT 206 - Human Origins Credits: 3
- ANT 204 - Peoples and Cultures of the World Credits: 3
- ANT 215 - Origins of Civilization Credits: 3
- Electives/general education
- STA 215 - Introductory Applied Statistics Credits: 3
- ANT 207 - Language and Culture Credits: 3
- **OR** ANT 220 - Introduction to Archaeology Credits: 4

#### Second Year

- First semester science
- Electives/general education
- ANT 210 - History of Anthropological Theory Credits: 3
- ANT elective requirement
- Second semester science
- Electives/general education
- ANT 305 - Methods in Biological Anthropology Credits: 3
- **OR** ANT 317 - Advanced Cross-cultural Linguistics Credits: 3
- **OR** ANT 400 - Ethnographic Methods Credits: 3
- **OR** ARC 400 - Archaeological Methods and Research Design Credits: 3

#### Third Year

- Upper level science
- ANT elective requirement
- Electives/general education
- ANT elective requirement
- Electives/general education
- ANT 312 - Human Osteology Credits: 4
- **OR** ANT 313 - Primate Behavior and Ecology Credits: 3
- **OR** ANT 314 - Bioarchaeology Credits: 3

#### Fourth Year

##### Spring/Summer:

- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
- **OR** ANT 308 - Field Experience Abroad Credits: 1 to 6
- **OR** ANT 490 - Practicum: Career-Service Credits: 1 to 9

##### Fall:

- ANT 405 - Contemporary Anthropological Theory Credits: 3

##### Winter:

- ANT 495 - Practicing Anthropology (Capstone) Credits: 3

## Anthropology Minor

A student who minors in anthropology is required to complete 21 to 22 hours in the department, including the courses listed as follows.

- ANT 204 - Peoples and Cultures of the World Credits: 3
- ANT 206 - Human Origins Credits: 3
- ANT 215 - Origins of Civilization Credits: 3
- ANT 207 - Language and Culture Credits: 3
- **OR** ANT 220 - Introduction to Archaeology Credits: 4

The remaining nine credit hours must come from 300- or 400-level courses.

### Courses of Instruction

- ANT 305 - Methods in Biological Anthropology Credits: 3
- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
- ANT 311 - Native Peoples of North America Credits: 3
- ANT 312 - Human Osteology Credits: 4
- ANT 314 - Bioarchaeology Credits: 3
- ANT 315 - Comparative Religions Credits: 3
- ANT 317 - Advanced Cross-cultural Linguistics Credits: 3
- ANT 320 - Culture and Disease Credits: 3
- ANT 325 - Archaeology of North America Credits: 3
- ANT 330 - Anthropology of Selected World Areas Credits: 3

- ANT 340 - Culture and Environment Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- ANT 350 - Archaeology of Mid-East Credits: 3
- ANT 370 - Cross-cultural Perspectives on Gender Credits: 3
- ANT 380 - Special Topics in Anthropology Credits: 3
- ANT 399 - Independent Readings Credits: 1 to 3
- ANT 400 - Ethnographic Methods Credits: 3
- ANT 405 - Contemporary Anthropological Theory Credits: 3
- ANT 420 - Applied Anthropology Credits: 3
- ANT 421 - Anthropology of Social Movements Credits: 3
- ANT 430 - Issues in Contemporary Anthropology Credits: 3
- ANT 431 - Historical Perspectives in Anthropology Credits: 3
- ANT 490 - Practicum: Career-Service Credits: 1 to 9
- ANT 495 - Practicing Anthropology (Capstone) Credits: 3
- ANT 498 - Honors Research in Anthropology Credits: 3
- ANT 499 - Independent Study and Research Credits: 1 to 4

## Certificate in Applied Anthropology

### Requirements for a Certificate in Applied Anthropology

A certificate in applied anthropology is a strong curricular addition to the degrees offered at GVSU. This 15-credit-hour certificate in applied anthropology provides students at Grand Valley State University with a foundational knowledge of applied anthropology, its principles, and actual experience through an internship. This certificate can be completed in three semesters (winter, summer, fall), if all prerequisites were completed previously.

A certificate in applied anthropology is neither a major nor a minor; it is a focused investigation into an area of cultural resource management, medical anthropology, development, or conservation. Students must be degree seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree.

### Core Courses

- ANT 400 - Ethnographic Methods Credits: 3
- ANT 420 - Applied Anthropology Credits: 3
- ANT 490 - Practicum: Career-Service Credits: 1 to 9

Students select one of the following courses:

- ACC 308 - Governmental and Not-for-Profit Accounting Credits: 3
- AHS 330 - Health Care: A Global Perspective Credits: 3
- AHS 352 - Introduction to Holistic Health Care Credits: 3
- ANT 421 - Anthropology of Social Movements Credits: 3
- ANT 430 - Issues in Contemporary Anthropology Credits: 3
- ANT 431 - Historical Perspectives in Anthropology Credits: 3
- BUS 301 - International Business and Culture Credits: 3
- ECO 343 - Health Economics Credits: 3
- ECO 345 - Environmental and Resource Economics Credits: 3
- ECO 349 - Emerging Markets Issues Credits: 3
- ECO 365 - Comparative Economic Systems Credits: 3
- ECO 369 - International Economic Issues Credits: 3
- ENS 401 - Environmental Problem Solving Credits: 3
- GPY 335 - Globalization and Development Credits: 3
- GPY 362 - Farmers, Crops, and Our Challenging Agricultural World Credits: 3
- GPY 363 - World Forests and Their Use Credits: 3
- MGT 303 - International Business and Culture Credits: 3
- NRM 320 - Introduction to Resource Systems Credits: 3
- PA 335 - Grant Writing Credits: 3
- PA 360 - Voluntarism and the Nonprofit Sector Credits: 3
- PA 372 - International and Comparative Administration Credits: 3
- PLS 301 - Poverty, Inequality, and U.S. Public Policy Credits: 3
- PLS 302 - Women, Politics, and Public Policy Credits: 3
- PLS 304 - Political Parties and Interest Groups Credits: 3
- PLS 310 - Politics and Health Policy Credits: 3

- PLS 313 - International Organization Credits: 3
- PLS 316 - Human Rights in International Politics Credits: 3
- PLS 327 - Politics of Developing Countries Credits: 3
- PSY 362 - Environmental Psychology Credits: 3
- PSY 367 - Health Psychology Credits: 3
- WGS 335 - Women, Health and Environment Credits: 3

## Applied Linguistics - Program Description

**Website:** [www.gvsu.edu/english](http://www.gvsu.edu/english)

### Program Description

The M.A. in applied linguistics provides students with foundational knowledge of linguistics and its practical application to real world concerns. It addresses issues in language teaching and learning, language assessment, second language literacy development, cross-cultural communication, and empirical research in language acquisition. The overall goal of the program is to graduate students as knowledgeable and skilled English language specialists who can work in a variety of professional careers in applied linguistics at home and abroad such as second language education, adult literacy development, language assessment and evaluation, various domestic and international contexts of TESOL, language program administration, and publishing.

### Admission Requirements

Applicants must complete GVSU's online application, and include the following materials:

- Personal statement: A statement about your reasons for pursuing this program of study, your learning objectives in the program, and your career goals when you complete the program.
- Writing sample: A substantive piece of writing, no fewer than three typed pages (1500-1700 words), which demonstrates your academic writing ability. You may submit a paper you wrote for a past undergraduate or graduate course.
- Letters of recommendation: Two letters of recommendation from former professors or supervisors in a relevant field who can testify to your potential as a graduate student in this program.
- GRE scores: Applicants whose GPA is lower than 3.0 (in the undergraduate major or in prior graduate coursework) must submit a score for the Graduate Record Examination (general test only).
- Evidence of English language proficiency: International students whose first language is not English must submit evidence of English language proficiency. GVSU accepts scores from the Test of English as a Foreign Language (TOEFL) and the International English Language Testing System (IELTS), among others. Consult the program director concerning other tests that may be accepted.
- Graduate study at GVSU requires minimum scores of 79 on the TOEFL-ibt, or 6.5 on the IELTS. We recommend that students applying to the M.A.-A.L. program score 20 or higher on each subtest of the TOEFL-ibt (Reading, Writing, Listening, and Speaking).

### Practicum

The practicum (ENG 679) is a three-credit course that provides students with hands-on experience in the field. In addition to field placements arranged by the program, students may propose their own practicum sites, with prior consultation and approval of the instructor.

### Special Topics

A variable or special topics course may be offered with a focus on an area of applied linguistics. It may be used as a substitute for an existing course in the concentration. Please consult with the program director to determine substitution options.

### Independent Study

Independent study gives students an opportunity to explore a topic of interest in applied linguistics that is not already covered in an existing

## Applied Linguistics

course. Students can propose a topic for a one- to three-credit independent study under faculty supervision. Consult the program director for details about this process.

### Transfer Courses

Students who transfer from another accredited institution may apply for credit for courses taken at the prior institution. To earn transfer credit, the courses must have been completed no earlier than five years prior to the time of application, and they must be equivalent to those offered at Grand Valley. Per university policy, a maximum of nine credits can be transferred. Please consult the program director about the materials required to determine course equivalency.

## Master of Arts in Applied Linguistics

The program requires a total of 36 credit hours of coursework.

### Required Courses (30 credits)

#### Foundation (9 credits)

- ENG 660 - Principles of Educational Linguistics Credits: 3
- ENG 667 - Introduction to Applied Linguistics Research Credits: 3
- ENG 669 - Teaching English as an Additional Language (EAL) Credits: 3

#### Concentration (21 credits)

- ENG 662 - Pedagogical Grammar Credits: 3
- ENG 664 - Sociolinguistics and Language Teaching Credits: 3
- ENG 665 - Second Language Acquisition Credits: 3
- ENG 668 - Second Language Assessment Credits: 3
- ENG 670 - World Englishes: History and Variation Credits: 3
- ENG 675 - Second Language Reading and Writing Credits: 3
- ENG 679 - Practicum Credits: 3

### Culminating Experience (6 credits)

#### Choose One

Students have two options for their culminating experience in the program: the master's thesis option or the master's Capstone option.

#### Thesis Option

The master's thesis option is designed to give students experience designing and conducting empirical research. This option is strongly recommended to students planning to pursue doctoral work. Students must take a total of six credit hours of ENG 695 prior to graduation. Preparing a thesis is a multistage process that involves the following (see M.A.-A.L. program materials for more detail):

**Forming a Committee:** You need to form a thesis committee, comprised of a chair and two additional graduate faculty. If you wish to select a faculty member from outside of the program as chair, you should consult with the program director for prior approval. The outside committee member must have relevant expertise in the thesis topic.

**Writing a Prospectus:** You will write a prospectus for your proposed thesis project.

**Holding a Prospectus Meeting:** After your chair approves your prospectus, you will share it with the committee, prior to holding a meeting, at which you will get feedback. If the prospectus is approved, you begin research; if not, you will need to revise and resubmit.

**Research and Writing:** You will research, write, and revise the thesis, under your chair's supervision.

**Defending the Thesis:** You will defend your thesis to your committee in a meeting that is open to faculty and students. Your committee may require further revision of the thesis as a condition of graduation. Students have 30 days in which to complete the revision, at which time the committee will decide whether to accept the final thesis. No further oral defense is necessary, unless the committee votes no on the final thesis, in which case the student has the option of writing a new thesis or dropping the program.

**Prerequisite:** Students who choose the thesis option must complete 18 credit hours of coursework prior to registering for ENG 695 thesis credits.

- ENG 695 - Master's Thesis Credits: 1 to 3

### Capstone Option

The master's Capstone option offers students the opportunity to take additional coursework in applied linguistics, and to engage in the kinds of professional activities they will be expected to undertake in the field following graduation. Students who choose the Capstone option for their culminating experience will take the following courses (instead of 6 thesis credits):

- One three-credit elective course, to be chosen in consultation with the program director, and
  - ENG 693 - Master's Project Credits: 3
- In this course, students will design and develop an independent project in applied linguistics, which they will present publicly at a departmental conference. Prerequisite: Students must complete 27 credits in the program prior to taking ENG 693.

### Elective Courses

- ENG 680 - Special Topics in English Credits: 1 to 4
  - ENG 699 - Independent Study Credits: 1 to 3
- Other electives to be determined in consultation with graduate advisor.

### Suggested Program of Study

The program can typically be completed in two academic years by students enrolled full-time. Students who wish to enroll on a part-time basis should consult with the program director to determine a viable plan of study. All students must begin their study in fall semester.

The following is the suggested course sequence for full-time students.

#### Fall - Year 1 (9 credits)

- ENG 660 - Principles of Educational Linguistics Credits: 3
- ENG 667 - Introduction to Applied Linguistics Research Credits: 3
- ENG 669 - Teaching English as an Additional Language (EAL) Credits: 3

#### Winter - Year 1 (9 credits)

- ENG 662 - Pedagogical Grammar Credits: 3
- ENG 664 - Sociolinguistics and Language Teaching Credits: 3
- ENG 665 - Second Language Acquisition Credits: 3

#### Fall - Year 2 (9 credits)

- ENG 675 - Second Language Reading and Writing Credits: 3
- ENG 679 - Practicum Credits: 3

One of the following:

- Elective: One elective course, chosen in consultation with advisor (credits: 3)
- ENG 695 - Master's Thesis Credits: 1 to 3

#### Winter - Year 2 (9 credits)

- ENG 668 - Second Language Assessment Credits: 3
- ENG 670 - World Englishes: History and Variation Credits: 3

One of the following:

- ENG 693 - Master's Project Credits: 3
- ENG 695 - Master's Thesis Credits: 1 to 3

## Applied Linguistics Minor

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/english](http://www.gvsu.edu/english)

The applied linguistics minor is designed to provide systematic study of language and applied issues in language teaching, language learning, and language use. The minor is an excellent disciplinary complement to such fields as anthropology, classics, computing and information systems, English, education, modern languages, philosophy, psychology, and writing. Courses in the minor consider such topics as learning and teaching of languages, social and regional language variation, literacy, language and gender, language and power, language disorders, and language history.

**Minor Requirements**

The applied linguistics minor has two tracks: the general track that requires 21 credits and the ESL track that requires 18 credits and a College of Education ESL practicum.

**Applied Linguistics Minor - General Track (21 credits)**

The general track of the applied linguistics minor is designed for students who are interested in pursuing a systematic study of language and applied issues in language teaching, language learning, and language use. Students with a minor in applied linguistics/general track are well prepared to teach English internationally as well as to work in such settings as adult literacy, refugee services, nonprofit/NGO services, and electronic and print publishing. The minor is an excellent disciplinary complement to majors such as anthropology, classics, communications, computing and information systems, English, education, modern languages, philosophy, psychology, and writing.

**Foundation (9 credits)**

- ENG 261 - Foundations of Language Study Credits: 3
- ENG 363 - Applied Linguistics Credits: 3
- ENG 364 - Sociolinguistics Credits: 3

**Elective Courses (12 credits)**

The minor requires four electives. Three electives must be chosen from the English electives. The fourth elective must be chosen from the cross-departmental electives or be an elective approved by an English linguistics advisor.

**English Electives (9 credits)**

- ENG 362 - History of the English Language Credits: 3
- ENG 365 - Teaching English as a Second Language Credits: 3
- ENG 366 - English Grammar and Usage Credits: 3
- ENG 390 - Topics in Language and Rhetoric Credits: 3
- ENG 392 - Language and Power Credits: 3
- ENG 461 - Language and Gender Credits: 3
- ENG 465 - Teaching Second Language Reading and Writing Credits: 3
- ENG 467 - Language Disorders and English Literacy Credits: 3
- ENG 469 - ESL Teaching Practicum Credits: 3

**Cross-departmental Electives (3 credits)**

- AAA 350 - African American Identity and Communication Credits: 3
- ANT 207 - Language and Culture Credits: 3
- CIS 343 - Structure of Programming Languages Credits: 3
- CIS 365 - Artificial Intelligence Credits: 3
- CIS 461 - Compiler Design and Construction Credits: 3
- FRE 331 - French Phonetics Credits: 3
- FRE 332 - Introduction to French Linguistics Credits: 3
- GER 321 - Improving German Pronunciation Credits: 3
- GER 322 - Introduction to German Linguistics Credits: 3
- GER 421 - History of the German Language Credits: 3
- PHI 203 - Intermediate Logic Credits: 3
- PHI 470 - Philosophy of Language Credits: 3
- PSY 305 - Infant and Early Childhood Development Credits: 3
- PSY 357 - Psychology of Language Credits: 3
- PSY 365 - Cognition Credits: 3
- SPA 308 - Spanish Phonetics Credits: 3
- SPA 309 - Advanced Spanish Grammar Credits: 3
- SPA 327 - The History of the Spanish Language Credits: 3
- SPA 329 - Sociolinguistics of Spanish Credits: 3
- SPA 335 - Introduction to Spanish Linguistics Credits: 3

**Applied Linguistics Minor - ESL Track**

The ESL track of the Applied Linguistics Minor is designed for students seeking elementary, including CSAT, or secondary teacher certification. The curriculum meets Michigan Department of Education (MDE) standards for a teachable minor for elementary and secondary certification and leads to ESL endorsement, an add-on credential to a Michigan teaching license. Students must complete 18 credits of coursework in English and a supervised teaching practicum during their teacher assisting

(EDI 330/331) or student teaching (EDI 430/431) through the College of Education to fulfill the Applied Linguistics Minor/ESL Track. They must also pass the MDE subject-area test in order to qualify for ESL endorsement.

**Requirements for a Minor in Applied Linguistics - ESL Track**

18 credits + College of Education ESL teaching practicum

**ESL Track (9 credits)**

- ENG 365 - Teaching English as a Second Language Credits: 3
- ENG 366 - English Grammar and Usage Credits: 3
- ENG 465 - Teaching Second Language Reading and Writing Credits: 3

**Foundation (9 credits)**

- ENG 261 - Foundations of Language Study Credits: 3
- ENG 363 - Applied Linguistics Credits: 3
- ENG 364 - Sociolinguistics Credits: 3

**ESL Practicum**

Students must complete an ESL teaching practicum offered by the College of Education during the required semesters of teacher assisting or student teaching:

EDI 330 - Teacher Assisting - Elementary Credits: 5

**OR** EDI 331 - Methods and Strategies of Secondary Teaching Credits: 5

EDI 430 - Student Teaching, Elementary Credits: 10

**OR** EDI 431 - Student Teaching, Secondary Credits: 8

In addition to the required coursework, the MDE *Introduction to Standards for the Preparation of Teachers of English as a Second Language* (2016) requires all candidates pursuing ESL endorsement to have “documented experience learning a second language equivalent to two semesters’ worth of college-level study in order to gain an understanding and appreciation of the processes of learning an additional language.” Students pursuing a B.A. from GVSU fulfill this state requirement by completion of the degree requirement that requires third semester proficiency in a second language. Students pursuing a B.S. from GVSU can fulfill the state requirement in one of the following ways:

- Two semesters of second language study at the college level;
- Second semester proficiency in a second language as demonstrated by the appropriate proficiency exam(s) administered by the Modern Languages and Literatures Department or the Classics Department;
- Certificate from an intensive language institute verifying at least 15 weeks of intensive second language study.

Note to students in the following areas of teacher certification:

- If you are seeking elementary certification in a core subject (language arts, social studies, science, or math), you will need to complete two minors: the elementary distributed minor and the applied linguistics minor/ESL track.
- If you are seeking elementary certification with a Comprehensive Science and Arts for Teaching (CSAT) major, the applied linguistics minor/ESL track fulfills the required “student-centered” minor.
- If you are seeking secondary certification in any of the state-approved teachable majors, the applied linguistics minor/ESL track fulfills the requirement for a teachable minor for initial certification.

**Arabic - Program Description**

Arabic is spoken in the area stretching from Morocco in the west to Oman in the east, from Syria in the north to Sudan and Yemen in the south — the Arab world is a region inhabited by more than 300 million people. However, Arabic speakers are also found outside this region with large populations in the United States, across Europe, West Africa and Latin America. And because of its religious significance to Islam, Arabic is widely used among Muslims all over the world. In fact, Michigan is home to the nation’s largest Arab American community with a diverse mix of Christians and Muslims.

In the tradition of education in modern languages and literatures at Grand Valley State University, courses in this minor teach different ways to reach

## Archaeology

linguistic proficiency and cultural competence in Arabic. The ability to listen, speak, write and read in Arabic expands the range of students' communication skills and extends the breadth of students' world views.

The minor in Arabic concentrates on the two main vernaculars of Arabic, the standard language (Modern Standard Arabic) and some regional spoken varieties. However, proficiency can only be reached when students are competent in the culture as well. In response to this call, the Arabic minor offers coursework that specifically targets cultural aspects and encourages students to immerse themselves in Arabic culture. GVSU currently offers a faculty-led study abroad program in Oman and Dubai, where students can study Arabic language and culture for five weeks.

Arabic minor students are encouraged to participate in the Model Arab League simulation held annually in February and in field trips to points of cultural interest locally and in the Detroit area.

## Arabic Minor

### Requirements for a Minor in Arabic

Students minoring in Arabic must complete a minimum of 20 credit hours of coursework. This includes eight credits of core courses and 12 credits of electives. Students have the option to fulfill three credits of electives through the Oman/United Arab Emirates study abroad program (which includes taking either ARA 285 or ARA 386).

Minors required to complete two core courses:

- ARA 201 - Intermediate Arabic I: Language and Culture Credits: 4
- ARA 202 - Intermediate Arabic II: Language and Culture Credits: 4

Minors choose four from the following elective courses:

- ARA 285 - Colloquial and Media Arabic Credits: 3
- ARA 301 - Arabic Conversation Credits: 3
- ARA 302 - Arabic Composition Credits: 3
- ARA 310 - Media Arabic Credits: 3
- ARA 312 - Contemporary Arabic Culture Credits: 3
- ARA 320 - Practical Arabic Translations Credits: 3
- ARA 380 - Special Topics in Arabic Credits: 1 to 4
- ARA 386 - Arabic through Culture and Customs Credits: 2
- ARA 480 - Special Topics in Arabic Credits: 1 to 4

## Archaeology - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Archaeology is the study of the scope and diversity of human cultural experience through analysis of material culture, from the earliest appearance of humankind to the recent past. Students gain insights into their own society and cultural heritage through comparisons with ancient cultures. The archaeology minor at Grand Valley is a collaborative interdepartmental program and is open to students from any academic major.

The archaeology program encourages student participation with local and national groups such as the Michigan Archaeological Society and Archaeological Institute of America, both of which have local chapters that welcome student members. Students are also encouraged to take part in faculty and student-directed research projects.

Opportunities for participation in archaeological field projects, both local and international, are numerous. Scholarships and other forms of financial aid may be available for some programs. Students interested in archaeological fieldwork should consult program advisors for a list of approved field programs that fulfill field research requirements for the minor.

### Participating Programs

Anthropology Department  
Classics Department  
History Department

## Archaeology Minor

### Requirements for a Minor in Archaeology

Students pursuing the minor in archaeology will complete seven courses (minimum 22 credits) distributed as follows.

1. Three core courses (10 hours total)
2. Two regional issues courses (six hours total)
3. One cross-disciplinary elective (three, four, or five hours depending on chosen course)
4. One field research practicum (three hours minimum)

Core Courses (all three are required)

- ANT 220 - Introduction to Archaeology Credits: 4
- ARC 400 - Archaeological Methods and Research Design Credits: 3
- ARC 401 - Archaeological Theory Credits: 3

Regional Issues Courses (select two of the following)

- ANT 325 - Archaeology of North America Credits: 3
- ANT 350 - Archaeology of Mid-East Credits: 3
- CLA 350 - Issues in Classical Archaeology Credits: 3

Cross-disciplinary Electives (select one of the following)

- ARA 202 - Intermediate Arabic II: Language and Culture Credits: 4 (or other modern language at intermediate level)
- ART 420 - Asian Art Credits: 3
- BIO 311 - Who's Running Your Life: Genes, Evolution and Behavior Credits: 3
  - OR BIO 452 - Human Evolution Credits: 3
- CHM 115 - Principles of Chemistry I Credits: 4 (for non-CHM, BIO, or GEO majors)
- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GEO 112 - Earth History Credits: 4
  - OR GEO 312 - Sedimentation-Stratigraphy Credits: 4
  - OR GEO 320 - Geomorphology Credits: 4
- LAT 350 - Latin Prose Credits: 3 (or other ancient language at 300-level)

Field Practicum

All students must complete a minimum of three credits of field research, under the direction of the archaeologists on the CLAS faculty or in another pre-approved program.

Choose one:

- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
- CLA 499 - Independent Study and Research Credits: 1 to 3
- HST 490 - History Internship Credits: 1 to 3
- GEO 315 - Geological Field Methods Credits: 3
  - OR equivalent course

## Art and Design - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/art](http://www.gvsu.edu/art)

The Department of Visual and Media Arts offers courses in studio art, art education and art history with degree programs leading to a B.A. or B.S. degree in studio art, a B.F.A. degree in studio art with an emphasis in ceramics, graphic design, illustration, jewelry and metalsmithing, painting, printmaking, sculpture, or visual studies, a B.A. or B.S. degree in art education and a B.A. in art history. Also available are minors in studio art and in art history. The degree programs in art and design combine intensive studio training in the visual arts with a liberal arts education. The programs are designed to support students' acquisition of conceptual and technical skills while fostering their awareness of current issues, theoretical frameworks, as well as the historical and cultural contexts for art production. Under the guidance of a faculty advisor in the Department of Visual and Media Arts, students may choose either a generalized program in studio art, an art education degree leading to teaching certification, an art history degree, or a focused studio art

program (B.F.A.) preparing them for entry into a specific profession such as graphic design or illustration. They may also prepare for a career as an independent artist or for entry into graduate school.

Coursework is augmented by field trips, a campus exhibition program, visiting artists, and international programs. Internships and independent study also enhance coursework, especially in graphic design, where off-campus field experience is required.

Because of current enrollments in art, nonart majors can only be admitted to selected art studio classes.

### Admission

Admission to Grand Valley State University does not guarantee access or admission to the degree programs offered by the Department of Visual and Media Arts. Once a student has been admitted to Grand Valley and, most importantly, declares an interest in pursuing any of the art and design degrees listed in the admissions materials, a packet explaining the portfolio entrance process is mailed directly to the student. The student is then responsible for following the instructions in the packet. In addition, the highly popular programs of graphic design and illustration are secondary admit programs. More information regarding application for admission is available here.

### Transfer Students

- Admittance to the department and all transfer credit will be by departmental portfolio review only, both for newly admitted and current Grand Valley students. Contact the department for application information and specific details. Transfer students should bring the results of this review as well as the transfer credit statement from admissions with them at the time they register so they can be advised about advanced placement.
- Transfer students are required to take a minimum of 15 art credits within the department, including one art history course.
- Transfer students may take longer to graduate in the B.F.A. or art education programs because of the high number of professional courses required in those programs and the sequencing necessary for skill development.

### Accreditation

The department is accredited by the National Association of Schools of Art and Design (NASAD).

## Bachelor of Arts or Bachelor of Science in Art Education (Teacher Certification)

The art education program enables students to meet certification requirements for teaching visual art in Michigan elementary and secondary schools.

### Degree Requirements

All students entering art education must follow the program leading to LQ certification (K-12 comprehensive with no teachable minor).

Entering students in art education or degree-holding students wishing teacher certification must complete 75 credits in art, including four introductory studios and a studio emphasis chosen from ceramics, jewelry/metalsmithing, painting, printmaking, sculpture, or visual studies.

### General Education

In the GVSU general education requirements, the foundations section lists ART 101 - Introduction to Art as a choice. ART 101 is not required for the B.F.A., B.A., or B.S. in Art and Design. Some of the material in ART 101 will be duplicated in the required coursework. Art and Design majors are advised to take one of the other classes in the general education Arts category.

### Requirements for a Major in Art Education

#### Degree Requirements

##### B.A. Degree Requirements

- Foreign language (third-semester proficiency in a foreign language).

#### B.S. Degree Requirements (Credits: 9)

- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
- **OR** HST 290 - Research Methods in History Credits: 3

#### Foundations Review and Courses

After completing the foundations program (ART 150, 151, 152, 153, 155, 157), all art students are evaluated for entrance into the design and fine arts programs. All art students are required to submit their collective work for faculty review.

Foundations Credits: 18 (Must be taken during freshman year):

- ART 150 - Foundations: 2-D Design Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3
- ART 152 - Foundations: Color and Design Credits: 3
- ART 153 - Foundations: Making and Meaning in Art and Design Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3
- ART 157 - Foundations: Introduction to Drawing II Credits: 3

Art history requirements Credits: 12

- Art History electives Credits: 6
- ART 221 - Survey of Art History I Credits: 3
- ART 222 - Survey of Art History II Credits: 3

#### Art Education Requirements

Required courses:

- ART 332 - Introduction to Art Education Credits: 3
- ART 333 - Curriculum Development and Practice Credits: 3
- ART 335 - Digital Creativity Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3

Note: Art methodology courses (ART 332, 333, and 335) must be taken before arranging for teacher assisting and directed teaching. Students should consult the College of Education for the specific requirements concerning teacher assisting and student directed teaching.

Note: Completion of the art history requirements (see previously listed) of the B.A. or B.S. program is a prerequisite for ART 495.

Four introductory studio courses at the 200 level. Select four courses from the following list:

- ART 245 - Introduction to Jewelry and Metalsmithing Credits: 3
- ART 260 - Introduction to Painting Credits: 3
- ART 265 - Introduction to Printmaking Credits: 3
- ART 270 - Introduction to Sculpture Credits: 3
- ART 275 - Introduction to Ceramics Credits: 3

Two drawing courses selected from:

- ART 257 - Life Drawing Credits: 3
- ART 258 - Intermediate Drawing Credits: 3
- ART 355 - Advanced Drawing I Credits: 3

Two intermediate studio emphasis courses. Credits: 6

One advanced studio emphasis course Credits: 3

Two studio art or art education electives Credits: 6

#### Additional Requirements

Prerequisite courses:

- PSY 301 - Child Development Credits: 1 to 3
- EDF 315 - Diverse Perspectives on Education Credits: 3
- EDI 337 - Introduction to Learning and Assessment Credits: 3
- Requirements for admission to assisted and student directed teaching, please consult with art education/COE advisor for specific requirements.

Note: These prerequisite courses require a 2.7 GPA or better, with no grade lower than a C.

Passing score (minimum score of 220) on the MTTC Professional Readiness Examination (PRE) (#096) is required prior to admission to the College of Education. Passing scores on the Content Area (#095- Visual Arts Education) test will be required prior to obtaining certification. The

## Art and Design

Content Area (#095) test can be taken during teacher assisting, student teaching, or before graduation. MTTC website: [www.mttc.nesinc.com](http://www.mttc.nesinc.com).

### Prerequisites to College of Education Application (9 credits)

A 3.0 GPA in the major, passing score on the MTTC Professional Readiness Exam (#096), and completion of EDF 315, EDI 337, and PSY 301 with a grade of C or better are required before admission to College of Education's Teacher Assisting semester.

Certificate requirement: Pass the Michigan Test for Teacher Certification (MTTC) [www.mttc.nesinc.com](http://www.mttc.nesinc.com), #95 Visual Arts Education, in the content area before graduation.

## Bachelor of Arts in Art History

The art history major at Grand Valley State University offers students a broad-based knowledge of visual culture, its social and historical contexts of production as well as an introduction to theoretical approaches. The major uses an interdisciplinary model, which offers students opportunities for intensive study within the Department of Visual and Media Arts while allowing them to select from courses offered in other departments across the GVSU campus.

### Requirements for a Major in Art History

All art history majors will earn a B.A. degree. Students are required to complete 39 credit hours in art history and studio art courses. Students will also meet the general education requirements, including third semester language proficiency.

#### General Education Requirements

Students are strongly encouraged to work closely with their advisors and create individual study plans appropriate to their area of interest in the major. These courses allow students to enrich their understanding of the cultural contexts for art production. Students may combine these courses to meet other requirements in the art history and general education programs.

#### Foundations Courses (6 credit hours)

All art history majors are required to take the two introductory courses to provide them with an overview of the chronology and methods of the discipline of art history.

- ART 221 - Survey of Art History I Credits: 3
- ART 222 - Survey of Art History II Credits: 3

#### Distribution Courses (15 credit hours)

Art history majors are required to take classes covering a range of historical periods and cultures. Students take two courses in Ancient through Early-Modern Art as well as two courses in Modern and Contemporary Art categories for a total of 12 credit hours. In addition, one course is required from the World Art category for an additional three hours toward the distribution requirements.

#### Ancient through Early-Modern Art

Choose two courses:

- ART 322 - Goths to Gothic: Medieval Art Credits: 3
- ART 323 - Rethinking Renaissance Art Credits: 3
- CLA 250 - Classical Art and Archaeology Credits: 3

#### Modern and Contemporary Art

Choose two courses:

- ART 327 - Art Since 1945 Credits: 3
- ART 421 - Surrealism Credits: 3
- ART 425 - Depicting a Nation: 19th Century American Art Credits: 3

#### World Art

Choose one course:

- ART 420 - Asian Art Credits: 3
- ART 422 - Art and the Worlds of Islam Credits: 3

#### Studio Requirements (6 credit hours)

Select two courses from the list as follows:

- ART 150 - Foundations: 2-D Design Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3

- ART 152 - Foundations: Color and Design Credits: 3
- ART 153 - Foundations: Making and Meaning in Art and Design Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3
- ART 157 - Foundations: Introduction to Drawing II Credits: 3
- 200-level studio course in any emphasis area

#### Capstone and Senior Thesis (6 credit hours)

After they have completed their other art history requirements, students take a Capstone seminar, which offers them a discussion-intensive classroom experience. During their final semester, students complete a senior thesis with the assistance of their academic advisor.

- ART 495 - Issues in Art (Capstone) Credits: 3

#### Art History Electives (6 credit hours)

- ART 218 - Design History Credits: 3
- ART 322 - Goths to Gothic: Medieval Art Credits: 3
- ART 323 - Rethinking Renaissance Art Credits: 3
- ART 327 - Art Since 1945 Credits: 3
- ART 380 - Special Topics in Art and Design Credits: 1 to 3 (history emphasis)
- ART 420 - Asian Art Credits: 3
- ART 421 - Surrealism Credits: 3
- ART 422 - Art and the Worlds of Islam Credits: 3
- ART 425 - Depicting a Nation: 19th Century American Art Credits: 3
- CLA 250 - Classical Art and Archaeology Credits: 3
- CFV 225 - Film Culture Credits: 3
- CFV 348 - Film Theories Credits: 3
- CPH 366 - History of Photography II Credits: 3
- PHI 220 - Aesthetics Credits: 3
- SOC 289 - Sociology of Art Credits: 3

#### Distribution of General Education Requirements

Students are strongly encouraged to work closely with their advisors and create individual study plans appropriate to their area of interest in the major. These courses allow students to enrich their understanding of the cultural contexts for art production. Students may combine these courses to meet other requirements in the art history and general education programs. Some possible fields of exploration include - sociology, anthropology, history, philosophy, literature, music history, theater history, and foreign languages.

#### Suggested Order of Coursework for a Major in Art History

##### Freshman Year, Fall Semester:

- ART 221 - Survey of Art History I Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- First semester foreign language Credits: 4
- One general education elective Credits: 3

##### Freshman Year, Winter Semester:

- ART 222 - Survey of Art History II Credits: 3
- Second semester foreign language Credits: 4
- Two general education electives Credits: 6

##### Sophomore Year, Fall Semester:

- Two art history distribution courses Credits: 6
- Third semester foreign language Credits: 4
- One studio elective Credits: 3
- One general education elective Credits: 3

##### Sophomore Year, Winter Semester:

- Two art history distribution courses Credits: 6
- One Issues course Credits: 3
- Two general education electives Credits: 6
- Complete the second SWS course

##### Junior Year, Fall Semester:

- One art history distribution course Credits: 3
- One art history elective Credits: 3
- One Issues course Credits: 3
- One studio elective Credits: 3
- One general education elective Credits: 3

**Junior Year, Winter Semester:**

- One art history elective Credits: 3
- Four electives - general education/additional art history/second major/minor Credits: 15

**Senior Year, Fall Semester:**

- ART 495 - Issues in Art (Capstone) Credits: 3
- Four electives - general education/additional art history/second major/minor Credits: 12

**Senior Year, Winter Semester:**

- Complete senior thesis requirement Credits: 3
- Four electives - general education/additional art history/second major/minor Credits: 12

**Art History Minor**

The minor in art history is a general introduction to the study of art history and its methods. It offers students from many disciplines — including studio art, the humanities and professional degrees — the opportunity to examine the contexts for the production of the visual arts.

**Survey Courses (credits: 6)**

- ART 221 - Survey of Art History I Credits: 3
- ART 222 - Survey of Art History II Credits: 3

**Distribution Courses (credits: 9)**

Art history minors are required to take one course from each of the three following areas. Consult with art history faculty about new courses and special topics offerings for credit in the distribution and elective areas.

**Ancient through Early-Modern Art** Credits: 3 (choose one of the following)

- CLA 250 - Classical Art and Archaeology Credits: 3
- ART 322 - Goths to Gothic: Medieval Art Credits: 3
- ART 323 - Rethinking Renaissance Art Credits: 3

**Modern and Contemporary Art** Credits: 3 (choose one of the following)

- ART 325 - Nineteenth-Century Art Credits: 3
- ART 327 - Art Since 1945 Credits: 3
- ART 421 - Surrealism Credits: 3
- ART 425 - Depicting a Nation: 19th Century American Art Credits: 3

**World Art** Credits: 3 (choose one of the following)

- ART 420 - Asian Art Credits: 3
- ART 422 - Art and the Worlds of Islam Credits: 3

**Art History Electives (credits: 6)**

Select two courses from the list as follows:

- ART 218 - Design History Credits: 3
- ART 322 - Goths to Gothic: Medieval Art Credits: 3
- ART 323 - Rethinking Renaissance Art Credits: 3
- ART 327 - Art Since 1945 Credits: 3
- ART 380 - Special Topics in Art and Design Credits: 1 to 3 (history emphasis)
- ART 420 - Asian Art Credits: 3
- ART 421 - Surrealism Credits: 3
- ART 422 - Art and the Worlds of Islam Credits: 3
- ART 425 - Depicting a Nation: 19th Century American Art Credits: 3
- CLA 250 - Classical Art and Archaeology Credits: 3
- CFV 225 - Film Culture Credits: 3
- CFV 348 - Film Theories Credits: 3
- CPH 366 - History of Photography II Credits: 3
- PHI 220 - Aesthetics Credits: 3
- SOC 289 - Sociology of Art Credits: 3

**Bachelor of Arts or Bachelor of Science in Studio Art**

The B.A. and B.S. programs emphasize breadth of experience over specialization in a single medium. Students complete a more diverse curriculum including coursework in two and three-dimensional disciplines.

**Requirements for a Major in Studio Art**

Art majors seeking a B.A. or B.S. degree must complete a minimum of 45 credits in art and design.

**General Education**

In the GVSU general education requirements, the Foundations section lists ART 101 - Introduction to Art as a choice. ART 101 is not required for the B.A. or B.S. in studio art. Some of the material in ART 101 will be duplicated in the required coursework. B.A. and B.S. majors in studio art are advised to take one of the other classes in the general education Arts category.

**Foundations Courses and Review**

After completing the Foundations program (ART 150, 151, 152, 155, and 157), all studio art and art education students are evaluated by the faculty during Foundations portfolio review for entrance into majors in the Department of Visual and Media Arts.

- ART 150 - Foundations: 2-D Design Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3
- ART 152 - Foundations: Color and Design Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3
- ART 157 - Foundations: Introduction to Drawing II Credits: 3

**Other Requirements**

Students seeking a major in studio art can earn either the B.A. or B.S. degree. Requirements include completion of the following:

**1. Art History electives (credits: 9)****2. Two courses in different 2-D areas selected from the following list (credits: 6)**

- ART 210 - Graphic Design I Credits: 3
- ART 257 - Life Drawing Credits: 3
- ART 260 - Introduction to Painting Credits: 3
- ART 265 - Introduction to Printmaking Credits: 3
- ART 280 - Special Topics in Art and Design Credits: 3
- ART 393 - Image Studio Credits: 3

**3. Two courses in different 3-D areas selected from the following list (credits: 6)**

- ART 245 - Introduction to Jewelry and Metalsmithing Credits: 3
- ART 270 - Introduction to Sculpture Credits: 3
- ART 275 - Introduction to Ceramics Credits: 3
- ART 395 - Space Studio Credits: 3

**4. Two studio courses at the 300 level or above (credits: 6)****5. ART 495**

- ART 495 - Issues in Art (Capstone) Credits: 3  
Completion of the art history requirements of the B.A. or B.S. program is a prerequisite for ART 495. Students register for a section taught by an art history professor.

**B.A. Degree Requirements**

Foreign language (third-semester proficiency in a foreign language).

**B.S. Degree Requirements**

Science (three courses):

- CIS 150 - Introduction to Computing Credits: 3
  - STA 215 - Introductory Applied Statistics Credits: 3
- One course from the following list:
- STA 216 - Intermediate Applied Statistics Credits: 3
  - HST 290 - Research Methods in History Credits: 3

**Suggested Order of Coursework for a Major in Studio Art**

A general fine arts curriculum (check specific major requirements with your advisor) working toward a B.S. or B.A. degree.

**First Year**

- ART 150 - Foundations: 2-D Design Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3
- ART 152 - Foundations: Color and Design Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3
- ART 157 - Foundations: Introduction to Drawing II Credits: 3

## Art and Design

- Five general education courses

### Second Year

- Two courses from art history Credits: 6
- Four studio courses Credits: 12
- Four general education courses or electives

### Third Year

- One course from art history Credits: 3
- Two studio courses Credits: 6
- Seven general education courses or electives

### Fourth Year

- ART 495 - Issues in Art (Capstone) Credits: 3
- Nine general education courses or electives

## Bachelor of Fine Arts in Studio Art

The B.F.A. degree is designed for students interested in a professional degree in art or design. It will prepare students for a career as a professional artist or designer.

### Requirements for a Major in Studio Art

Students seeking a B.F.A. degree must complete a minimum of 84 credits in art and design, including completion of the foundation and art history component as well as the specific emphasis requirements as listed as follows. A 2.75 GPA must be maintained in the upper level studio courses for a B.F.A.

#### General Education

In the GVSU general education requirements, the Foundations section lists ART 101 - Introduction to Art as a choice. ART 101 is not required for the B.F.A., B.A., or B.S. in studio art. Some of the material in ART 101 will be duplicated in the required coursework. Majors are advised to take one of the other classes in the general education Arts category.

#### Foundations Courses and Review

After completing the Foundations program (ART 150, 151, 152, 153, 155, and 157), all majors are evaluated for entrance into the design and fine arts programs. All majors are required to submit their collective work for faculty review.

Foundations Credits: 18 (must be taken during the freshman year)

- ART 150 - Foundations: 2-D Design Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3
- ART 152 - Foundations: Color and Design Credits: 3
- ART 153 - Foundations: Making and Meaning in Art and Design Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3
- ART 157 - Foundations: Introduction to Drawing II Credits: 3

#### Secondary Admit in Graphic Design and Illustration

Students seeking either the graphic design or illustration emphasis, must participate in a secondary admit process after successful completion of the Foundations Review. Both programs prioritize admission based on a review of portfolio work from the foundations courses.

#### Junior Review

Two semesters before their B.F.A. exhibition, all B.F.A. students are required to submit a sample of their work, completed since the foundations program, for faculty review and comment. Based on the review, students may be asked to do remedial work and submit to a second review. If a second review is unsuccessful, the student will be asked to leave his or her current program or the department. See the Department of Visual and Media Arts Student Handbook for scheduling details and specific requirements.

#### B.F.A. Exhibition

Graduating seniors must have a B.F.A. show and a final acceptance of their work by art and design faculty, earning a grade of at least a C for their Senior Project (ART 498 or 415). The fine arts and illustration

seniors will have a group exhibition. The graphic design seniors will have a group exhibit evaluated by graphic design faculty. See the Department of Visual and Media Arts Student Handbook for details.

#### Art History Credits: 12

- Art history electives Credits: 6
- ART 221 - Survey of Art History I Credits: 3
- ART 222 - Survey of Art History II Credits: 3

#### Capstone

- ART 495 - Issues in Art (Capstone) Credits: 3

Completion of the art history requirements of the B.F.A. program is a prerequisite for ART 495. Students register for a section taught by an art history professor.

#### Emphases

##### Ceramics Credits: 54

Studio electives Credits: 18

Required emphasis Credits: 36

- ART 245 - Introduction to Jewelry and Metalsmithing Credits: 3
- ART 270 - Introduction to Sculpture Credits: 3
- ART 275 - Introduction to Ceramics Credits: 3
- ART 376 - Intermediate Ceramics 1: Wheel Throwing Credits: 3
- ART 377 - Intermediate Ceramics 2: Voice/Concept Credits: 3
- ART 401 - Senior Seminar Credits: 3
- ART 477 - Advanced Ceramics 1 Credits: 3
- ART 478 - Advanced Ceramics 2 Credits: 3
- ART 479 - Glaze Calculation Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3
- ART 498 - Senior Project Credits: 6

##### Graphic Design Credits: 54-55

Studio electives Credits: 15

Required emphasis Credits: 39-40

- ART 210 - Graphic Design I Credits: 3
- ART 211 - Graphic Design II Credits: 3
- ART 215 - Advanced Typography Credits: 3
- ART 258 - Intermediate Drawing Credits: 3
- ART 310 - Graphic Design III Credits: 3
- ART 312 - Graphic Design IV-Experience Design Credits: 3
- ART 410 - Graphic Design V Credits: 3
- ART 413 - Portfolio Credits: 3
- ART 415 - Senior Project: Graphics/Illustration Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3
- CPH 171 - Photography I Credits: 4
- **OR** CPH 175 - Understanding Still Photography Credits: 3

Note: CPH 171 or 175: Consult advisor to make CPH course selection.

Access to studio courses in the School of Communications cannot be guaranteed for art and design majors.

Business practice courses Credits: 3

Select one course from the following list:

- BUS 201 - Legal Environment for Business Credits: 3
- MKT 350 - Marketing Management Credits: 3
- CAP 210 - Fundamentals of Advertising Credits: 3
- CAP 220 - Fundamentals of Public Relations Credits: 3

#### Internship/Practicum

Select one course from the following list:

- ART 491 - Internship in Studio Art Credits: 1 to 6  
Note: If ART 491 is selected, students must register for a minimum of three credits. Students must substitute
- ART 218 - Design History Credits: 3 for one of the two art history elective courses.
- Studio electives Credits: 15  
Studio electives may be selected in art, photography, or film and video. Electives in other areas must be approved by an advisor.

**Illustration Credits: 54**

Studio electives Credits: 15

Required emphasis Credits: 39

- ART 212 - Graphic Design for Illustrators Credits: 3
- ART 257 - Life Drawing Credits: 3
- ART 258 - Intermediate Drawing Credits: 3
- ART 260 - Introduction to Painting Credits: 3
- ART 265 - Introduction to Printmaking Credits: 3
- ART 281 - Introduction to Illustration Credits: 3
- ART 381 - Intermediate Illustration I Credits: 3
- ART 382 - Intermediate Illustration II Credits: 3
- ART 413 - Portfolio Credits: 3
- ART 415 - Senior Project: Graphics/Illustration Credits: 3
- ART 482 - Advanced Illustration I Credits: 3
- ART 483 - Advanced Illustration II Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3

**Jewelry/Metalsmithing Credits: 54**

Studio electives Credits: 18

Required emphasis Credits: 36

- ART 245 - Introduction to Jewelry and Metalsmithing Credits: 3
- ART 270 - Introduction to Sculpture Credits: 3
- ART 275 - Introduction to Ceramics Credits: 3
- ART 345 - Relevant Skills for the Jeweler Credits: 3
- ART 346 - Intermediate Jewelry and Metalsmithing I Credits: 3
- ART 347 - Intermediate Jewelry and Metalsmithing II Credits: 3
- ART 401 - Senior Seminar Credits: 3
- ART 447 - Advanced Jewelry and Metalsmithing I Credits: 3
- ART 448 - Advanced Jewelry and Metalsmithing II Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3
- ART 498 - Senior Project Credits: 6

**Painting Credits: 54**

Printmaking or illustration Credits: 3

Metals, sculpture, or ceramics Credits: 3

Studio electives Credits: 12

Required emphasis Credits: 42

- ART 257 - Life Drawing Credits: 3
- ART 258 - Intermediate Drawing Credits: 3
- ART 260 - Introduction to Painting Credits: 3
- ART 355 - Advanced Drawing I Credits: 3
- ART 361 - Intermediate Painting I Credits: 3
- ART 362 - Intermediate Painting II Credits: 3
- ART 401 - Senior Seminar Credits: 3
- ART 462 - Advanced Painting I Credits: 3
- ART 463 - Advanced Painting II Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3
- ART 498 - Senior Project Credits: 6

**Printmaking Credits: 54**

Metals, sculpture, or ceramics Credits: 3

Studio electives Credits: 9

Required emphasis Credits: 45

- ART 257 - Life Drawing Credits: 3
- ART 258 - Intermediate Drawing Credits: 3
- ART 260 - Introduction to Painting Credits: 3
- ART 265 - Introduction to Printmaking Credits: 3
- ART 355 - Advanced Drawing I Credits: 3
- ART 356 - Advanced Drawing II Credits: 3
- ART 366 - Intermediate Printmaking I Credits: 3
- ART 367 - Intermediate Printmaking II Credits: 3
- ART 401 - Senior Seminar Credits: 3
- ART 467 - Advanced Printmaking I Credits: 3
- ART 468 - Advanced Printmaking II Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3
- ART 498 - Senior Project Credits: 6

**Sculpture Credits: 54**

Studio electives Credits: 18

Required emphasis Credits: 36

- ART 245 - Introduction to Jewelry and Metalsmithing Credits: 3
- ART 270 - Introduction to Sculpture Credits: 3
- ART 275 - Introduction to Ceramics Credits: 3
- ART 321 - Digital 3D Credits: 3
- ART 371 - Intermediate Sculpture 1: Fabrications Credits: 3
- ART 372 - Intermediate Sculpture 2: Replications Credits: 3
- ART 401 - Senior Seminar Credits: 3
- ART 472 - Advanced Sculpture 1 Credits: 3
- ART 473 - Advanced Sculpture 2 Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3
- ART 498 - Senior Project Credits: 6

**Visual Studies Credits: 54**

Studio electives six to nine courses, three credits each Credits: 18-27

Required emphasis Credits: 27-36

Working with their advisor, undergraduates create individualized learning plans, which are evaluated every semester. Students take 5-8 courses specific to visual studies in at least four different areas (ART 391, 392, 393, 394, 395, and 396). These may be repeated once. Students complete the remaining credits in the emphasis with the studio electives they have chosen for their learning plan, for a total of 54 credits.

- ART 391 - Civic Studio Credits: 3
- ART 392 - Curatorial Studio Credits: 3
- ART 393 - Image Studio Credits: 3
- ART 394 - Interactive Studio Credits: 3
- ART 395 - Space Studio Credits: 3
- ART 396 - Time Studio Credits: 3
- ART 401 - Senior Seminar Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3
- ART 498 - Senior Project Credits: 6

**Suggested Order of Coursework for a B.F.A. in Studio Art****Freshman Year****Fall Semester Credits: 16**

- Two general education courses Credits: 7
- ART 150 - Foundations: 2-D Design Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3
- **OR** ART 153 - Foundations: Making and Meaning in Art and Design Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3

**Winter Semester Credits: 16**

- Two general education courses Credits: 7
- ART 151 - Foundations: 3-D Design Credits: 3
- **OR** ART 153 - Foundations: Making and Meaning in Art and Design Credits: 3
- ART 152 - Foundations: Color and Design Credits: 3
- ART 157 - Foundations: Introduction to Drawing II Credits: 3

**Sophomore Year****Fall Semester Credits: 18**

- Emphasis requirements Credits: 9
- Two general education courses Credits: 6
- ART 221 - Survey of Art History I Credits: 3

**Winter Semester Credits: 18**

- Emphasis Requirements Credits: 9
- Two general education courses Credits: 6
- ART 222 - Survey of Art History II Credits: 3

**Junior Year****Fall Semester Credits: 18**

- Emphasis requirements and electives Credits: 9
- Art history elective Credits: 3
- Two general education Issues courses Credits: 6

## Athletic Training

### Winter Semester Credits: 18

- Emphasis requirements and electives Credits: 9
- Art history elective Credits: 3
- One or two general education Issues courses Credits: 3 or 6

### Senior Year

#### Fall Semester Credits: 12

- Emphasis requirements and electives Credits: 6
- ART 401 - Senior Seminar Credits: 3
- OR ART 413 - Portfolio Credits: 3
- ART 495 - Issues in Art (Capstone) Credits: 3

#### Winter Semester Credits: 12-15

- Emphasis requirements and electives Credits: 3
- One or two general education courses Credits: 3 to 6
- ART 498 - Senior Project Credits: 6

## Studio Art Minor

The studio art minor offers students in other majors the opportunity to pursue their interests in the visual arts. Students choose eight courses for the minor, which can be structured for broad engagement or focused learning in studio art.

### Studio Art Minor Requirements (24 credits)

#### Studio Art (18 credits)

Complete these studio foundations courses:

- ART 151 - Foundations: 3-D Design Credits: 3
- ART 153 - Foundations: Making and Meaning in Art and Design Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3

Complete two studio courses at the 200-level or above.

Complete one studio course at the 300-level or above.

#### Art History (3 credits)

One art history course at the 200-level or above

#### Elective (3 credits)

One additional course with the ART designation. ART courses include studio art courses at any level (including 100 level foundation courses), ART 101, art history at any level, and art education courses at any level.

## Athletic Training - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/athletictraining](http://www.gvsu.edu/athletictraining)

### Accreditation

The athletic training program currently holds full accreditation status from the Commission on Accreditation of Athletic Training Education (CAATE).

## Bachelor of Science in Athletic Training

### Requirements for a Major in Athletic Training

Students applying to the athletic training program at Grand Valley must follow all general education requirements as defined in the Grand Valley State University Undergraduate and Graduate Catalog. Transfer students should refer to the Transfer Student Policy at the end of this section.

This program is available only to students who apply and are admitted through the formal, competitive admission process. Application for admission to the program takes place two times per year: fall and winter. Once admitted into the program a student is required to spend a minimum of five semesters completing their clinical experiences.

### Prerequisites for Admission

The prerequisites for admission into the athletic training program are as follows:

- MOV 217 - Modern Principles of Athletic Training Credits: 2
- MOV 218 - Modern Principles of Athletic Training Lab Credits: 1
- ATH 210 - Directed Observation in AT Credits: 1
- MOV 300 - Kinesiology Credits: 3

Note: Students must receive a B or better in all prerequisite coursework.

- Current first aid and CPR certification
- Proof of current immunizations as defined by the CDC for health care workers
- Cumulative GPA of 2.8 or higher
- One semester attendance at Grand Valley State University

### Admission Eligibility

Once the previously listed criteria have been met (or in process), the student is eligible to apply for admission into the program. Admission is competitive and is based on:

1. Written test (Students must receive a 70 percent or higher to qualify for an interview)
2. Practical test (Students must receive a 70 percent or higher to qualify for an interview)
3. Admission application
4. Interview
5. Recommendations
6. Completion of a criminal background check and 10-panel drug screen
7. Technical standards

Individuals must be able to meet all technical standards of the athletic training program as outlined in the Athletic Training Policies and Procedures Manual.

### Transfer Student Policy for the Athletic Training Education Program

1. Transfer students seeking to enter the Grand Valley State University athletic training program must meet with an athletic training curriculum advisor to discuss possible transfer courses.
2. Transfer students must meet all admission criteria in the Grand Valley State University Undergraduate and Graduate Catalog.
3. Transfer students must meet all Grand Valley athletic training program prerequisite and admission criteria.
4. The application committee will evaluate pre-admission criteria and transfer of coursework to the program on an individual basis.

Admission into the athletic training education program and successful completion of the curriculum courses and clinical hours will make students eligible to sit for the Board of Certification (BOC) exam for athletic trainers upon graduation.

### Athletic Training Major B.S. Course Requirements (credit hours: 10)

- BMS 251 - Anatomy and Physiology II Credits: 4
- MOV 304 - Introduction to Exercise Physiology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Coursework (credit hours: 77-83)

Athletic training majors must complete the following courses in addition to their general education and prerequisite requirements:

- ATH 220 - Athletic Training Clinical I Credits: 2
- ATH 225 - AT Emergency Care Credits: 3
- ATH 230 - Athletic Training Clinical II Credits: 2
- ATH 314 - Athletic Injury Assessment I Credits: 3
- ATH 315 - Athletic Injury Assessment II Credits: 3
- ATH 316 - Therapeutic Exercise Credits: 3
- ATH 320 - Athletic Training Clinical III Credits: 2
- ATH 330 - Athletic Training Clinical IV Credits: 2
- ATH 405 - Therapeutic Modalities Credits: 3
- ATH 406 - Intervention and Referral Credits: 2
- ATH 407 - Pharmacology in Athletic Training Credits: 2

- ATH 420 - Advanced Techniques in Athletic Training Credits: 2
- ATH 490 - Internship in Athletic Training Credits: 6 to 12
- ATH 495 - Organization and Administration Credits: 3
- BMS 105 - Basic Nutrition Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- BMS 355 - Anatomy of Joints Credits: 2
- CHM 109 - Introductory Chemistry Credits: 4
- MOV 101 - Foundations of Human Movement Science Credits: 3
- MOV 304 - Introduction to Exercise Physiology Credits: 3
- MOV 309 - Measurement and Evaluation Credits: 2
- MOV 320 - Exercise Testing and Prescription Credits: 3
- MOV 321 - Exercise Testing Lab Credits: 1
- PHY 200 - Physics for the Life Sciences Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### GPA Retention Policies

Athletic training majors are required to maintain a 3.0 GPA in all required coursework with no grade lower than a C. Once formally admitted to the program, students will also be required to maintain a cumulative GPA of 2.8 or higher. In addition, students must maintain a minimum GPA of 2.5 for the semester. Failure to maintain the previously listed GPA requirements will place students in a probationary status for one semester. Failure to maintain the previously listed GPA requirements for a second consecutive semester will result in dismissal from the program.

### Program Costs

Students will be responsible for the costs associated with required immunizations, background checks and drug screenings, BLS face mask, travel to and from clinical sites, identification tags and clothing items, and all textbooks and supplemental materials required for each course.

### Suggested Order of Coursework for a Major in Athletic Training

#### First Year

- CHM 109 - Introductory Chemistry Credits: 4
- MOV 101 - Foundations of Human Movement Science Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- BIO 120 - General Biology I Credits: 4
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 105 - Basic Nutrition Credits: 3
- MTH 110 - Algebra Credits: 4
- PSY 101 - Introductory Psychology Credits: 3

#### Second Year

- ATH 210 - Directed Observation in AT Credits: 1
- ATH 220 - Athletic Training Clinical I Credits: 2
- ATH 225 - AT Emergency Care Credits: 3
- ATH 314 - Athletic Injury Assessment I Credits: 3
- BMS 251 - Anatomy and Physiology II Credits: 4
- BMS 355 - Anatomy of Joints Credits: 2
- MOV 217 - Modern Principles of Athletic Training Credits: 2
- MOV 218 - Modern Principles of Athletic Training Lab Credits: 1
- MOV 300 - Kinesiology Credits: 3
- MOV 309 - Measurement and Evaluation Credits: 2
- STA 215 - Introductory Applied Statistics Credits: 3
- General education requirement
- General education requirement

#### Third Year

- ATH 230 - Athletic Training Clinical II Credits: 2
- ATH 315 - Athletic Injury Assessment II Credits: 3
- ATH 316 - Therapeutic Exercise Credits: 3
- ATH 320 - Athletic Training Clinical III Credits: 2
- ATH 405 - Therapeutic Modalities Credits: 3
- MOV 304 - Introduction to Exercise Physiology Credits: 3

- MOV 320 - Exercise Testing and Prescription Credits: 3
- MOV 321 - Exercise Testing Lab Credits: 1
- PHY 200 - Physics for the Life Sciences Credits: 4
- General education requirement
- General education requirement

#### Fourth Year

- ATH 330 - Athletic Training Clinical IV Credits: 2
- ATH 406 - Intervention and Referral Credits: 2
- ATH 407 - Pharmacology in Athletic Training Credits: 2
- ATH 420 - Advanced Techniques in Athletic Training Credits: 2
- ATH 490 - Internship in Athletic Training Credits: 6 to 12
- ATH 495 - Organization and Administration Credits: 3
- General education requirement
- General education requirement
- General education requirement
- General education requirement

## Biochemistry - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

The biochemistry program is administered by the Chemistry Department.

**Website:** [www.gvsu.edu/chem](http://www.gvsu.edu/chem)

Biochemistry is a fascinating and diverse field that affects almost every area of our lives. The medicines we take and the food we eat are all affected by discoveries made through the study of biochemistry. Increasingly, biochemistry is being applied to other technologies, such as the production of biofuels and material development.

A biochemistry major is excellent preparation for students interested in attending biochemistry graduate school or in obtaining employment in biochemical and biomedical laboratories. This major is also appropriate for students interested in attending professional schools in the health professions, such as medical, dental, pharmacy, or veterinary schools.

The biochemistry program is housed within the Chemistry Department, which also offers a B.S. in chemistry as well as a B.S. in chemistry with an education emphasis for students interested in teaching high school chemistry.

For any degree program in chemistry or biochemistry, it is important to start the proper sequence of chemistry courses as soon as possible. Students who wish to major in biochemistry should meet with their Chemistry Department faculty advisors as soon as possible to plan programs that match their academic interests and career goals.

The Chemistry Department also offers a green chemistry certificate. This option can be added to any major or minor. It shows that students have taken a series of classes where they learn the principles of green chemistry and the production of chemicals and design of chemical processes in a manner that is environmentally sustainable.

The Chemistry Department also offers a chemistry minor. Students from other departments can add a chemistry minor to enhance their knowledge of chemistry and laboratory experience.

### Accreditation

The Chemistry Department is approved by the Committee on Professional Training of the American Chemical Society and offers ACS certified degrees in chemistry and biochemistry to qualified graduates.

### Degrees Offered

Bachelor of Science in chemistry, Bachelor of Science in biochemistry, Bachelor of Science in chemistry with an education emphasis (secondary education certified major). Green chemistry certificate. Minor in chemistry (secondary education certified major). Master of Education (general education, middle and high school emphasis, with a concentration in science) offered in cooperation with the College of Education.

## Biochemistry

### Participating Programs

The College of Education offers a M.Ed. in general education with a concentration in science. This program is called Target Inquiry. Contact the chemistry office for more information.

The dual geology-chemistry major is offered by the Geology Department in cooperation with the Chemistry Department. For details, see the Program Description.

The following programs are available:

- **Bachelor of Science in chemistry**
- **Bachelor of Science in biochemistry**
- **Chemistry minor**
- **Certificate in green chemistry**
- **Master of Education in instruction and curriculum in science**

### Bachelor of Science in Biochemistry

The B.S. biochemistry major prepares students for entry level employment in biotechnical or biomedical laboratories or for entry into professional health schools or biochemical graduate programs.

A summary of all degree requirements as well as other departmental information is available in the Chemistry Department Handbook. All biochemistry majors should obtain a copy from the department office.

#### Requirements for a B.S. Major in Biochemistry

##### 1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

##### 2. Chemistry Courses

- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 245 - Principles of Organic Chemistry I Credits: 4
- CHM 246 - Principles of Organic Chemistry I Lab Credits: 1
- CHM 247 - Principles of Organic Chemistry II Credits: 3
- CHM 248 - Principles of Organic Chemistry II Lab Credits: 1
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- **OR BOTH** CHM 356 - Physical Chemistry I Credits: 3
- **AND** CHM 358 - Physical Chemistry II Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 391 - Chemistry Seminar I Credits: 1
- CHM 461 - Biochemistry I Credits: 4
- CHM 462 - Techniques in Biochemistry Credits: 3
- CHM 463 - Biochemistry II Credits: 3
- CHM 491 - Chemistry Seminar II Credits: 1

##### 3. Required Cognate Courses

- BIO 120 - General Biology I Credits: 4
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- MTH 201 - Calculus I Credits: 4
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

##### 4. Cognate Elective Courses

Take eight additional credits from the following choices:

- BIO 357 - Environmental Microbiology Credits: 4
- BIO 416 - Advanced Genetics Laboratory Credits: 2
- BIO 423 - Plant Biotechnology Credits: 3
- BIO 432 - Comparative Animal Physiology Credits: 4
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- BMS 306 - Advanced Human Nutrition Credits: 3
- BMS 312 - Bacterial Genetics Credits: 3
- BMS 313 - Bacterial Genetics Laboratory Credits: 1
- BMS 410 - Immunology Credits: 3

- BMS 422 - Bacterial Physiology Credits: 3
- BMS 423 - Bacterial Physiology Laboratory Credits: 2
- BMS 431 - Medical Virology Credits: 3
- CMB 405 - Cell and Molecular Biology Credits: 4
- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2
- CMB 411 - Genetics of Development and Cancer Credits: 3
- CMB 414 - Molecular Biology of the Gene Credits: 3
- CMB 426 - Nucleic Acids Laboratory Credits: 3
- CMB 452 - Computational Biology Credits: 3

#### Additional Information

Students in the biochemistry major interested in graduate school are advised to consult with their advisor about selecting these optional courses:

- PHY 230/231 instead of PHY 220/221
- CHM 356 and CHM 358 instead of CHM 351
- MTH 202 in addition to MTH 201

Students in the biochemistry major who transfer or change majors may make these substitutions with advisor approval:

- CHM 241 may replace CHM 245 and 246
- CHM 242 may replace CHM 247 and 248
- BIO 355 may replace BIO 375

Students in the biochemistry major seeking a degree certified by the American Chemical Society (ACS) must also complete:

- At least 106 lab hours in additional elective CHM courses above the 200 level.
- CHM 273 plus one credit of CHM courses above the 200 level in addition to the minimum requirements.
- CHM 490 and CHM 499 lab hours and credits may be used to satisfy the ACS certification requirements.

#### Suggested Order of Coursework for a Major in Biochemistry (B.S.)

This option assumes students will complete the required general education courses and select electives with the help of his or her advisor.

##### First Year

- BIO 120 - General Biology I Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- MTH 201 - Calculus I Credits: 4
- PHY 220 - General Physics I Credits: 5
- **OR** PHY 230 - Principles of Physics I Credits: 5

##### Second Year

- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 245 - Principles of Organic Chemistry I Credits: 4
- CHM 246 - Principles of Organic Chemistry I Lab Credits: 1
- CHM 247 - Principles of Organic Chemistry II Credits: 3
- CHM 248 - Principles of Organic Chemistry II Lab Credits: 1
- PHY 221 - General Physics II Credits: 5
- **OR** PHY 231 - Principles of Physics II Credits: 5

##### Third Year

- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- CHM 391 - Chemistry Seminar I Credits: 1
- CHM 461 - Biochemistry I Credits: 4
- CHM 462 - Techniques in Biochemistry Credits: 3
- Cognate Electives

##### Fourth Year

- CHM 351 - Introduction to Physical Chemistry Credits: 3
- **OR** CHM 356 - Physical Chemistry I Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 463 - Biochemistry II Credits: 3
- CHM 491 - Chemistry Seminar II Credits: 1 (Capstone course)
- Cognate Electives

## Biology - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/biology](http://www.gvsu.edu/biology)

The study of animals and plants has fascinated people for thousands of years. All of us have wondered at some time about how animals are put together and how they function, why plants flower, how organisms interact with each other and respond to the environment, or why some bacteria cause disease and others do not. Biology is an exciting and dynamic field filled with the satisfaction of answers to many questions and the challenge of others waiting to be explained.

As a science, biology offers the opportunity to study and experiment with animals, plants, fungi, and bacteria in the laboratory and outdoors. Biologists make contributions in widely varying areas, including medicine, aquatic ecology, biotechnology, botany, conservation biology, evolutionary biology, genetics, microbiology, molecular biology and ecology, terrestrial ecology, and zoology.

### Degrees Offered

Master of Science, biology concentration in Master of Education, Bachelor of Science, Bachelor of Arts in biology, and major and minor for secondary teaching certification.

### Preparation for Graduate School

Students planning to do graduate work in biology should consult early with their advisors. There is no absolute list of courses required for admission to graduate school. Generally, in addition to mathematics, students will need a full year of physics and two full years of chemistry, including CHM 241 and 242.

### Participating Programs

#### Cell and Molecular Biology

Students who wish to prepare for careers in biotechnology, biomedicine, cell biology, forensics, genetics, molecular biology, pharmacology, or related fields may wish to consider the genetics, cell and molecular emphasis of the Bachelor of Science in Biology or the interdisciplinary degree, cell and molecular biology (CMB) described elsewhere in the Grand Valley State University Undergraduate and Graduate Catalog. Both programs offer independent research directed by mentors from Grand Valley or area business and research institutes, ensuring that students will get practical experience conducting original research in an area of their interest.

#### Integrated Science Major for the B.S. Degree

The integrated science major is designed for students seeking certification to teach at the elementary school level. It provides the student with broad exposure in all the sciences and emphasizes the connections among the scientific disciplines, their relationship with technology, and their relevance to society. In order to be certified students must complete this major and the elementary teaching minor with at least a 2.7 GPA in each. Students are advised to take the MDE subject test after they have completed the major with a 2.7 GPA.

#### Integrated Science Secondary Endorsement

Students who have declared or completed a major and minor in a science discipline may complete additional courses for an integrated science secondary endorsement. The Michigan Department of Education will allow teachers with the integrated science secondary endorsement to teach biology, chemistry, earth science, and physics at the secondary level.

#### Behavioral Neuroscience Major

Students interested in this interdisciplinary major should consult the psychology department for specific requirements.

### Honors Organizations

Beta Beta Beta (TriBeta) is an honor society for students, particularly undergraduates, dedicated to improving the understanding and

appreciation of biological study and extending boundaries of human knowledge through scientific research. Requirements: undergraduates shall have completed at least one term of the second year of a four-year curriculum, completed at least three courses in biological science, of which at least one is not an introductory course, with an average grade of B or its equivalent in those biology courses, and shall be in good academic standing.

## Bachelor of Arts or Bachelor of Science in Biology

The biology major is designed to help students gain a comprehensive understanding of the biological sciences. The biology faculty believe it is vital for undergraduate students to understand the unifying concepts and fundamental principles within the breadth of biology. Thus, the core biology curriculum introduces the diverse areas of biology. All students are required to complete an emphasis. Each of the five emphases provides breadth and depth in biology, while allowing students flexibility to specialize in areas of particular interest. In consultation with their biology advisor, students can tailor programs to meet their unique interests, educational goals and career needs. A biology degree can support students intending to pursue graduate or professional degrees in the life sciences, including veterinary and human medicine, as well as careers in highly diverse fields, such as conservation biology, genetic counseling, plant biology, population genetics, aquatic sciences, wildlife ecology, animal behavior, evolutionary biology, microbiology, and sustainable agriculture.

The biology major requires fulfillment of general university degree requirements, biology core requirements (including chemistry, physics, cell and molecular biology, and math/statistics requirements), and biology elective requirements as outlined as follows for each emphasis. All majors must complete at least 41 credits in biology.

### Requirements for a Major in Biology

#### Biology Core (32-34 credits)

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- BIO 210 - Evolutionary Biology Credits: 3
- BIO 215 - Ecology Credits: 4
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- CMB 405 - Cell and Molecular Biology Credits: 4
- BIO 495 - Perspectives in Biology (Capstone) Credits: 3

Complete one course from each of the following biology elective categories:

- Category I (Plant Organismal Biology) Credits: 3 to 4
- Category II (Animal Organismal Biology) Credits: 3 to 4

Biology B.S. students must complete the courses listed previously.

Biology B.A. students must complete the courses listed previously and demonstrate third-semester proficiency in a foreign language.

Students must complete a minimum of 41 credits of biology coursework. If students still do not have 41 credits of biology coursework after completing both the biology core requirements (listed previously) and the requirements for their chosen emphasis (as follows), they should select additional biology courses from the elective categories, BIO Issues courses, credits in research (BIO 499), or internship credit (BIO 490). Students should consult with a biology advisor prior to selecting elective courses.

#### Additional Requirements for the Biology Major (26-28 credits)

##### a. Chemistry

- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- AND EITHER**
- CHM 231 - Introductory Organic Chemistry Credits: 4
- AND CHM 232 - Biological Chemistry Credits: 4**

## Biology

**OR** CHM 241 - Organic Chemistry for Life Sciences I Credits: 5  
**AND** CHM 242 - Organic Chemistry for Life Sciences II Credits: 4  
Note: Some professional and graduate schools require a year of organic chemistry, others a semester; some require one to two semesters of biochemistry. Students should consult an advisor and check requirements of particular programs of interest prior to selecting chemistry courses.

### b. Statistics and Mathematics

Choose one of the following:

- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3

Professional and graduate schools generally require a semester of statistics and/or completion of math through trigonometry or calculus. Students should consult an advisor and check requirements of particular programs of interest prior to selecting math and statistics courses.

### c. Physics

Students planning to seek secondary teaching certification or acceptance to graduate or professional programs (e.g., Ph.D. programs; medical or veterinary school) should complete PHY 220 and PHY 221 OR PHY 230 and PHY 231.

Choose one:

- PHY 200 - Physics for the Life Sciences Credits: 4
- PHY 220 - General Physics I Credits: 5
- PHY 230 - Principles of Physics I Credits: 5

### Excluded and Restricted Courses

The following courses are excluded from the biology major.

- BIO 104 - Biology for the 21st Century Credits: 4
- BIO 105 - Environmental Science Credits: 3
- BIO 107 - Great Lakes and Other Water Resources Credits: 4
- BIO 109 - Plants in the World Credits: 4
- BIO 205 - Genetics for K-8 Pre-Service Teachers Credits: 2
- Any other biology course whose description prevents it from being used in the major.

The following course may only count toward the biology major with advisor's permission.

- BIO 355 - Human Genetics Credits: 3

Students may count BIO 357 *or* BMS 212/213 toward the biology degree, but not both.

### Biology Issues Courses

The following courses have been approved to satisfy part of the general education Issues requirement. These courses may count toward the biology major after elective-category requirements are satisfied for the student's selected emphasis:

- BIO 309 - Plants and Human Health Credits: 3
- BIO 311 - Who's Running Your Life: Genes, Evolution and Behavior Credits: 3
- BIO 319 - Global Agricultural Sustainability Credits: 3
- BIO 328 - Biomedical Ethics Credits: 3
- BIO 329 - Evolution of Social Behavior Credits: 3
- BIO 338 - Environmental Ethics Credits: 3

### Emphases

All biology majors must complete an emphasis within the major (general biology, biomolecular processes, ecology and evolutionary biology, preveterinary medicine, or teacher certification). Students pursuing certification to teach biology in grades 6-12 must complete the emphasis in teacher certification. Students pursuing enrollment in veterinary school should select the emphasis in preveterinary medicine.

Students are encouraged to complete BIO courses of interest beyond the minimum required; these may include BIO courses not listed in the elective categories as follows. Unrestricted elective credits, i.e., those beyond the 41-credit minimum, will apply toward the GVSU 120 credit-hour baccalaureate degree requirement and additionally may help satisfy general education requirements (e.g., Issues courses). For students desiring more breadth or depth in their major, any additional BIO courses

(except those specifically excluded elsewhere) are suggested and will contribute to credits completed in the BIO major.

Students may wish to pursue more specialized study within biology, such as aquatic biology, plant biology, microbiology, animal behavior, evolution, genetics, or conservation biology. The two specialized emphases — ecology and evolutionary biology (EEB) and biomolecular processes — can support many such interests when elective courses are selected carefully. Prior to selecting an emphasis, students should consult with one or more biology faculty members whose expertise supports their interests.

Students should also pursue hands-on professional development through research, internship, volunteer, and other opportunities in field and laboratory settings. Early consultation with an appropriate academic advisor in the biology department is strongly encouraged.

### Emphasis in General Biology

The general biology emphasis is appropriate for preprofessional students (other than preveterinary), and students interested in exploring biology broadly. In addition to the requirements outlined previously, students in this emphasis must complete the following requirements. Elective courses may only count in one category.

Complete the following courses:

- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2

Complete one course from one of the following categories:

- Category III (Principles of Ecology and Evolutionary Biology; 3 to 4 credits) or
- Category IV (Applied Ecology and Evolution; 3 to 4 credits)

Complete one course from the following category:

- Category V (Biomolecular Processes; 2 to 4 credits)

### Emphasis in Biomolecular Processes

The emphasis in biomolecular processes is appropriate for students interested in microbiology, genetics, cellular biology and molecular biology. It supports students pursuing careers as laboratory technicians, seeking entry into medical or other health-related professional schools or graduate programs in genetics, microbiology, molecular and cellular biology or related fields, and those wishing to complete a broad biology degree with some specialization in genetics, microbiology, or cellular and molecular biology. In addition to the requirements outlined previously, students in this emphasis must complete the following requirements. Elective courses may only count in one category.

Complete the following courses:

- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2

Complete two courses from the following category:

- Category V (Biomolecular Processes; 2 to 4 credits each)

### Emphasis in Ecology and Evolutionary Biology

The emphasis in ecology and evolutionary biology is appropriate for students pursuing careers in professions such as aquatic and fisheries biology, animal behavior, wildlife ecology, plant biology, zoology, marine biology, and conservation biology. It is especially appropriate for students intending to apply to graduate programs in ecology, evolutionary biology (including systematics), and related fields. In addition to the requirements outlined previously, students in this emphasis must complete the following requirements. Elective courses may only count in one category.

Complete one course from the following category:

- Category III (Principles of Ecology and Evolutionary Biology; 3 to 4 credits)

Complete one course from one of the following categories:

- Category III (Principles of Ecology and Evolutionary Biology; 3 to 4 credits) or
- Category IV (Applied Ecology and Evolution; 3 to 4 credits)

### Emphasis in Preveterinary Medicine:

Students planning careers in veterinary medicine or related fields may prepare for application to professional schools with a biology major by

selecting the emphasis in preveterinary medicine after completion of the introductory sequences in biology and chemistry (previously mentioned). Early consultation with an appropriate preprofessional advisor within the biology department is strongly encouraged.

Entrance requirements vary among veterinary schools at different universities. The emphasis in preveterinary medicine is tailored to satisfy application requirements at MSU; students should peruse the application requirements of the specific programs they are considering to ensure requirements are met prior to applying. Entry requirements for particular programs are available on university websites. Because entry into professional programs is highly competitive, students should complete the entry requirements for programs in veterinary medicine offered at multiple universities and be prepared to apply for admission to several. In addition to the requirements outlined previously, students in this emphasis must complete the following requirements. Elective courses may only count in one category.

Complete the following courses:

- BIO 317 - Principles of Animal Nutrition Credits: 3
- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2

Complete one of the following:

- BIO 357 - Environmental Microbiology Credits: 4
- OR BOTH**
- BMS 212 - Introductory Microbiology Credits: 3
- AND** BMS 213 - Laboratory in Microbiology Credits: 1

Complete the following courses in chemistry and physics:

- CHM 241 - Organic Chemistry for Life Sciences I Credits: 5
- CHM 242 - Organic Chemistry for Life Sciences II Credits: 4
- CHM 461 - Biochemistry I Credits: 4
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

Beyond coursework, preveterinary students must gain experience in the profession through volunteer work, internships, or employment; most schools of veterinary medicine require completion of specific hours of small- and large-animal experience prior to application. Research experience and community service (especially involving animal handling or welfare) are also strongly encouraged. Consultation with a biology advisor is essential.

### Emphasis in Teacher Certification

Students majoring in biology may obtain Michigan certification to teach biology in grades 6-12. In addition to the requirements outlined previously, students pursuing certification to teach biology must complete all the requirements listed as follows. Elective courses may only count in one category. These are the same requirements as listed in the general biology emphasis, but declaring the teacher certification emphasis is important so that students are identified for advising purposes. Additionally, those seeking teacher certification must complete a teaching minor and a 39-credit professional education program from the College of Education (see the GVSU College of Education website for more information). Secondary admission to the College of Education requires at least a 2.7 GPA in the major.

Complete the following courses:

- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2

Complete one course from one of the following categories:

- Category III (Principles of Ecology and Evolutionary Biology; 3 to 4 credits) or
- Category IV (Applied Ecology and Evolution; 3 to 4 credits)

Complete one course from the following category:

- Category V (Biomolecular Processes; 2 to 4 credits)

### Premedical and other Preprofessional Students

Students planning careers in clinical professions, such as physicians, dentists, and physical therapists may prepare for entry into professional school with a biology major. Students are encouraged to complete the general biology or biomolecular processes emphasis and to pursue

opportunities in laboratory-based research and/or clinical experience to best support preparation for such professional studies. Early consultation with an appropriate preprofessional advisor within the biology department or CLAS Academic Advising Center is strongly encouraged. Entrance requirements vary among universities, but most require completion of the following:

- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 241 - Organic Chemistry for Life Sciences I Credits: 5
- CHM 242 - Organic Chemistry for Life Sciences II Credits: 4
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

Additional coursework required for admission to professional programs may include biochemistry, microbiology, embryology, nutrition, anatomy, physiology, statistics, and/or mathematics beyond college algebra. Entry requirements for particular professional programs are available on university websites. Biology advisors and the CLAS preprofessional advisors can assist students in selecting appropriate courses. Because entry into professional programs is highly competitive, students should complete the entry requirements for programs offered at multiple universities, and be prepared to apply for admission to several programs.

Beyond coursework, applicants are typically required to gain experience in the profession prior to seeking admission; for example, admission requirements for most medical schools require practical experience in a clinical or health care setting. Research experience and community service (especially in areas related to the profession) are also strongly encouraged. Consultation with a biology advisor is essential.

### Elective Course Categories

- Category I: Plant Organismal Biology
- Category II: Animal Organismal Biology
- Category III: Principles of Ecology and Evolutionary Biology
- Category IV: Applied Ecology and Evolution
- Category V: Biomolecular Processes

Elective courses must be selected to satisfy emphasis requirements, but also should be selected deliberately, carefully, and in consultation with a biology advisor to support a student's specific educational and career objectives. Students should meet with their advisor prior to completion of elective coursework.

Note: some courses appear in more than one category, but a particular course may only satisfy one biology degree requirement.

#### Category I: Plant Organismal Biology

These courses include a field and/or laboratory component and address the structure, function, development, taxonomy, evolution, or ecology of plants. All students (regardless of emphasis) must complete at least one course from the following:

- BIO 243 - Plant Identification and Natural History Credits: 3
- BIO 303 - Plant Morphology Credits: 4
- BIO 313 - Plants and Islands Credits: 4
- BIO 323 - Aquatic and Wetland Plants Credits: 3
- BIO 333 - Systematic Botany Credits: 4
- BIO 383 - Plant-Fungal Interactions Credits: 4
- BIO 403 - Plant Structure and Function Credits: 4
- BIO 413 - Freshwater Algae Credits: 3
- BIO 423 - Plant Biotechnology Credits: 3
- BIO 433 - Plant Ecology Credits: 4

#### Category II: Animal Organismal Biology

These courses include a laboratory or field component and significant content addressing the anatomy, physiology, development, and/or life cycles of animals. All biology majors (regardless of emphasis) must complete at least one course from the following:

- BIO 222 - Natural History of Vertebrates Credits: 3
- BIO 232 - Natural History of Invertebrates Credits: 3
- BIO 272 - Insect Biology and Diversity Credits: 3

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- BIO 302 - Comparative Vertebrate Anatomy Credits: 4
- BIO 342 - Ornithology Credits: 3
- BIO 362 - Fisheries Biology Credits: 4
- BIO 402 - Aquatic Insects Credits: 3
- BIO 412 - Mammalogy Credits: 4
- BIO 422 - Embryology Credits: 3
- BIO 432 - Comparative Animal Physiology Credits: 4
- BMS 208 - Human Anatomy Credits: 3  
AND BMS 309 - Laboratory in Human Anatomy Credits: 1
- BMS 290 - Human Physiology Credits: 3  
AND BMS 291 - Laboratory in Human Physiology Credits: 1

### Category III: Principles of Ecology and Evolutionary Biology

These courses include significant content addressing principles of ecology and/or evolutionary biology; these courses may or may not include a laboratory component. See requirements for specific emphases.

- BIO 303 - Plant Morphology Credits: 4
- BIO 313 - Plants and Islands Credits: 4
- BIO 333 - Systematic Botany Credits: 4
- BIO 349 - The Darwinian Revolution Credits: 3
- BIO 352 - Animal Behavior Credits: 3
- BIO 370 - Marine Biology Credits: 3
- BIO 433 - Plant Ecology Credits: 4
- BIO 440 - Limnology Credits: 4
- BIO 450 - Stream Ecology Credits: 4
- BIO 452 - Human Evolution Credits: 3
- BIO 460 - Terrestrial Ecosystem Ecology Credits: 4
- BIO 473 - Ecology and Evolution of Plant-Animal Interactions Credits: 3

### Category IV: Applied Ecology and Evolution

These courses include significant content addressing the application of ecological and evolutionary principles to environmental concerns and human endeavors. See elective requirements for specific emphases.

- BIO 308/NRM 308 - Wildlife Ecology Credits: 4
- BIO 357 - Environmental Microbiology Credits: 4\*
- BIO 362 - Fisheries Biology Credits: 4
- BIO 370 - Marine Biology Credits: 3
- BIO 386/NRM 386 - Ecological Restoration and Management Credits: 4
- BIO 402 - Aquatic Insects Credits: 3
- BIO 440 - Limnology Credits: 4
- BIO 407 - Biology and Society: Study Abroad Credits: 1 to 4 (with advisor's permission)
- BIO 408/NRM 408 - Wildlife Management Credits: 4
- BIO 417 - International Field Biology Credits: 1 to 4 (with advisor's permission)
- BIO 418 - Regional Field Biology Credits: 1 to 4 (with advisor's permission)
- BIO 450 - Stream Ecology Credits: 4
- BIO 470 - Conservation Biology Credits: 3
- BIO 473 - Ecology and Evolution of Plant-Animal Interactions Credits: 3
- BIO 486/NRM 486 - Advanced Restoration Ecology Credits: 3  
\*Note: Students may count BIO 357 or BMS 212/213 toward the biology degree, but not both.

### Category V: Biomolecular Processes

These courses include significant content addressing gene function and regulation, microbiology, cellular biology, and/or molecular biology. See elective requirements for specific emphases.

- BIO 317 - Principles of Animal Nutrition Credits: 3
- BIO 357 - Environmental Microbiology Credits: 4 \*
- BIO 403 - Plant Structure and Function Credits: 4
- BIO 416 - Advanced Genetics Laboratory Credits: 2
- BIO 422 - Embryology Credits: 3
- BIO 423 - Plant Biotechnology Credits: 3
- BIO 485 - Molecular Ecology Credits: 3

- BMS 212 - Introductory Microbiology Credits: 3  
AND BMS 213 - Laboratory in Microbiology Credits: 1 \*
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2 (elective for EEB emphasis *only*)
- CMB 411 - Genetics of Development and Cancer Credits: 3
- CMB 414 - Molecular Biology of the Gene Credits: 3
- CMB 426 - Nucleic Acids Laboratory Credits: 3

\*Note: Students may count BIO 357 or BMS 212/213 toward the biology degree, but not both.

## Suggested Order of Coursework for a Major in Biology

The CLAS Academic Advising Center has biology curriculum guides for the general major and all emphases.

## Master of Science in Biology

For additional information about opportunities your college offers, please refer to your college's section in this catalog.

The Master of Science in biology is a versatile graduate program designed to produce outstanding graduates. Versatility in the program will allow students to achieve individual goals while serving a diversity of student interests. Students have the opportunity to pursue graduate programs in broad areas such as genetics and cell biology, organismal biology, aquatic and terrestrial ecology, and natural resources. As a focus for these M.S. programs, we offer internship, project, and thesis pathways. Students may choose an emphasis (but not required) in either aquatic sciences or natural resources. The Master of Science in biology degree program is designed to meet the needs of baccalaureate-trained professionals who will be more competitive with a master's degree as they seek job placement or advancement, secondary teachers who prefer a science master's, and baccalaureate graduates who wish to earn a master's degree before continuing their graduate education at the doctoral level.

The Master of Science in biology helps candidates extend their knowledge in their discipline, extend their professional skills, gain experience in the application of their knowledge and skills, and helps them develop their abilities as leaders and team members. Graduates will be professionals who have progressed from learning about science to doing science, and graduates will be able to use their knowledge and abilities to solve problems and answer questions in the complex and interactive context of local, regional, and global issues and concerns. The optional emphasis in natural resources is offered in order to meet the more specific needs of natural resources management professionals, while the aquatic sciences emphasis highlights the importance of aquatic ecosystems of the region. Both aquatic sciences and natural resources emphases offer students opportunities to work with faculty from the Annis Water Resources Institute in Muskegon as well as with Biology Department faculty at the Allendale Campus.

### Admission to the Master of Science in Biology Program

- Satisfactory GRE score
- A 500-word essay detailing educational and professional goals and your area of interest in biology
- Three letters of reference
- An overall undergraduate of at least 3.0 GPA on a 4.0 scale
- Prospective candidates must contact the biology graduate program coordinator to begin the process of identifying a prospective graduate committee chair. Candidates will only be admitted if a faculty member has consented to serve as the committee chair.
- Applicants must interview with faculty either via telecommunication or by visiting campus to determine compatibility and interests.

The Biology Graduate Committee will begin reviewing applications in January for admission during the following fall semester.

### Transfer Credits

See the Transfer of Credit portion of the Graduate Admission section in the Grand Valley State University Undergraduate and Graduate Catalog

for general provisions. If a candidate wishes any courses taken prior to admission to the Master of Science in biology program to be counted towards the required credits, the request must be made at the time of application. The decision to allow credits to transfer will be made by the departmental graduate program committee and the student's graduate committee chair.

#### Departmental Contact

Biology Department graduate program coordinator, 3300a Kindschi Hall of Science, Biology Department, Grand Valley State University, Allendale, Michigan 49401-9403. Telephone (616) 331-2470.

#### Program Location

Allendale Campus and Annis Water Resources Institute

**Website:** [www.gvsu.edu/biology](http://www.gvsu.edu/biology)

#### Course Listing

- Appropriate 400-level courses (as approved by the graduate program coordinator)
- BIO 530 - Aquatic Ecosystems and Processes Credits: 3
- BIO 535 - Aquatic Microbial Ecology Credits: 3
- BIO 550 - Advanced Population Ecology Credits: 3
- BIO 570 - Landscape Ecology Theory and Application Credits: 3
- BIO 580 - Special Topics in Biology Credits: 1 to 4
- BIO 593 - Advanced Univariate Methods Credits: 3
- BIO 594 - Advanced Multivariate Methods Credits: 3
- BIO 610 - Scientific Methodology Credits: 3
- BIO 651 - Emerging Issues in Water Resources Credits: 2
- BIO 680 - Special Topics in Biology Credits: 1 to 3
- BIO 691 - Graduate Internship Credits: 3 to 9
- BIO 693 - Graduate Project Credits: 3 to 9
- BIO 695 - Thesis Research Credits: 3 to 9
- BIO 698 - Perspectives in Biology Credits: 3
- BIO 699 - Independent Study Credits: 1 to 3

#### Requirements for the M.S. in Biology

The Master of Science in biology is a highly individualized, planned program of study. Early advising is essential because the student's graduate committee chair must approve all coursework in advance. Requirements for each student will be individually predetermined at the time the program plan is established. The degree will be earned upon the successful completion of all requirements outlined in the Grand Valley State University Undergraduate and Graduate Catalog. The program of study will include a qualifying exam administered by the student's graduate committee and a minimum of 33 approved credits with a cumulative GPA of 3.0. All program plans will include the following three components:

- Nine credits common to all students in the program. These will consist of an experimental design/statistics course, the introductory course (BIO 610 - Scientific Methodology), and the Capstone (BIO 698 - Perspectives in Biology).
- Fifteen to 18\* credits in the student's interest area, all of which must be approved by the student's graduate committee chair. Specific coursework, which may include a focus in a secondary area, will be developed by the candidate with the guidance and approval of the student's graduate committee chair.
- Six to nine\* credits of BIO 695 - Thesis, BIO 693 - Project, or BIO 691 - Internship (for those selecting the optional natural resources emphasis, the corresponding course numbers are NRM 695, NRM 693, or NRM 691). Note that the credits may not be mixed in this category. This component will be conducted under the supervision of the student's graduate committee chair and with the approval of the student's graduate committee. No course-only option is available.

Successful progress towards completion of the degree and continued enrollment requires that the student's graduate committee chair be determined before admission, and the student's graduate committee

be appointed before the end of the second semester of enrollment. In addition, the student must pass the qualifying exam before registering for thesis, project, or internship credits. The purpose of the qualifying exam is to ensure that students have adequate science knowledge and background to successfully complete their thesis, project, or internship. All students will be limited to a five-year period to complete their degree.

The variable credits in components two and three are designed to allow for an extended thesis, project, or internship. The graduate program will consist of a minimum of 33 credits.

#### Natural Resources Emphasis (optional)

Corresponding to the existing undergraduate degree program in natural resources management, the Master of Science in biology includes an optional natural resources emphasis. Candidates choosing this optional emphasis have the same admissions criteria and degree requirements as other M.S. students, but will focus their coursework, thesis, project, and internship activities in an area related to the management, conservation, or protection of atmospheric, aquatic, or terrestrial resources. Students in this emphasis will develop interdisciplinary studies involving CLAS faculty as well as other collaborating agencies and groups in the West Michigan area. Students in this emphasis will have opportunities to work with faculty and conduct research at the Annis Water Resources Institute located in Muskegon, as well as at the Allendale Campus of Grand Valley State University.

#### Aquatic Sciences Emphasis (optional)

Corresponding to the existing undergraduate emphasis in aquatic sciences, the Master of Science in Biology includes an optional aquatic sciences emphasis. Candidates choosing this optional emphasis have the same admissions criteria and degree requirements as other MS students, but will focus their coursework, thesis, project, and internship activities in an area related to research, management, conservation, or protection of aquatic resources. Students in this emphasis will develop interdisciplinary studies involving CLAS faculty as well as other collaborating agencies and entities in the west Michigan area. Students in this emphasis will have opportunities to work with faculty and conduct research at the Annis Water Resources Institute located in Muskegon, as well as at the Allendale Campus of Grand Valley State University.

#### Potential Course Selections

Courses previously taught as BIO 580 or BIO 680:

- Advanced Community Ecology
- Advanced Quantitative Methods 1 and 2
- Ecological Modeling
- Emerging Issues in Water Resources
- Molecular Ecology
- Population Genetics

Courses previously taught as NRM 580 and NRM 680:

- Advanced Fisheries Management
- Advanced Restoration Ecology
- Aquatic Ecosystem Management

#### Financial Assistance

Prospective students should review the Costs and Financial Aid section of the Grand Valley State University Undergraduate and Graduate Catalog in full detail. A limited amount of funding is available on a competitive basis for candidates who need assistance. Those who receive departmental assistantships will work with faculty at a variety of departmental tasks that provide support to the undergraduate programs in the biology department. Candidates who wish to instruct laboratory or lecture sections must apply separately for adjunct teaching position, which are not linked to their status as graduate students. Additional assistance in the form of research assistantships may be available through faculty research grants. Candidates are encouraged to seek external support for their work by submitting grant proposals to external funding agencies. Assistance from faculty is available to candidates seeking external funding.

## Biomedical Sciences

### Departmental Contact

Biology Department graduate program coordinator, 3300a Kindschi Hall of Science, Biology Department at Grand Valley State University, Allendale, Michigan 49401-9403. Telephone (616) 331-2470.

## Biology Minor

### Requirements for a Minor in Biology

The biology minor consists of a minimum of 24 credits in Biology. CHM 109 or CHM 115 is a required cognate in addition to the 24 credits. Following standard university policy, students must ensure that they complete 30 unduplicated credits in their major and 20 unduplicated credits in the minor to fulfill the requirements for both. Requirements of the biology minor are:

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- Cognate course: CHM 109 - Introductory Chemistry Credits: 4  
**OR** CHM 115 - Principles of Chemistry I Credits: 4
- An additional 16 credits selected from BIO courses numbered BIO 215 and above, except as noted as follows.

The following may not be used in minor: BIO 104, 105, 107, 109, 205, and any other Biology course whose course description prevents it from being used in the minor.

Only one of the following courses may be counted in the biology minor: BIO 309, 311, 329 or 349. CMB 405, 406, 411, 414, or 426 may be counted as electives in the biology minor with approval of the biology unit head.

Students may count up to eight credits from the following BMS-designated courses toward the required 24 credits in biology.

- BMS 202 - Anatomy and Physiology Credits: 4  
**OR** the following two courses: BMS 208 - Human Anatomy Credits: 3  
**AND** BMS 309 - Laboratory in Human Anatomy Credits: 1
- BMS 212 - Introductory Microbiology Credits: 3  
**AND** BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- BMS 290 - Human Physiology Credits: 3  
**AND** BMS 291 - Laboratory in Human Physiology Credits: 1

Since specific BMS course requirements vary among majors, students should seek the advice of their major advisors on which of these BMS courses to take and the appropriate sequence in which to take them. Students should contact the Biology Department if they have questions on how the specified BMS courses may be applied to the biology minor.

### Teacher Certification Requirements

Students selecting the biology minor for teacher certification are strongly advised to consult either the CLAS Academic Advising Center or the Biology Department for guidance on which BIO courses to complete to satisfy the State Standards for Teaching Biology and to prepare for the Michigan Test for Teacher Certification (MTTC) in biology. To assure both breadth and depth in the teaching minor, in addition to completing BIO 120 - General Biology I and BIO 121 - General Biology II, students should complete BIO 210 - Evolutionary Biology, BIO 215 - Ecology, either BIO 355 - Human Genetics or BIO 375 - Genetics, and BMS 202 - Anatomy and Physiology. Students considering the Integrated Science Secondary Endorsement should choose BIO 375 and the CHM 115 cognate.

## Biomedical Sciences - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/bms](http://www.gvsu.edu/bms)

The biomedical sciences major consists of courses prescribed by professional schools (medical, dental, osteopathic, veterinary, pharmacy, graduate) as essential to the successful completion of a professional school curriculum, plus electives necessary to provide educational breadth and maturity. Succinctly stated, the biomedical sciences major is designed to aid students in gaining a comprehensive understanding of the human life sciences, and is an introduction and gateway to stimulating and significant careers.

The four general areas of significance in the biomedical sciences curriculum are anatomy, physiology, microbiology, and nutrition. Faculty in the biomedical sciences department are involved in a wide variety of research providing numerous opportunities for undergraduate and graduate students to gain valuable applied research experience. The areas of research in the department include infectious disease epidemiology, prostate cancer biology, microbial genetics, immunology, neurology, obesity biochemistry, cardiovascular disease, and stem cell biology to name a few.

### Degrees Offered

Bachelor of Science in biomedical sciences

Master of Health Science in biomedical sciences

Emphases in microbiology and nutrition sciences are also offered

### Participating Programs

Study Abroad

Students have an opportunity to spend a semester or a year studying at Kingston University (KU) in the United Kingdom. The School of Life Sciences at KU offers a number of courses that will be accepted as part of the biomedical sciences degrees.

## Bachelor of Science in Biomedical Sciences

### Requirements for a Major in Biomedical Sciences

#### 1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

#### 2. Required Biomedical Sciences Courses

- BMS 208 - Human Anatomy Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3
- BMS 495 - Concepts in Wellness (Capstone) Credits: 3

#### 3. Additional Required Courses

- BIO 120 - General Biology I Credits: 4
- BIO 355 - Human Genetics Credits: 3  
**OR** BIO 375 - Genetics Credits: 3  
**AND** BIO 376 - Genetics Laboratory Credits: 1
- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 5
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4
- CHM 461 - Biochemistry I Credits: 4
- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

#### 4. Biomedical Sciences Elective Courses

Six additional hours of upper-division (BMS 300-level and higher) biomedical sciences courses, excluding BMS 301, BMS 374, and BMS 495.

In addition, the following courses outside of BMS may also be included in these six hours:

- BIO 422 - Embryology Credits: 3
- CMB 405 - Cell and Molecular Biology Credits: 4
- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2

## Biomedical Sciences - Microbiology Emphasis

Graduates from this emphasis will be prepared to enter a graduate program in microbiology or biotechnology. It would be an excellent emphasis for a premedical student interested in infectious disease. In addition, the laboratory-rich aspect of this emphasis will prepare a graduate for becoming a microbiology/biotechnology laboratory technician. Because it is impossible to design one curriculum to fulfill the requirements of every graduate school or laboratory, it is the student's responsibility, in consultation with an advisor, to see that the requirements are fulfilled for the particular school(s)/job(s) in which the student is interested. This major, although directed, allows sufficient flexibility to accommodate specific requirements that various programs may have.

### Major Requirements

#### 1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

#### 2. Required Biomedical Sciences Courses

- BMS 208 - Human Anatomy Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- BMS 312 - Bacterial Genetics Credits: 3
- BMS 313 - Bacterial Genetics Laboratory Credits: 1
- BMS 422 - Bacterial Physiology Credits: 3
- BMS 423 - Bacterial Physiology Laboratory Credits: 2
- BMS 499 - Research in the Biomedical Sciences Credits: 1 to 3

#### 3. Additional Required Courses

- BIO 120 - General Biology I Credits: 4
- BIO 355 - Human Genetics Credits: 3
- **OR** BIO 375 - Genetics Credits: 3
- **AND** BIO 376 - Genetics Laboratory Credits: 1
- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 5
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4
- CHM 461 - Biochemistry I Credits: 4
- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

#### 4. Biomedical Sciences Elective Courses

Six additional hours of upper-division science courses from the following:

- BMS 410 - Immunology Credits: 3
- BMS 412 - Medical Bacteriology Credits: 3
- BMS 413 - Medical Bacteriology Laboratory Credits: 2
- BMS 431 - Medical Virology Credits: 3
- CHM 462 - Techniques in Biochemistry Credits: 3

## Biomedical Sciences - Nutrition Science Emphasis

Graduates from this emphasis will be prepared to pursue graduate training in many disciplines within the biomedical sciences, especially nutrition or physiology. Students who wish to become a registered dietician can do so by completing an accredited didactic program in dietetics at the graduate level, and an approved dietetic internship program. The

nutrition emphasis also offers outstanding preparation for premedical or prephysician assistant students who are interested in understanding the mechanisms by which diet influences health and disease. In addition, this emphasis will prepare graduates for career opportunities as a laboratory technician. Because it is impossible to design one curriculum to fulfill the requirements of every graduate school or career choice, it is the student's responsibility, in consultation with an advisor, to see that requirements are met for the graduate schools or careers in which the student is interested.

### 1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

### 2. Required Biomedical Sciences Courses

- BMS 105 - Basic Nutrition Credits: 3
- BMS 208 - Human Anatomy Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3
- BMS 495 - Concepts in Wellness (Capstone) Credits: 3

Any four of the following five nutrition courses: (12 credits)

- BMS 305 - Clinical Nutrition Credits: 3
- BMS 306 - Advanced Human Nutrition Credits: 3
- BMS 404 - Community Nutrition Credits: 3
- BMS 407 - Nutrition in the Life Cycle Credits: 3
- BMS 415 - Nutrition and Physical Performance Credits: 3

### 3. Additional Required Courses

- BIO 120 - General Biology I Credits: 4\*
- BIO 355 - Human Genetics Credits: 3
- **OR** BIO 375 - Genetics Credits: 3
- **AND** BIO 376 - Genetics Laboratory Credits: 1
- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 232 - Biological Chemistry Credits: 4
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 5
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4
- CHM 461 - Biochemistry I Credits: 4
- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

\* B.S. degree requirement course sequence STA 215; BIO 120; BMS 290-291.

## Master of Health Sciences in Biomedical Sciences

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/grad/biomed](http://www.gvsu.edu/grad/biomed)

The graduate program offers a Master of Health Sciences in biomedical sciences degree through which students can pursue multiple career opportunities. The program, built on a graduate core requirement, is designed in cooperation with the student's graduate committee to meet individual career goals in research, doctoral study, as well as health and allied health programs.

The program is designed to accommodate either part-time or full-time students.

### Admission to Master of Health Sciences in Biomedical Sciences Program

- GPA of 3.0 on a 4.0 scale from all undergraduate courses

## Behavioral Neuroscience

- Satisfactory score from the GRE (General Test), MCAT, or DAT
- Names and contact information for three references
- Completion of undergraduate courses in anatomy, physiology, microbiology, and statistics
- Coursework in chemistry is highly recommended

### Requirements for the M.H.S. in Biomedical Sciences

#### 1. Biomedical Science Core Requirements

Students must complete a minimum of 33 semester hour credits, including the biomedical sciences graduate core (14 credits) and formal thesis (six credits).

Core Credits: 14

- BMS 501 - Graduate Seminar in Biomedical Sciences Credits: 1
- BMS 508 - Advanced Human Physiology Credits: 3
- BMS 560 - Regional Human Anatomy Credits: 4
- BMS 523 - Epidemiology Credits: 3
- BMS 601 - Experimental Design Credits: 3

Thesis Credits: 6

- BMS 695 - Master's Thesis Research Credits: 3 or 6

#### 2. Electives (at least 13 credits)

Courses to fulfill the elective credits are selected with guidance from the graduate program director. Graduate courses both within and outside of biomedical sciences can be selected if deemed appropriate and aligned with the student's career goals. Some of the more common electives include:

- BMS 510 - Immunology Credits: 3
- BMS 512 - Medical Bacteriology Credits: 3
- BMS 540 - Molecular Ecology of Infectious Disease Credits: 3
- BMS 550 - Human Histology Credits: 4
- BMS 655 - Advanced Human Anatomy Credits: 3
- STA 610 - Applied Statistics for Health Professions Credits: 3

#### 3. Comprehensive Written Examination

Successful completion of a comprehensive written examination after all didactic coursework has been taken. Students who fail any part of the examination may take another examination within 18 months of the original effort.

## History of Science Minor

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

In today's technological society no person can be considered to be truly educated unless he or she has an understanding of the role of science in the world. The history of science program offers students the opportunity to go beyond the accumulation of scientific facts and to gain an understanding of the historical roots of science and technology as well as the interaction between scientific history and social, literary, economic, and political history. Thus, scientists can understand the history of their discipline as a part of the progress of human civilization. Nonscientists, on the other hand, can see that science is not a frightening series of facts and formulas that appeared from the chaos, fully developed in the brain of an Einstein or a Newton.

In this regard, the history of science is no different from any other branch of intellectual history. However, because new scientific theories by their very nature render earlier theories obsolete and worthless (at least to practicing scientists), interest in scientific history has been a relatively recent phenomenon.

### Requirements for a Minor in History of Science

A student choosing history of science as a minor program must complete 20 hours of study in the history of science, normally including HSC 201, 202, 399, and related courses from other units. Courses not regularly offered may be available through independent study. Such a minor is not recognized as a "teachable minor."

## Bachelor of Arts or Bachelor of Science in Behavioral Neuroscience

Behavioral neuroscience is an interdisciplinary area of study where the area of interest is the relationship between physiological and psychological systems. This major is administered by the department of psychology, and offers students who are interested in issues in the emerging field of neuroscience and behavior. Study focuses on the neural mechanisms of behavior and cognition, evolutionary development of the nervous system, and mechanisms of nervous system and their application to the treatment of disorders.

The behavioral neuroscience major prepares students for graduate study in neuroscience, neuropsychology, or related fields, and for careers requiring a solid foundation in science. Many students with a behavioral neuroscience degree may also pursue professional degrees in health-related fields such as clinical psychology.

\*\*Students wishing to pursue graduate or professional studies are strongly advised to speak with their major advisor regarding additional courses in which to enroll.

\*\* Premed students are also strongly advised to speak with their major advisor regarding additional courses in which to enroll.

### Requirements for a Major in Behavioral Neuroscience

Students majoring in behavioral neuroscience are required to take 50 to 58 credit hours.

#### Required Courses

- BIO 120 - General Biology I Credits: 4
- BIO 352 - Animal Behavior Credits: 3
- BIO 355 - Human Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- BMS 250 - Anatomy and Physiology I Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- PSY 330 - Foundations of Behavioral Neuroscience Credits: 3
- PSY 400 - Advanced Research in Psychology Credits: 3
- PSY 435 - Advanced Neuroscience and Behavior Credits: 3
- PSY 492 - Advanced General: The Capstone Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### Chemistry

Choose one of the following:

- CHM 109 - Introductory Chemistry Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 4
- **AND** CHM 116 - Principles of Chemistry II Credits: 5
- \* Premed students are advised to take CHM 115 and CHM 116 instead of CHM 109 toward the fulfillment of the chemistry requirement.

#### Psychology

Choose one of the following:

- PSY 370 - Cognitive Neuroscience Credits: 3
- PSY 375 - Comparative Psychology Credits: 3
- PSY 431 - Introduction to Neuropsychology Credits: 3
- PSY 432 - Psychopharmacology Credits: 3

#### Additional Course Requirements

Two additional courses must be taken from the following. Each course must be taken from a different department.

- BIO 121 - General Biology II Credits: 4
- BIO 302 - Comparative Vertebrate Anatomy Credits: 4
- BIO 329 - Evolution of Social Behavior Credits: 3
- BIO 432 - Comparative Animal Physiology Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- CHM 231 - Introductory Organic Chemistry Credits: 4
- PHY 200 - Physics for the Life Sciences Credits: 4

- PHY 220 - General Physics I Credits: 5 \*\*
- PSY 301 - Child Development Credits: 3
- PSY 303 - Psychopathology Credits: 3
- PSY 357 - Psychology of Language Credits: 3
- PSY 361 - Perception Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3
- PSY 365 - Cognition Credits: 3
- PSY 420 - Theories of Personality Credits: 3

\*\* Premed students are advised to take PHY 220 instead of PHY 200

### B.A. or B.S. degree

Students may earn either a B.A. or B.S. degree.

#### B.A. Degree Requirements

- Third semester proficiency in a foreign language

#### B.S. Degree Requirements

- STA 215 - Introductory Applied Statistics Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- PSY 435 - Advanced Neuroscience and Behavior Credits: 3

### Suggested Pattern of Coursework

This pattern of coursework is suggested for those who wish to pursue a B.S. degree.

#### Fall Semester - Year One

- PSY 101: Introductory Psychology
- BIO 120: General Biology I
- MTH 110
- Gen ed course

#### Winter Semester - Year One

- STA 215: Introductory Applied Statistics (BS Degree Requirement)
- WRT 150: Strategies in Writing
- CHM 109: Introductory Chemistry or CHM 115: Principles of Chemistry I
- Gen ed course

#### Fall Semester - Year Two

- PSY 300: Research Methods in Psychology
- PSY 330: Foundations of Behavioral Neuroscience
- BMS 250: Anatomy and Physiology I
- CHM 116: Principles of Chemistry II (only if CHM 115 was completed)
- Gen ed course

#### Winter Semester - Year Two

- BIO 352: Animal Behavior
- BIO 355: Human Genetics (students should take this course only if they do not plan on taking BIO 375)
- Issues Course
- Gen ed course

#### Fall Semester - Year Three

- PSY 435: Advanced Neuroscience and Behavior
- BIO 375: Genetics (Students who have taken BIO 355 should not take this course)
- BIO 376: Genetics Laboratory
- Additional Major Course
- Gen ed course

#### Winter Semester - Year Three

- PSY 370 **OR** PSY 375 **OR** PSY 431 **OR** PSY 432
- Additional major course
- Issues course
- Elective

#### Fall Semester - Year Four

- PSY 400: Advanced Research Methods in Psychology
- Issues course
- Elective
- Elective
- Elective

#### Winter Semester - Year Four

- PSY 492: Advanced General (Capstone)
- Elective
- Elective
- Elective

## Biostatistics - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/biostat](http://www.gvsu.edu/biostat)

Statistics is a discipline that develops and utilizes tools for making decisions in the presence of uncertainty. Statistics is utilized in many fields; however, when data is collected in the life sciences and medicine, we use the term biostatistics to distinguish this particular application of statistical concepts and methods. A biostatistician has academic training and/or work experience in defining research problems, formulating rational methods of inquiry, and gathering, analyzing, and interpreting data in the life sciences and medicine.

Research activities for a biostatistician cover the full range of studies that take place within the life sciences and medicine. These include clinical trials, as well as data from other preclinical, genetic and epidemiology studies. Also included are population-based health surveys of various types and evaluations of health promotion programs. Opportunities are also available for biometrical research related to problems in agriculture wildlife, and natural resources (e.g., data analyses for ongoing wildlife and water quality studies).

The objective of our M.S. program in biostatistics is to prepare professional biostatisticians who are capable of taking leadership in the application of statistical methods to the design and analysis of health research and biomedical studies and to the planning and evaluation of health services programs. Career opportunities are found in government, private industry, medical research institutions, and universities. Demand for biostatisticians is high, and graduates have their choice of a variety of attractive job offers.

Students can enter our M.S. program from a variety of academic and professional backgrounds. Some applicants pursue a degree in biostatistics directly after completing undergraduate studies. Other applicants pursue the study in biostatistics after years of experience as a medical or health professional. To the extent possible, the curriculum of each student will be tailored to his or her background and interests.

Upon completion of the M.S. in biostatistics, the student will be prepared to function as a statistical consultant in the application of statistics to the health or medical research. This will necessitate that he or she receives training in both statistical methodology and the life sciences. As a result, our biostatistics program incorporates coursework in biology, computer science and information systems, and the health professions and sciences. In addition to building upon the strengths of the Grand Valley faculty and our existing curricula, our program also integrates the regional health providers and scientific community through the required internship experience. Finally, our graduates will be trained in the preparation of reports, presentations and publications resulting from health science studies.

## Master of Science in Biostatistics

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

The M.S. in biostatistics is one of three new synergistic professional science master (PSM) degree programs at Grand Valley State University. The three programs (medical and bioinformatics, biotechnology, and biostatistics) are interdisciplinary and involve both the university and its industry partners. All three programs emphasize teamwork, problem-solving, communication, and scientific knowledge and technical

## Business Administration

skills. Each program is designed to integrate university coursework with business/industrial internships to better prepare students for the variety of career pathways associated with the life science and health science industries. The overall objectives and interactions of these three new programs are described in the PSM section of the Grand Valley State University Undergraduate and Graduate Catalog.

The requirements for the M.S. in biostatistics consists of 36 credits with a minimum cumulative GPA of 3.0. Consistent with Grand Valley State University policy all courses must be completed within eight consecutive years from entry into the first graduate course.

### Admission to Master of Science in Biostatistics Program

- Grade point average of 3.0 on a 4.0 scale from all undergraduate coursework or a satisfactory score on the GRE
- Resume detailing work experiences and accomplishments
- Personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives
- Letters of recommendations from at least two individuals who are in positions to attest to the applicant's successful completion of the program

### Requirements for the M.S. in Biostatistics

Students must complete the following requirements:

#### 1. PSM Core Courses (credits: 11)

- CMB 610 - Foundations of Biotechnology Credits: 3
- CIS 661 - Introduction to Medical and Bioinformatics Credits: 3
- PSM 650 - Ethics and Professionalism in Applied Science Credits: 3
- STA 610 - Applied Statistics for Health Professions Credits: 3
- OR STA 622 - Statistical Methods for Biologists Credits: 3

#### 2. Directed Courses for the Biostatistics Program (credits: 19)

Electives (at least 4 credits) are selected, with advisor approval, from graduate courses that are appropriate to each student's interests and goals. Students are strongly encouraged to meet with their advisor during their first semester to develop specific plans for their elective coursework.

- STA 616 - Statistical Programming Credits: 3
- STA 621 - Design of Experiments and Regression Credits: 4
- STA 623 - Categorical Data Analysis Credits: 3
- STA 625 - Clinical Trials Credits: 2
- STA 630 - Perspectives in Advanced Biostatistics Credits: 3

#### 3. PSM Seminar Course (credits: 2)

- PSM 662 - Seminar in Professional Science Practice Credits: 2

#### 4. Internship Experience (credits: at least 4)

- PSM 691 - Internship Credits: 1 to 9

## Business Administration - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

**Website:** [www.gvsu.edu/seidman](http://www.gvsu.edu/seidman)

### Undergraduate Business Program

The undergraduate program provides students with business education that blends liberal arts and professional courses with practical application. The programs are designed to prepare students for careers in various business areas as well as for admission into graduate and professional schools.

### Admission

Refer to Seidman College of Business in the Colleges section of this catalog.

### Academic Review

In order to graduate, admitted upper-division business students must achieve a 2.5 minimum cumulative GPA and a 2.5 minimum cumulative GPA in all Seidman business and economics courses. If the cumulative GPA falls below 2.5, students will be considered on probation with

Seidman College. Students will not be permitted to take additional 300- and 400-level business and economics courses. However, such students may repeat 300- and 400-level Seidman business and economics courses for which they received a low grade. Students are advised to contact the Seidman Undergraduate Programs Office for assistance. Once students reestablish themselves in good standing with Seidman College by improving their grade point average to a 2.50 or higher, they can be reassigned to their Seidman major.

Students may repeat up to three different business and economics courses in their undergraduate career, but no single business or economics course can be repeated more than once. Exceptions are made only with the approval of the Assistant Dean for Seidman Academic Student Services.

It is the policy of the Seidman College of Business that no credit shall be earned for any course if, at any time, it is found that the student has not met the prerequisites as determined by the head of the unit offering the course.

### Academic Advising

All routine advising for program requirements and scheduling for undergraduate students is provided by the Seidman Undergraduate Programs Office, 1041 SCB, L. William Seidman Center. Appointments are available at either the Seidman Center or in Allendale by calling 331-7500. It is the student's responsibility to contact the office for program planning. First year and sophomore business students are encouraged to contact any faculty member or the Seidman Undergraduate Programs Office concerning business career opportunities and advice. A faculty advisor will be assigned when a student is admitted to the upper-division program.

### Internship Opportunities

Undergraduate business students are encouraged to become involved in, and receive academic credit for, a work experience directly related to their major. Junior and senior students who wish to apply must have completed at least nine hours of the core program requirements and should have an overall GPA of 2.5 or higher to be eligible. Internship application forms are available at the Seidman Undergraduate Programs Office. Students selected will intern for a varied number of hours each week depending on the number of credits of the internship. Coordination of each internship is provided by the Seidman Internship Coordinator. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements.

### Transfer Students

Transfer students may receive transfer credit for basic courses in accounting, business law, computing, economics, management, marketing, mathematics, and statistics completed at their junior or community college. Credit may be given for Intermediate Accounting I if the student is able to pass a validation exam.

In all cases, transfer students may apply a maximum of 24 hours of transfer credit for business courses toward their Seidman College of Business degree and must complete a minimum of five of the twelve business core courses and four of the six business major courses required for the degree at the Seidman College of Business. It is extremely important that transfer students meet with an advisor in the Seidman Undergraduate Programs Office before registering for classes.

### Graduate Business Program

The graduate business programs are open to qualified individuals with bachelor's degrees from accredited colleges and universities.

### Participating Programs

#### B.B.A./J.D.

The Seidman College of Business and Michigan State University College of Law (MSU Law) have partnered to offer a "3+3" program (Legal Education Admission Program - LEAP) that gives Grand Valley business students the opportunity to earn a B.B.A. and a Juris Doctor (J.D.) in approximately six years.

Interested students complete a minimum of 96 credits comprised of the required undergraduate courses in their first three years of study at Grand Valley. This includes all university-level requirements as well as the requirements for the specific business major. Upon admission to the law school, Seidman students complete their undergraduate electives with law school courses. Up to 24 credits of MSU Law work in which the student earned a 2.0 or above will be accepted. MSU Law courses may be applied to the four upper-division elective courses (12 credits) required for the B.B.A. The B.B.A. will be awarded upon satisfactory completion of the number of credits and requirements necessary for the undergraduate program.

Students may apply any time during their junior year for admission to LEAP. GVSU students interested in LEAP must have a minimum grade-point average of 3.60, and a score of 156 or higher on the Law School Admission Test (LSAT) is highly recommended. A Joint Committee comprised of faculty from both institutions will admit students to the LEAP program on the basis of undergraduate record, ACT scores, and other information deemed relevant. Additionally, applicants to the program must obtain letters of recommendation from the GVSU LEAP advisor and a second recommendation from another GVSU faculty member, with both recommenders commenting on the applicant's preparedness for this accelerated program.

### Honors Organizations

#### Beta Alpha Psi - Kappa Beta Chapter

Beta Alpha Psi is a national scholastic and professional honors society. The primary objective of the society is to encourage and give recognition to scholastic and professional excellence in the field of accounting, finance and information systems. Grand Valley State University's chapter of Beta Alpha Psi is dedicated to enhancing career opportunities and providing a social environment for persons of similar life goals. The chapter has regular meetings, sponsors speakers, participates in outreach programs such as the VITA (Volunteer Income Tax Assistance) program, and holds numerous social events. Members have the opportunity to attend regional and national meetings held in different cities each year. Membership allows students to learn first-hand about elements of a successful accounting career and ensures multiple network opportunities with practicing professional accountants.

Membership is open to any part- or full-time student majoring in accounting and finance at Grand Valley State University with an upper level cumulative GPA in declared area of concentration of at least a 3.0 (based on a 4.0 scale) and a cumulative overall GPA of at least 3.0 (or an overall GPA of 3.25 for the last 35 credits).

#### Beta Gamma Sigma

The Grand Valley State University chapter of Beta Gamma Sigma, a national honor society in business administration, promotes high scholarship in business education by recognizing and rewarding scholastic attainment in business subjects.

Membership in Beta Gamma Sigma is awarded once each year to undergraduate and graduate students who are in the top 7 percent of the junior class, the top 10 percent of the senior class, and the top 20 percent of graduating master's students. Induction occurs annually near the end of the winter semester.

#### Omicron Delta Epsilon

Grand Valley State University is home to Omicron Delta Epsilon's Rho Chapter of Michigan. Omicron Delta Epsilon is the international honor society for economics and is one of the world's largest academic honor societies. The objectives of Omicron Delta Epsilon include recognition of scholastic attainment, the honoring of outstanding achievement in economics and the establishment of closer ties between students and faculty in economics within colleges and universities, and among colleges and universities.

Membership is open primarily to economics majors (although non-majors who have a significant interest in economics will also be considered) who

have completed at least 12 credit hours of economics courses, have at least an overall B average at Grand Valley State University and a minimum 3.0 GPA in their economics courses, and be ranked in the top third of their class. Induction occurs annually near the end of the winter semester.

## Bachelor of Business Administration

### Requirements for the Major in Business Administration

To complete the requirements for graduation with a B.B.A. degree, the following course requirements for a total of 120 undergraduate hours must be met: general education; business core; business major, major requirements listed with information on individual majors; cognates; and electives.

### Requirements for the B.B.A.

#### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

#### BOTH

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**
- ECO 211 - Introductory Microeconomics Credits: 3
- OR** ECO 200 - Business Economics Credits: 3
- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

### Suggested Order of Coursework for Seidman Majors

#### First Year:

- Begin general education foundations and cultures requirements
- Begin and complete 100 level Seidman major requirements

#### Second Year:

- Complete general education foundations and cultures requirements
- Include at least one course designated as supplemental writing skills
- Begin and complete 200 level Seidman cognate and core requirements

## Business Economics

### Third Year:

- Begin 300 level cognate and core requirements
- Begin Seidman major and elective courses (please see a Seidman faculty mentor for guidance on elective courses)
- Begin Issues

### Fourth Year:

- Complete Seidman major and elective courses
- Seidman Capstone
- Complete Issues
- Complete second Supplemental Writing Skills course no later than senior year

## Business Economics - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

## Bachelor of Business Administration in Business Economics

### Requirements for a Major in Business Economics

Because economics is a department in the Seidman College of Business, students pursuing a B.B.A. in economics must achieve a 2.5 or higher cumulative GPA, have completed 55 semester hours, and achieved a 2.5 or higher combined GPA in ACC 212, BUS 201, ECO 210, ECO 211, MGT 268, and STA 215 to be admitted to the business economics program. In order to graduate, upper-division economics majors must achieve a 2.5 minimum cumulative GPA and a 2.5 minimum GPA in all economics courses. A student whose cumulative GPA falls below 2.5 will not be permitted to take additional 300- and 400-level economics or business courses. However, such students may repeat 300- and 400-level Seidman economics and business courses for which they received a low grade. Students may repeat up to three different economics and business courses in their undergraduate career, but no single economics or business course can be repeated more than once. Exceptions are made only with the approval of the associate dean of the Seidman College of Business. Business economics majors are eligible to participate in the business internship program.

Students who plan to enter a graduate program in economics or a related field are highly encouraged to take the following courses: MTH 201, MTH 202, MTH 203, and MTH 227. These students should also consider a mathematics or statistics minor and consult with their advisors at an early date to explore alternatives and plan their coursework.

### Requirements for the B.B.A.

#### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

#### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**  
ECO 211 - Introductory Microeconomics Credits: 3

#### **OR** ECO 200 - Business Economics Credits: 3

- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

### General Business Economics

Students who take this emphasis will focus on applications in business and public policy issues. This 18-credit-hour emphasis supports careers in fields such as banking, business analyst, insurance services, and marketing research. Then economics general business emphasis is also a solid foundation for graduate programs.

### Required Courses

The upper-division economics course selected as part of the core requirements cannot count as an economics major course.

- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- ECO 495 - Senior Economic Project (Capstone) Credits: 3
- ECO elective at the 300 or 400 level Credits: 3
- ECO elective at the 300 or 400 level Credits: 3
- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

### Real Estate Business Economics

This emphasis supports careers such as real estate agent, commercial and residential appraiser, mortgage broker, commercial lender, urban planner, title examiner, location specialist, REIT manager, and regional developer. Students who obtain the economics B.B.A. with the real estate emphasis must take the following courses:

### Required Courses

The upper-division economics course selected as part of the core requirements cannot count as an economics major course.

- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- ECO 336 - Urban and Real Estate Economics Credits: 3
- ECO 495 - Senior Economic Project (Capstone) Credits: 3
- FIN 350 - Real Estate Principles Credits: 3

And one of the following:

- ECO 300 - Applied Economic Analysis Credits: 3
- ECO 385 - GIS in Urban and Regional Analysis Credits: 3 /  
GPY 385 - GIS in Urban and Regional Analysis Credits: 3

- ECO 414 - Money and Banking Credits: 3
  - ECO 490 - Economics Internship Credits: 1 to 6  
(Internship credits must be in work related to real estate)
- Quantitative group - choose one:
- MTH 122 - College Algebra Credits: 3
  - MTH 125 - Survey of Calculus Credits: 3
  - MTH 201 - Calculus I Credits: 4
  - PHI 103 - Logic Credits: 3
  - MGT 361 - Management Science Credits: 3

### Requirements for an Honors Emphasis in Business Economics

The undergraduate honors emphasis in economics is for students pursuing a B.B.A. degree in business economics. Students must achieve a minimum 3.2 GPA in their economics courses and a 3.2 GPA in their overall degree to receive the honors emphasis designation. Courses cannot be taken on a credit/no credit basis. Students are required to complete the following classes, with an honors section of either ECO 210, ECO 211, or both (honors-designated sections require good standing with the Meijer Honors College or a 3.5 GPA overall):

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- ECO 300 - Applied Economic Analysis Credits: 3
- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- ECO 401 - Honors Seminar in Microeconomics Credits: 1
- ECO 402 - Honors Seminar in Macroeconomics Credits: 1
- ECO 403 - Honors Capstone Seminar Credits: 1
- ECO 495 - Senior Economic Project (Capstone) Credits: 3
- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

### Certificate in Real Estate

The certificate in real estate is designed for Bachelor of Business Administration (B.B.A.) and business minor students seeking knowledge and skills related to career opportunities in the real estate industry. Students must be degree seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. Students in this program may find careers such as real estate development, appraisal, sales agency, property management, loan origination, credit analysis, investment analysis, financial consultancy, portfolio management, city government, title examination, and location analysis. The certificate can also strengthen studies in business, finance, economics, resource management, urban planning, public policy, insurance, and construction management.

#### Required Courses

Students who seek a certificate in real estate must earn a Bachelor of Business Administration (B.B.A.) degree or a business minor designation and are required to complete the following courses:

- ECO 300 - Applied Economic Analysis Credits: 3
- **OR** ECO 495 - Senior Economic Project (Capstone) Credits: 3
- FIN 350 - Real Estate Principles Credits: 3
- ECO 336 - Urban and Real Estate Economics Credits: 3

And two of the courses listed as follows:

- GPY 385/ECO 385 - GIS in Urban and Regional Analysis Credits: 3
- ECO 414 - Money and Banking Credits: 3
- ECO 490 - Economics Internship Credits: 1 to 6 \*

- FIN 321 - Investments Credits: 3
- FIN 331 - Risk and Insurance Credits: 3
- FIN 424 - Financial Modeling Credits: 3
- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GPY 209 - Introduction to Urban and Regional Planning Credits: 3
- GPY 310 - Land Use Planning Credits: 3
- GPY 312 - Urban and Regional Environmental Planning Credits: 3
- GPY 314 - Land Use and Planning Law Credits: 3
- MKT 365/GPY 365 - GIS for Economic and Business Decision-Making Credits: 3
- HTM 333 - Hospitality Facilities Management Credits: 3
- MKT 353 - Marketing Negotiations Credits: 3
- MKT 356 - Professional Selling Credits: 3
- MKT 360 - Marketing on the Internet Credits: 3
- MKT 456 - Sales Management Credits: 3

\* Internship must be in work related to real estate.

### Business (General) - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

The 18-credit-hour major in general business provides a broad curriculum in business for the student who desires to be a generalist. The major allows students to take courses in several business disciplines instead of concentrating on a specific emphasis. The major is designed for students who wish to work in a family-owned business or any small business that would need an employee with a broad background. In addition, the general business major may serve the interests of a student who wishes to be an entrepreneur.

### Bachelor of Business Administration in General Business

The 18-credit-hour major in general business provides a broad curriculum in business for the student who desires to be a generalist. The major allows students to take courses in several business disciplines instead of concentrating on a specific emphasis. The major is designed for students who wish to work in a family-owned business or any small business that would need an employee with a broad background. In addition, the general business major may serve the interests of a student who wishes to be an entrepreneur.

#### Requirements for the B.B.A.

##### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

##### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**
- ECO 211 - Introductory Microeconomics Credits: 3

##### **OR** ECO 200 - Business Economics Credits: 3

- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

## Business (General)

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

### Requirements for a Major in General Business

In addition to the business core, the requirements are as follows:

- MGT 330 - Entrepreneurship and Small Business Management Credits: 3
- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

One of the following:

- ACC 317 - Individual Income Taxation Credits: 3
- ACC 318 - Entity Taxation Credits: 3

One of the following:

- FIN 321 - Investments Credits: 3
- FIN 322 - Intermediate Managerial Finance Credits: 3
- FIN 331 - Risk and Insurance Credits: 3

One of the following:

- MKT 351 - Consumer Behavior Credits: 3
- MKT 352 - Marketing Research Credits: 3
- MKT 451 - Marketing Strategy Credits: 3

One of the following:

- ACC 330 - International Accounting Credits: 3
- ECO 349 - Emerging Markets Issues Credits: 3
- ECO 365 - Comparative Economic Systems Credits: 3
- ECO 369 - International Economic Issues Credits: 3
- ENT 350 - Entrepreneurial Business Plan Credits: 3
- FIN 429 - International Financial Management Credits: 3
- MGT 303 - International Business and Culture Credits: 3
- MGT 437 - Family Business Credits: 3
- MGT 466 - International Management and Multinational Corporations Credits: 3
- MKT 359 - Multinational Marketing Credits: 3

And one three-credit internship in any business discipline.

Students with business experience may meet with an advisor to discuss substituting an alternative course for their internship experience.

The upper division economics course selected as part of the business requirements cannot double count in a general business major.

## Master of Business Administration

### Master of Business Administration (Traditional M.B.A.)

The traditional M.B.A. serves primarily working professionals. Most students attend classes part-time while working full-time. This facilitates a synergistic connection between the classroom and the workplace. Traditional M.B.A. students bring diversity of academic and professional backgrounds, making the classroom a dynamic environment for the exchange of perspectives and ideas.

### Admission to the Traditional Master of Business Administration Program

Candidates are admitted to the traditional M.B.A. program based on criteria that have been shown to predict success. Applicants must submit official documentation of all previous college coursework, including a baccalaureate degree (or equivalent international credential). Any major is acceptable. Additionally, applicants must submit:

- GMAT score
- Personal statement
- TOEFL score (if English is not the applicant's first language)

Admission requirements are provided in detail in the Seidman College of Business section of this catalog.

### Transfer Credit

A maximum of nine semester hours of transfer credit will be given for appropriate graduate courses completed with a grade of B or better from another AACSB-accredited college or university. These credits may be substituted for required courses, area of emphasis courses, or general elective credit as determined by Seidman Academic Services. University policy on transfer of credit also governs such courses.

### Academic Review

A cumulative GPA of 3.0 is required in all graduate level courses that fulfill graduation requirements for the M.B.A. A grade of C or better must be earned in all graduate courses that fulfill graduation requirements for the M.B.A.

### Program Location

The M.B.A. program is offered on the Pew Grand Rapids Campus in L. William Seidman Center in downtown Grand Rapids, Michigan.

**Website:** [gvsu.edu/seidmangrad](http://gvsu.edu/seidmangrad)

### Graduate Outcomes/Time to Program Completion

The Seidman faculty has identified the following learning goals for M.B.A. students. Objectives related to each goal are assessed regularly to ensure that they are being achieved.

- Effective business communications
- Business acumen and strategic decision making
- Global and intercultural competence
- Value driven leadership

Students complete the program at various rates. Completion can take as little as 15 months with full-time enrollment. Part-time students typically take 2 to 4 years to complete the program.

The Seidman faculty has adopted APA as the standard citation style for M.B.A. coursework. Unless a faculty member indicates otherwise, students are expected to use this citation method where appropriate in their written coursework.

### Requirements for the Traditional M.B.A.

The M.B.A. program consists of 33 semester hours of nonfoundation level graduate coursework. Foundation work courses may be required by students based on undergraduate major and performance.

### Foundation Courses (up to 11 credits)

Foundation requirements may be met by completion of either the 500-level accelerated courses or the undergraduate courses indicated as follows:

Background Area		GVSU Undergraduate Course(s)
Accounting	ACC 511 - Financial and Managerial Accounting Concepts Credits: 3	ACC 212 and 213 (6 credits)
Quantitative Methods	FIN 520 - Statistics and Mathematics of Finance Credits: 3	STA 215 and FIN 320 (6 credits)
Legal Environment	BUS 531 - Legal Environment of Business Credits: 2	BUS 201 (3 credits)
Economics	ECO 542 - Economic Reasoning Credits: 3	ECO 210 and 211 (6 credits)

The relationship between foundation requirements and the M.B.A. curriculum requires that all foundation studies be complete by the time the student enrolls for 600-level course(s). An exception is made for those students who are completing their background studies during the same semester in which they enroll for their first 600-level course(s), in which case the specific prerequisite(s) for the 600-level courses, as documented in this catalog with the course description, must be complete.

Students who have completed GVSU undergraduate courses listed previously with a grade of B or better or the equivalent at another college or university are not required to complete additional foundation coursework. A background assessment showing the status of the student's foundation requirements is provided to each student at the time of admission.

#### Core Courses (28.5 credits)

The following core courses are required of all traditional M.B.A. students except noted as follows:

- ACC 611 - Contemporary Managerial Accounting Credits: 3
- BUS 610 - Management Information Systems and Org Processes Credits: 3
- BUS 631 - Leadership and Organizational Dynamics Credits: 3
- BUS 671 - Global Competitiveness Credits: 3
- BUS 677 - Business Ethical Problems and Perspectives Credits: 1.5
- BUS 681 - Strategy Credits: 3
- FIN 621 - Financial Policy for Managers Credits: 3
- ECO 641 - Business Economics and Strategy Credits: 3
- MGT 660 - Operations and Supply Chain Management Credits: 3
- MKT 651 - Marketing Management Credits: 3

Students who have majored in accounting, economics, finance, marketing, or operations management will not take the corresponding core course but are required to substitute a graduate business elective.

Students with 12 or more credits, but not a major, in any of the following areas will be required to substitute an elective in the same area: Some examples are information systems, international business, economics, finance, marketing or operations.

Students who have completed an undergraduate or previous graduate cost accounting course will be required to substitute a graduate business elective for ACC 611. However, students with 12 previous accounting credits which do not include cost accounting will be required to complete ACC 611.

The balance of the program, typically 4.5 to 10.5 credits of business electives, will depend on the student's objectives and career interests.

#### Capstone Course

- BUS 681 - Strategy Credits: 3 (Capstone course and may not be taken until other core courses are complete, or concurrently with other required courses if it is the student's final semester.)

#### M.B.A. Emphasis Areas

Students earning the Seidman M.B.A. may choose electives in one area if

they choose to complement the breadth of the degree with some depth in a functional area. Adding on emphasis will lengthen the M.B.A. program.

The Seidman M.B.A. offers students an official emphasis in **technology and innovation management**. The emphasis requires four three-credit electives. The emphasis in technology and innovation management is designed to provide participants with the requisite management, business, technical, and strategic skills needed to better manage the technological resources of an organization. The interdisciplinary combination of courses that comprise the elective portion of the M.B.A. are BUS 656 - Management of Technology; MGT 665 - Enterprise Information Systems; MGT 669 - Process Analysis and ERP Systems; and one additional technology-related course offered at Grand Valley with the Seidman Academic Services approval.

An emphasis in **health sector management** is also available and consists of three specific courses that complete the elective portion of the M.B.A. program, as well as the substitution of PA 634 - Health Care Law and Ethics, for core course BUS 677. Electives for the emphasis are PA 630 - Health Administration/Services; PA 631 - Health Policy and Politics; and PA 633 - Health Economics.

Students interested in a depth of study in **finance** may earn an emphasis in that discipline by completing FIN 624 - Investments, and at least nine credits from the following: FIN 626 - Advanced Managerial Finance; FIN 629 - International Finance; FIN 680 - Special Topics in Finance; ACC 613 - Financial Statement Analysis; FIN 627 - Derivative Assets; and FIN 699 - Independent Study.

It should be noted that the elective courses, including those required for the previously listed emphases, are not available with the same regularity as core courses. Consequently, it may not be possible to complete a specific series of electives required for an emphasis in fewer than four academic semesters.

#### Master of Business Administration (Executive M.B.A.)

The executive M.B.A. serves experienced professionals. The program is cohort-based, and classes meet primarily on select Fridays and Saturdays over a 22-month period. The curriculum is highly strategic and systems oriented. It culminates in a real-world project.

#### Admission to the Executive Master of Business Administration Program

A bachelor's degree and at least five years of significant professional experience are required for consideration, and final selection is based on prior academic performance, potential for leadership, and employer recommendation. Applicants must submit official documentation of all previous college coursework, and personal statements, recommendations, and resumes. Any major is acceptable.

#### Transfer Credit

No transfer credit is accepted for the EMBA program.

#### Academic Review

A cumulative GPA of at least 3.0 is required in all 600-level courses that fulfill graduation requirements for the executive M.B.A. A grade of C or better must be earned in all graduate courses that fulfill graduation requirements for the M.B.A.

#### Program Location

The executive M.B.A. program is offered in the L. William Seidman Center on the Pew Grand Rapids Campus, located downtown in Grand Rapids, Michigan.

**Website:** [www.gvsu.edu/seidmangrad](http://www.gvsu.edu/seidmangrad)

#### Graduate Outcomes/Time to Program Completion

The Seidman Center faculty has identified learning goals for M.B.A. students, which are listed previously in the traditional Master of Business Administration section of this catalog.

The program is four semesters and meets over 22 months.

## Business (General)

### Requirements for the Executive M.B.A.

The E.M.B.A. program consists of 38 semester hours in a lock-step format. Preparation for M.B.A. coursework in areas of accounting, finance, business law, and economics can be fulfilled through GVSU courses and/or established online courses. Individualized program plans inform each student which foundation area(s) need to be completed and provide direction for completion. Also required is a series of workshops that integrate the academic curriculum and provide executive, focused professional development.

### Core Courses (38 credits)

The following core courses are required of all EMBA students:

#### Semester 1

- EMBA 601 - Financial Accounting for Executives Credits: 1.5
- EMBA 635 - Organizational Change Management Credits: 1
- EMBA 641 - Business Economics for Executives Credits: 3
- EMBA 681 - Developing the Strategic Mindset Credits: 1

#### Semester 2

- EMBA 611 - Managerial Accounting for Executives Credits: 1.5
- EMBA 621 - Finance for Executives Credits: 3
- EMBA 651 - Marketing Management for Executives Credits: 3
- EMBA 667 - Service and Value Chain Management Credits: 3
- EMBA 675 - Law for Executives Credits: 3

#### Semester 3

- EMBA 610 - Strategic Information Systems for Executives Credits: 3
- EMBA 626 - Financial Policy for Executives Credits: 3
- EMBA 652 - Negotiations for Executives Credits: 2
- EMBA 679 - Public Policy and Corporate Governance Credits: 2
- EMBA 682 - Systems Thinking and Advanced Tactics Credits: 2

#### Semester 4

- EMBA 678 - Executive Leadership and Ethics Credits: 3
- EMBA 683 - Corporate Strategy for Executives Credits: 3

### Additional Professional Development

Approximately 130 hours of professional development over four semesters will be facilitated by the program's executive director. It is integral to the program's overall goals and is required of all students.

#### Semester 1

- Team building
- Innovation
- Content integration

#### Semester 2

- Content integration

#### Semester 3

- Action learning Capstone project\*
- Content Integration

#### Semester 4

- Action learning Capstone project\*
- Content integration

### \*Culminating Experience

The executive M.B.A. culminates with a real-world, integrative project that takes place during the final two semesters of the program. It is facilitated by the program's executive director and evaluated by the executive director and academic director.

## Combined Bachelor of Business Administration and Juris Doctor

The Seidman College of Business and Michigan State University College of Law (MSU Law) have partnered to offer a "3+3" program (Legal Education Admission Program – LEAP) that gives Grand Valley business students the opportunity to earn a B.B.A. and a Juris Doctor (J.D.) in approximately six years.

Interested students complete a minimum of 96 credits comprised of the required undergraduate courses in their first three years of study at Grand

Valley. This includes all university-level requirements as well as the requirements for the specific business major. Upon admission to the law school, Seidman students complete their undergraduate electives with law school courses. Up to 24 credits of MSU Law work in which the student earned a 2.0 or above will be accepted. MSU Law courses may be applied to the four upper-division elective courses (12 credits) required for the B.B.A. The B.B.A. will be awarded upon satisfactory completion of the number of credits and requirements necessary for the undergraduate program.

The Legal Education Admission Program (LEAP) is open only to students who matriculate as first-year students at Grand Valley. Students may apply any time prior to their senior year for consideration for the program. A Joint Committee comprised of faculty from both institutions will admit students to the LEAP program on the basis of undergraduate record, ACT scores, and other information deemed relevant. In order to be eligible for consideration for final admission to MSU Law, "3+3" students must have earned an aggregate Grand Valley GPA of 3.5 or above, scored 156 or above on the LSAT, and satisfied any other current MSU College of Law admission requirements.

## Combined Master of Business Administration and Juris Doctor

The Seidman College of Business and Michigan State University College of Law offer the dual M.B.A./J.D. The partnership enables students to transfer 12 credits of Seidman M.B.A. courses to the MSU COL J.D. program and 12 credits of J.D. credits to the M.B.A. program, thus reducing the total number of graduate credit hours required to complete both programs from 121 to approximately 100. Prerequisites for both programs must be met in addition to the graduate credits. Participating students must meet the admission standards of each school and must be admitted to both programs prior to registering for coursework that will be transferred to either program.

The transfer work from MSU COL will complete the elective portion of the M.B.A. program, and ethics course from MSU COL will substitute for BUS 677. Thus, students pursuing this degree will complete, in addition to the M.B.A. prerequisites, the nine required three-credit core courses. Specific coursework to be transferred to the M.B.A. from MSU COL must be planned with the M.B.A. program director. Students are referred to the associate dean for Academic Affairs of MSU COL for advising for the J.D. and the specific M.B.A. transfer courses.

## Business Minor

Eligible business majors who elect to complete one of the business minors may be required to extend their degree programs beyond the minimum 120-semester hour university degree requirement.

The undergraduate minor program in business is for non-business majors and includes 18 credit hours (six courses) taken from the Seidman offerings. This minor is designed to complement major fields of study in other departments or schools. It is not designed to satisfy the requirements for teacher certification.

### Requirements for a Minor in Business

Students must achieve a minimum 2.5 GPA in these courses to receive the business minor designation. Courses cannot be taken on a credit/no credit basis.

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MKT 350 - Marketing Management Credits: 3

## Cardiovascular Sonography - Program Description

**Website:** [www.gvsu.edu/dts/cvs](http://www.gvsu.edu/dts/cvs)

Sonographers specialized in echocardiography and vascular sonography utilize sound waves to produce diagnostic images and guide invasive and non-invasive procedures of the body. Sonographers work collaboratively with cardiologists, radiologists, and vascular surgeons to diagnose a diverse range of conditions related to heart and circulatory system.

A sonographer practicing in the field of echocardiography and vascular sonography must be well versed in sectional anatomy, clinical medicine, cardiovascular pathology, and ultrasound physics.

### Skills Required for Cardiovascular Sonography

- Comprehensive understanding of cardiovascular anatomy and physiology
- Effective communication and interpersonal skills with patients and other health care professionals
- Critical thinking
- Time management
- Ability to master new fine-motor physical skills
- Compassionate and effective interaction with the sick or injured

### What are the Career Opportunities?

Career opportunities for sonographers in adult echocardiography, pediatric echocardiography, and vascular sonography are vast, ranging from inpatient to outpatient settings, large hospitals to private doctors' offices, as well as the ability to travel. Sonographers will work in collaboration with other medical professionals such as doctors, nurses, stress technicians, and surgeons to provide diagnostic services. Career advancement opportunities exist in education, administration, research, and in commercial companies such as education/application specialists, sales representatives, and technical advisors.

### The GVSU Cardiovascular Sonography Program

Students receive didactic, laboratory, and clinical experiences in the university's laboratories and through a clinical education system. Clinical education sites are located as far as three hours from GVSU. Students must have transportation available to these sites. Students should be aware that prior to the beginning of their clinical courses, they must complete comprehensive health compliance obligations including but not limited to a criminal background check, finger printing, and drug screening. It is the responsibility of the student to comply. If there is illegal activity in the background check/finger printing, or if there is evidence of one or more prohibited substances in the drug test, the clinical sites have the right to refuse a student's placement, a factor which may negatively impact a student's ability to progress in the cardiovascular sonography (CVS) program. In addition, individuals who have been charged with or convicted of a crime may not be eligible for national certification by the American Registry for Diagnostic Medical Sonography (ARDMS). Students to whom this may apply are strongly advised to work with the ARDMS for pre-application review of eligibility for certification from their website at [www.ardms.org](http://www.ardms.org). The ARDMS contact information: Telephone (301) 738-8401 or (800) 541-9754; Fax (301) 738-0312.

Students who complete the cardiovascular sonography major from GVSU may become eligible for the ARDMS examinations, upon completion of specific clinical requirements that are promulgated by the credentialing organizations. Information on these requirements changes from time to time and is available on the credentialing organization websites. Granting of the baccalaureate degree is not contingent on taking ARDMS examinations.

### Program Accreditation

The cardiovascular sonography program is accredited under the Commission on Accreditation of Allied Health Education Program (CAAHEP) and programmatically through the Joint Review Committee

on Education in Cardiovascular Technology (JRC-CVT). For more information please visit <http://www.jrcvct.org>.

## Admission Criteria to the Cardiovascular Sonography Program

### Selection Factors

Admission to the cardiovascular sonography (CVS) program is a competitive selective process that requires a secondary application. Prospective students can access the application at [www.gvsu.edu/dts/](http://www.gvsu.edu/dts/). The CVS program is administered through the College of Health Professions: [www.gvsu.edu/chp/](http://www.gvsu.edu/chp/). Students who complete the prerequisite and general education courses by August of the year they start the program are eligible to apply **February 1** of the same year. This coursework is typically completed by the end of the sophomore year. Applicants are selected to enroll based on the following criteria:

40 percent: Academic grade point average from completed prerequisite courses

- AHS 100 - Medical Terminology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- MTH 122 - College Algebra Credits: 3
- PHY 220 - General Physics I Credits: 5
- PSY 101 - Introductory Psychology Credits: 3
- SOC 105 - Social Problems Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

One of the following research methods courses:

- AHS 301 - Introduction to Health Care Research Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3

10 percent: Academic grade point average from previous 2 calendar years or most recent 2 calendar years if the student has not been enrolled at a college or university in the past 2 calendar years.

30 percent: Interview and/or Writing Assessment completed on-site at the College of Health Professions.

5 percent: Completion of 16 hours of documented work or volunteer time in a health field.

5 percent: Two letters of recommendation on university forms.

10 percent: Additional considerations: Educational, leadership, scholarly, work experience and/or volunteer activities are valued and may impact selection decisions.

## Bachelor of Science in Cardiovascular Sonography

### Requirements for a Major in Cardiovascular Sonography

#### Prerequisite Courses (35 credits)

- AHS 100 - Medical Terminology Credits: 3
- BIO 120 - General Biology I Credits: 4
- BMS 250 - Anatomy and Physiology I Credits: 4 (BIO 120\* prerequisite)
- BMS 251 - Anatomy and Physiology II Credits: 4
- MTH 122 - College Algebra Credits: 3 (MTH 110 prerequisite)
- \*PHY 220 - General Physics I Credits: 5 (MTH 123 prerequisite)
- \*PSY 101 - Introductory Psychology Credits: 3
- \*SOC 105 - Social Problems Credits: 3
- \*STA 215 - Introductory Applied Statistics Credits: 3

And one of the following:

- AHS 301 - Introduction to Health Care Research Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3

\*Also fulfills general education requirements

## Cardiovascular Sonography

General Education Requirements - Foundations and Cultures  
(12 credits, with 6 Issues credits)

Remaining general education courses not covered in the major coursework or major prerequisites:

- General education (Art) Credits: 3
- General education (Philosophy) Credits: 3
- General education (History) Credits: 3
- General education (World Perspectives) Credits: 3
- Issues Credits: 6 (two courses which can be taken when student has 55+ credits)
- WRT 150 - Strategies in Writing Credits: 4

B.S. Program Requirements (10 credits)

- BMS 250 - Anatomy and Physiology I Credits: 4
  - STA 215 - Introductory Applied Statistics Credits: 3
- And one of the following:
- AHS 301 - Introduction to Health Care Research Credits: 3
  - BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3
  - PSY 300 - Research Methods in Psychology Credits: 3

Note: STA 215 is a prerequisite for these three research courses.

Cardiovascular Sonography Courses (68 credits includes Issues courses)

The cardiovascular sonography major prepares students for clinical practice in adult echocardiography, pediatric echocardiography and vascular sonography. Cardiovascular sonographers work collaboratively with cardiologist, radiologists, vascular surgeons, or other specialized physicians to diagnose a diverse range of conditions using invasive and noninvasive procedures using complex computerized high frequency sound wave and Doppler signal equipment. The sonographer must acquire excellent knowledge of sectional anatomy, clinical medicine, pathology, and the use of sonographic instrumentation.

### Major Coursework

- AHS 340 - Health Care Management Credits: 3
- RIE 330 - Echocardiography I Credits: 4
- RIE 331 - Echocardiography I Laboratory Credits: 2
- RIE 332 - Echocardiography II Credits: 3
- RIE 333 - Echocardiography II Laboratory Credits: 1
- RIE 340 - Cardiac and Vascular Hemodynamics Credits: 2
- RIE 341 - ECG in Radiologic and Imaging Sciences Credits: 2
- RIE 360 - Introduction to Echocardiography Clinical Credits: 2
- RIE 361 - Echocardiography Clinical Education I Credits: 2
- RIE 362 - Echocardiography Clinical Education II Credits: 3
- RIE 363 - Pediatric Echo Clinical Education I Credits: 2
- **OR** RIE 366 - Vascular Sonography Clinical Education I Credits: 2
- RIE 432 - Vascular Sonography I Credits: 2
- RIE 433 - Vascular Sonography I Laboratory Credits: 1
- RIE 434 - Pediatric Echocardiography I Credits: 3
- RIE 435 - Pediatric Echocardiography I Laboratory Credits: 1
- RIE 436 - Vascular Sonography II Credits: 2
- RIE 437 - Vascular Sonography II Laboratory Credits: 2
- RIE 438 - Pediatric Echocardiography II Credits: 3
- RIE 439 - Vascular Sonography III Credits: 2
- RIE 440 - Vascular Sonography III Laboratory Credits: 1
- RIE 457 - Cardiovascular Image Evaluation Credits: 2
- RIE 463 - Pediatric Echocardiography Clinical Education II Credits: 3
- **OR** RIE 466 - Vascular Sonography Clinical Education II Credits: 3
- RIE 464 - Pediatric Echocardiography Clinical Education III Credits: 3
- **OR** RIE 467 - Vascular Sonography Clinical Education III Credits: 3
- RIE 495 - Advanced Clinical Problems in Echocardiography and Vascular Sonography Credits: 3
- RIT 441 - Gross Human Sectional Anatomy Credits: 4
- RIU 320 - Applied Ultrasound Physics Instruction I Credits: 2

- RIU 321 - Applied Ultrasound Physics Instruction I Lab Credits: 1
- RIU 324 - Applied Doppler Ultrasound Physics Credits: 2
- RIU 420 - Applied Ultrasound Physics Instruction II Credits: 2

### Suggested Order of Coursework

Freshman Year

#### Fall Semester (14 credits)

- BIO 120 - General Biology I Credits: 4
- SOC 105 - Social Problems Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- General education (Art) Credits: 3

#### Winter Semester (13 credits)

- AHS 100 - Medical Terminology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- MTH 122 - College Algebra Credits: 3
- PSY 101 - Introductory Psychology Credits: 3

Sophomore Year

#### Fall Semester (13 credits)

- BMS 251 - Anatomy and Physiology II Credits: 4
- MTH 123 - Trigonometry Credits: 3 (Prerequisite for GVSU PHY 220)
- STA 215 - Introductory Applied Statistics Credits: 3
- General education (Philosophy and Literature) Credits: 3

#### Winter Semester (14 credits)

- PHY 220 - General Physics I Credits: 5
- PSY 300 - Research Methods in Psychology Credits: 3
- General education (Historical Perspectives) Credits: 3
- General education (World Perspectives) Credits: 3

Junior Year

#### Fall Semester (15 credits) - Students admitted to CVS

- RIU 320 - Applied Ultrasound Physics Instruction I Credits: 2
- RIU 321 - Applied Ultrasound Physics Instruction I Lab Credits: 1
- RIU 330 - Abdominal Sonography I Credits: 4
- RIU 331 - Abdominal Sonography I Lab Credits: 2
- RIE 340 - Cardiac and Vascular Hemodynamics Credits: 2
- RIE 341 - ECG in Radiologic and Imaging Sciences Credits: 2

#### Winter Semester (15 credits)

- RIU 324 - Applied Doppler Ultrasound Physics Credits: 2
- RIE 332 - Echocardiography II Credits: 3
- RIE 333 - Echocardiography II Laboratory Credits: 1
- RIE 361 - Echocardiography Clinical Education I Credits: 2
- RIE 432 - Vascular Sonography I Credits: 2
- RIE 433 - Vascular Sonography I Laboratory Credits: 1
- RIT 441 - Gross Human Sectional Anatomy Credits: 4

#### Spring/Summer (5 credits)

- RIE 362 - Echocardiography Clinical Education II Credits: 3
- RIE 363 - Pediatric Echo Clinical Education I Credits: 2
- **OR** RIE 366 - Vascular Sonography Clinical Education I Credits: 2

Senior Year

#### Fall Semester (16 credits)

- RIU 420 - Applied Ultrasound Physics Instruction II Credits: 2
- RIE 434 - Pediatric Echocardiography I Credits: 3
- RIE 435 - Pediatric Echocardiography I Laboratory Credits: 1
- RIE 436 - Vascular Sonography II Credits: 2
- RIE 437 - Vascular Sonography II Laboratory Credits: 2
- RIE 463 - Pediatric Echocardiography Clinical Education II Credits: 3
- **OR** RIE 466 - Vascular Sonography Clinical Education II Credits: 3
- Issues Course Credits: 3

#### Winter Semester (17 credits)

- AHS 340 - Health Care Management Credits: 3
- RIE 438 - Pediatric Echocardiography II Credits: 3
- RIE 439 - Vascular Sonography III Credits: 2
- RIE 440 - Vascular Sonography III Laboratory Credits: 1
- RIE 457 - Cardiovascular Image Evaluation Credits: 2

- RIE 464 - Pediatric Echocardiography Clinical Education III Credits: 3
- **OR** RIE 466 - Vascular Sonography Clinical Education II Credits: 3
- RIE 495 - Advanced Clinical Problems in Echocardiography and Vascular Sonography Credits: 3

## Cell and Molecular Biology - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/cmb](http://www.gvsu.edu/cmb)

Cell and molecular biology (CMB) is for students with a passion for the life sciences who want to prepare for employment in their field or for graduate/professional training. It is focused on determining how cells develop and function and the significance of those functions in the living organism. This interdisciplinary study draws on diverse fields such as biochemistry, biophysics, computational biology, genetics and developmental biology and is the basis for many applied fields including biotechnology, pharmacology, and biomedicine. The Bachelor of Science in cell and molecular biology at Grand Valley prepares students for employment or graduate training in the critically important and dynamic fields of cell and molecular biology, biotechnology, evolutionary development and biomedical research. The major requires core courses that address issues specific to cell and molecular biology, which are supplemented by courses from the biology, biomedical sciences, chemistry, and physics departments. A unique and defining part of Grand Valley's CMB degree is the student's participation in independent research/internship. Each student will have a research mentor from CMB or another participating GVSU department or from an area business or research institute, ensuring that students will get practical experience conducting original research in their area of interest. This practical experience, in addition to the rigorous curriculum, has been demonstrated to contribute to success in the workforce or graduate programs after graduation.

Many upper-level classes in the CMB degree have several prerequisites, thus it is important for students to begin their chemistry, biology and physics course sequences as early as possible. Students who wish to major in cell and molecular biology should see a member of the CMB faculty to plan their program of study as soon as possible.

### Participating Programs

Faculty members from the Annis Water Resources Institute, biology, biomedical science, and chemistry departments contribute to the CMB program.

Faculty members from the CMB program contribute to the Professional Science Master's program at GVSU.

## Bachelor of Science in Cell and Molecular Biology

### Requirements for a Major in Cell and Molecular Biology

#### 1. Core Courses

All students majoring in cell and molecular biology must complete the following core courses, for a total of 51 credits.

- BIO 120 - General Biology I Credits: 4
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- CMB 405 - Cell and Molecular Biology Credits: 4
- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2
- CMB 426 - Nucleic Acids Laboratory Credits: 3
- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 5
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4

- CHM 461 - Biochemistry I Credits: 4
- CHM 462 - Techniques in Biochemistry Credits: 3
- CMB 250 - Introduction to Biotechnology Credits: 3
- CMB 495 - Perspectives in Cell and Molecular Biology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### 2. Major Course Requirements

##### Microbiology Courses

###### Option A

- BIO 357 - Environmental Microbiology Credits: 4

###### Option B

- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1

##### Math/Physics Sequences

###### Option A: (13 credits)

- MTH 125 - Survey of Calculus Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

###### Option B: (19 credits)

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5

##### Independent Research Experience

A choice between an independent research experience at a private industry or research lab or at Grand Valley State University. Choose one of the options that follow:

###### Option A

- CMB 490 Internship Credits: 3

###### Option B

- CMB 499 - Research in Cell and Molecular Biology Credits: 1 to 3

#### 3. Electives

With the required courses listed previously, most students will need additional credits to satisfy the 120-credit hour baccalaureate degree requirement. These additional credits will be comprised of electives. The elective credits are unrestricted; students may choose whatever elective courses they wish. For those students who desire more science in their CMB curriculum, the following is a list of suggested electives.

- BIO 403 - Plant Structure and Function Credits: 4
- BIO 416 - Advanced Genetics Laboratory Credits: 2
- BIO 422 - Embryology Credits: 3
- BIO 423 - Plant Biotechnology Credits: 3
- BIO 432 - Comparative Animal Physiology Credits: 4
- BMS 208 - Human Anatomy Credits: 3
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- BMS 310 - Basic Pathophysiology Credits: 3
- BMS 311 - Pharmacological Aspects of Biomedical Sciences Credits: 3
- BMS 312 - Bacterial Genetics Credits: 3
- BMS 313 - Bacterial Genetics Laboratory Credits: 1
- BMS 422 - Bacterial Physiology Credits: 3
- BMS 423 - Bacterial Physiology Laboratory Credits: 2
- BMS 410 - Immunology Credits: 3
- BMS 431 - Medical Virology Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 463 - Biochemistry II Credits: 3
- CMB 321 - Designing Our Future: Babies, Food, Medicine, and Biotechnology Credits: 3
- CMB 351 - Bioinformatics: Tools and Techniques for Life Scientists Credits: 3
- CMB 411 - Genetics of Development and Cancer Credits: 3
- CMB 414 - Molecular Biology of the Gene Credits: 3
- CMB 452 - Computational Biology Credits: 3
- PHY 320 - Optics Credits: 3

## Cell and Molecular Biology

### Suggested Order of Coursework for a Major in Cell and Molecular Biology

#### First Year

- MTH/STA
- Three general education classes
- BIO 120 - General Biology I Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- WRT 150 - Strategies in Writing Credits: 4

#### Second Year

- MTH/STA
- Microbiology
- Two general education classes
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 5
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4
- CMB 250 - Introduction to Biotechnology Credits: 3

#### Third Year

- CMB elective
- Two general education courses
- CMB 405 - Cell and Molecular Biology Credits: 4
- CMB 406 - Cell and Molecular Biology Laboratory Credits: 2
- CHM 461 - Biochemistry I Credits: 4
- CHM 462 - Techniques in Biochemistry Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

#### Fourth Year

- Three CMB electives
- Three general education courses
- CMB 490 - Internship in CMB Credits: 3
- CMB 495 - Perspectives in Cell and Molecular Biology Credits: 3
- CMB 499 - Research in Cell and Molecular Biology Credits: 1 to 3
- CMB 426 - Nucleic Acids Laboratory Credits: 3

## Combined Bachelor of Science and Master of Science in Cell and Molecular Biology

Qualified undergraduates may be admitted to an accelerated bachelor's/master's program and obtain both a B.S. and an M.S. in cell and molecular biology within an accelerated time frame. Students admitted to this program may take graduate courses after completing 90 undergraduate credits, and up to 12 credits of graduate work may be used in partial satisfaction of the requirements for the undergraduate degree (in alignment with university policy, a maximum of 12 credit hours of graduate work will count toward both the graduate and undergraduate degrees). If students earn at least a grade of B in each of these classes, they are granted advanced standing in the master's program and must then complete an additional 23 credits to receive the master's degree. All other master's degree requirements must be met, including an internship and the graduate Capstone. After completing 120 credits and all requirements for the bachelor's degree, students are awarded a bachelor's degree. A minimum of 23 graduate credits must be completed after the 120 credits for the bachelor's degree are completed (the M.S. program requires 35 hours).

Students with an overall GPA of at least 3.25 may apply to the combined bachelor's/master's program after

- completion of the lower division core requirements: BIO 120, 375, 376; CHM 115, 116, 241, 242; MTH 125; CMB 250;
- 75 hours of academic credit have been completed or are in progress;
- and completion or registration for CMB 499 or CMB 490.

#### Application Procedure

Students will normally apply directly to the Department of Cell and Molecular Biology for the combined B.S./M.S. program during their third academic year.

Application requirements include:

- GPA of 3.25 or greater
- Completion of the nine core courses listed previously with a grade of at least B in 5 of the 9 courses and no less than a C+ in any of the 9 courses
- Two letters of recommendation
- Academic transcripts (unofficial transcripts are OK)
- Letter of intent
- CV

All students who submit complete applications will be interviewed by 2-3 faculty members. Admission decisions will be made by a departmental admissions committee based on the student's previous academic success in CMB, as indicated by GPA and grades in the core CMB curriculum, as well as potential success in the graduate program, as indicated by the letters of recommendation, the student's letter of intent and the interview. Decisions will normally be communicated to students within four weeks of submitting a complete application to the combined degree program in CMB.

#### Requirements During Undergraduate Studies (First Eight Semesters)

All university requirements, including general education courses, must be completed before the final (graduate) year of the combined B.S./M.S. program. In the final undergraduate year, students will take 12 to 15 credits of graduate-level courses. If any courses are dual-listed, students in the accelerated B.S./M.S. program must complete all assignments expected of graduate students and they will be evaluated in the same way as graduate students.

- Students will earn 12 graduate credits during their undergraduate program.
- Students will be considered undergraduates for tuition, academic requirements and financial aid purposes until all requirements for the undergraduate degree are completed. Following this they will be considered graduate students, will pay graduate tuition, and will be eligible for graduate financial aid.
- At least three credits of independent research (CMB 499) or internship (CMB 490), as well as the undergraduate Capstone course, will be required during the undergraduate part of the program.

#### Requirements During Graduate Studies

After successful completion of their undergraduate program, students will be eligible to take the second year of the M.S. in CMB curriculum. At this point students will be treated as graduate students for purposes of tuition and fees, financial aid, etc.

- Students must complete an internship (or research). This could be completed during the summer immediately following the undergrad program or during the graduate year.

#### Graduation Without Completion of the Program

If a student decides at some point to pursue only the undergraduate portion of the combined degree, the Department of Cell and Molecular Biology will still recognize the graduate courses taken in lieu of undergraduate courses. Credit from the undergraduate degree cannot be used toward a graduate degree at a later date.

#### Suggested Curriculum Sequence

Fall Year One		Winter Year One	
BIO 120 - General Biology I	4 cr	CHM 116 - Principles of Chemistry II	5 cr
CHM 115 - Principles of Chemistry I	5 cr	MTH 123 - Trigonometry	3 cr
MTH 122 - College Algebra	3 cr	STA 215 - Introductory Applied Statistics	3 cr
Elective/General Education	3 cr	Elective/General Education	3 cr
Total	15 cr	Total	14 cr

Fall Year Two		Winter Year Two	
BIO 375 - Genetics	3 cr	Micro (or CMB Elective)	4 cr
BIO 376 - Genetics Laboratory	1 cr	PHY 220 - General Physics I	5 cr
CMB 250 - Introduction to Biotechnology	4 cr	CHM 242 - Organic Chemistry For Life Sciences II	4 cr
CHM 241 - Organic Chemistry For Life Sciences I	4 cr	Elective/General Education	3 cr
MTH 125 - Survey of Calculus	3 cr		
Total	15 cr	Total	16 cr
Fall Year Three		Winter Year Three	
CHM 461 - Biochemistry I	4 cr	CHM 462 - Techniques in Biochemistry	3 cr
PHY 221 - General Physics II	5 cr	CMB 405 - Cell and Molecular Biology	4 cr
CMB 351 - Bioinformatics: Tools and Techniques for Life Scientists	3 cr	CMB 406 - Cell and Molecular Biology Laboratory	2 cr
Elective/General Education	3 cr	CMB 499 - Research in Cell and Molecular Biology	3 cr
		Elective/General Education	3 cr
Total	15 cr	Total	15 cr
Fall Year Four		Winter Year Four	
CMB 626 - Advanced Nucleic Acids Laboratory	3 cr	CMB 506 - Advanced Molecular Biology	3 cr
CMB 610 - Foundations of Biotechnology	3 cr	CMB 495 - Perspectives in Cell and Molecular Biology	3 cr
CMB 501 - Scientific Communication for the Life Sciences and Professional Science Masters	3 cr	CMB 552 - Advanced Computational Biology	3 cr
Elective/General Education	3 cr	Elective/General Education	3 cr
Elective/General Education	3 cr	Elective	3 cr
Total	15 cr	Total	15 cr
Summer Year Four			
PSM 691 - Internship	4 cr		
Total	4 cr		
Fall Year Five		Winter Year Five	
CMB 505 - Advanced Cell Biology	3 cr	CMB 620 - Cell and Tissue Culture	2 cr
CIS 661 - Introduction to Medical and Bioinformatics	3 cr	CMB 697 - Colloquium in Biotechnology (graduate Capstone)	3 cr
PSM 650 - Ethics and Professionalism in Applied Science	3 cr	STA 622 - Statistical Methods for Biologists	3 cr
PSM 662 - Seminar in Professional Science Practice	2 cr		
Total	11 cr	Total	8 cr
<b>Total Credits: 143</b>			

Note that all undergraduate general education requirements will be fulfilled.

Undergraduate Credits that Count Toward B.S.	105
Graduate Credits that Count Toward B.S.	3
Graduate Credits that Count Toward B.S. and M.S.	12
Graduate Credits that Count Toward M.S.	23
Undergraduate Courses	105 credits
Graduate Courses	38 credits

## Master of Science in Cell and Molecular Biology

The M.S. in cell and molecular biology requires a minimum of 35 credits for both the research emphasis and the professional science master's, biotechnology emphasis. A minimum grade of B is required for all courses.

There are separate admissions committees for the research emphasis and the biotechnology emphasis degree programs. The research emphasis is a thesis-based masters. The biotechnology emphasis is one of the three internship-based professional science masters (PSM) programs at GVSU.

### Admission to the Master of Science in Cell and Molecular Biology

- A minimum grade point average of 3.0 on a 4.0 scale for all undergraduate coursework is required.
- Satisfactory GRE score.
- Extensive undergraduate life science experience.
- Personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.
- Written recommendations from at least two individuals who are in positions to attest to the applicant's successful completion of the program.
- Telecommunications interview with program faculty.

### Requirements for the M.S. in Cell and Molecular Biology: Biotechnology Emphasis (PSM)

Core cell and molecular biology courses (Credits: 16)

- CMB 505 - Advanced Cell Biology Credits: 3
- CMB 506 - Advanced Molecular Biology Credits: 3
- CMB 610 - Foundations of Biotechnology Credits: 3
- CMB 620 - Cell and Tissue Culture Credits: 2
- CMB 626 - Advanced Nucleic Acids Laboratory Credits: 3
- CMB 697 - Colloquium in Biotechnology Credits: 2

Interdisciplinary courses shared with PSM degree programs (Credits: 6)

- CIS 661 - Introduction to Medical and Bioinformatics Credits: 3
- STA 622 - Statistical Methods for Biologists Credits: 3

Core PSM courses (Credits: 5)

- PSM 650 - Ethics and Professionalism in Applied Science Credits: 3
- PSM 662 - Seminar in Professional Science Practice Credits: 2

PSM internship (Credits: 4)

- PSM 691 - Internship Credits: 1 to 9  
Four credits required. No more than four credits can be applied toward degree completion.

\*Electives (minimum of four credits with advisor approval)

### Requirements for the M.S. in Cell and Molecular Biology: Research Emphasis

Core cell and molecular biology courses (Credits: 11)

- BIO 610 - Scientific Methodology Credits: 3
- CMB 505 - Advanced Cell Biology Credits: 3
- CMB 506 - Advanced Molecular Biology Credits: 3
- CMB 698 - Colloquium in Cell and Molecular Biology Credits: 2

Research and thesis (Credits: 1 to 9)

- CMB 695 - Thesis Research Credits: 1 to 9

## Chemistry

Biostatistics course (Credits: 3)

- STA 622 - Statistical Methods for Biologists Credits: 3

### Electives

- BIO 580 - Special Topics in Biology Credits: 1 to 4
- BIO 680 - Special Topics in Biology Credits: 1 to 3
- BMS 680 - Special Topics in the Biomedical Sciences Credits: 1 to 3
- CMB 501 - Scientific Communication for the Life Sciences and Professional Science Masters Credits: 3
- CMB 580 - Special Topics in Cell and Molecular Biology Credits: 1 to 4
- CMB 620 - Cell and Tissue Culture Credits: 2 (Elective for Research Emphasis)
- CMB 626 - Advanced Nucleic Acids Laboratory Credits: 3 (Elective for Research Emphasis)
- CMB 680 - Special Topics in Cell and Molecular Biology Credits: 1 to 4
- CMB 699 - Grad Research in Cell and Molecular Biology Credits: 1 to 6
- STA 616 - Statistical Programming Credits: 3

## Chemistry - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/chem](http://www.gvsu.edu/chem)

Chemistry is a fascinating and diverse field that affects almost every area of our lives. The clothes we wear, the medicines we take, the food we eat, the fuel we consume, and the environmental impact of living in a modern society are all affected by discoveries made through the study of chemistry.

The chemistry major is excellent preparation for any student interested in the molecular and environmental sciences. This program offers a well-rounded education in chemistry and provides a strong background for employment at the bachelor level or entry into chemistry graduate school. By selecting the appropriate electives within the chemistry major, students can earn a degree certified by the American Chemical Society.

Students interested in teaching high school chemistry may choose the chemistry major - education emphasis. This emphasis includes courses in teaching methods and as well as other science courses required for teacher certification. To be certified, students will also be required to complete a teachable minor and the education major from the College of Education.

The Department of Chemistry also offers a B.S. in biochemistry. Students interested in attending biochemistry graduate school or in obtaining employment in biochemical or biomedical laboratories may choose the biochemistry major. This major is also appropriate for students interested in attending professional health schools, such as medical, dental, pharmacy, or veterinary schools.

For any degree program in chemistry or biochemistry, it is important to start the proper sequence of chemistry courses as soon as possible. Students who wish to major in chemistry should meet with their Chemistry Department faculty advisors as soon as possible to plan programs that match their academic interests and career goals.

The Chemistry Department also offers a green chemistry certificate. This option can be added to any major or minor. It shows that students have taken a series of classes where they learn the principles of green chemistry and the production of chemicals and design of chemical processes in a manner that is environmentally sustainable.

The Chemistry Department also offers a chemistry minor. Students from other departments can add a chemistry minor to enhance their knowledge of chemistry and laboratory experience.

### Accreditation

The Chemistry Department is approved by the Committee on Professional Training of the American Chemical Society and offers ACS certified degrees in chemistry and biochemistry to qualified graduates.

### Degrees Offered

Bachelor of Science in chemistry, Bachelor of Science in biochemistry, Bachelor of Science in chemistry with an education emphasis (secondary education certified major). Green chemistry certificate. Minor in chemistry (secondary education certified major). Master of Education (general education, middle and high school emphasis, with a concentration in science) offered in cooperation with the College of Education.

### Participating Programs

The College of Education offers a M.Ed. in general education with a concentration in science. This program is called target inquiry. Contact the chemistry office for more information.

The dual geology-chemistry major is offered by the Geology Department in cooperation with the Chemistry Department. For details, see the Program Description.

## Bachelor of Science in Chemistry

A summary of all degree requirements as well as other departmental information is available in the Chemistry Department Handbook. All chemistry majors should obtain a copy from the department office.

A degree in chemistry will require chemistry and cognate courses that add up to 69 credits.

### Requirements for a Major in Chemistry (B.S.)

#### 1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

#### 2. Chemistry Courses

- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 245 - Principles of Organic Chemistry I Credits: 4
- CHM 246 - Principles of Organic Chemistry I Lab Credits: 1
- CHM 247 - Principles of Organic Chemistry II Credits: 3
- CHM 248 - Principles of Organic Chemistry II Lab Credits: 1
- CHM 273 - Principles of Inorganic Chemistry Credits: 3
- CHM 325 - Instrumental Analysis Credits: 4
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 356 - Physical Chemistry I Credits: 3
- CHM 358 - Physical Chemistry II Credits: 3
- CHM 391 - Chemistry Seminar I Credits: 1
- CHM 461 - Biochemistry I Credits: 4
- CHM 491 - Chemistry Seminar II Credits: 1

#### 3. Elective Courses

Take any three of these elective courses:

- CHM 421 - Green Chemistry for Sustainable Environment Credits: 3
- CHM 427 - Green and Environmental Chemistry Laboratory Credits: 3
- CHM 441 - Advanced Topics in Organic Chemistry Credits: 3
- CHM 442 - Synthetic Polymers: Life Cycle and Emerging Sustainable Technologies Credits: 3
- CHM 447 - Organic Synthesis and Characterization Credits: 3
- CHM 457 - Advanced Physical and Instrumental Chemistry Laboratory Credits: 3
- CHM 462 - Techniques in Biochemistry Credits: 3
- CHM 463 - Biochemistry II Credits: 3
- CHM 471 - Advanced Inorganic Chemistry Credits: 3
- CHM 475 - Electrochemistry Credits: 3
- CHM 477 - Synthetic Inorganic Chemistry Credits: 3

## 4. Cognate Courses

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5

**Additional Information**

Students in the chemistry major who transfer or change majors may make these substitutions with advisor approval:

- CHM 241 may replace CHM 245/246
- CHM 242 may replace CHM 247/248
- CHM 351 may replace CHM 358
- PHY220 may replace PHY230
- PHY221 may replace PHY231

Students in the chemistry major seeking a degree certified by the American Chemical Society (ACS) must also complete

- at least 148 lab hours in additional elective CHM courses above the 200-level which could include CHM 490

**OR** CHM 499

**AND EITHER**

- CHM 462
- OR** CHM 477 as one of their upper-level electives.

**Bachelor of Science in Chemistry - Education Emphasis**

The education emphasis is designed specifically for students who plan to teach chemistry at the secondary level.

A degree in chemistry with an education emphasis will require chemistry and cognate courses that add up to 79 credits.

**Requirements for a Major in Chemistry - Education (B.S.)**

## 1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

## 2. Chemistry Courses

- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 245 - Principles of Organic Chemistry I Credits: 4
- CHM 246 - Principles of Organic Chemistry I Lab Credits: 1
- CHM 247 - Principles of Organic Chemistry II Credits: 3
- CHM 248 - Principles of Organic Chemistry II Lab Credits: 1
- CHM 273 - Principles of Inorganic Chemistry Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 391 - Chemistry Seminar I Credits: 1
- CHM 419 - Chemistry in Secondary Education Credits: 3
- CHM 461 - Biochemistry I Credits: 4
- CHM 491 - Chemistry Seminar II Credits: 1

## 3. Science Cognate Courses

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- GEO 111 - Exploring the Earth Credits: 4
- MTH 201 - Calculus I Credits: 4
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

## 4. Psychology and Education Courses

- EDF 315 - Diverse Perspectives on Education Credits: 3
- EDI 337 - Introduction to Learning and Assessment Credits: 3
- EDS 379 - Universal Design for Learning: Secondary Credits: 3
- PSY 101 - Introductory Psychology Credits: 3
- PSY 301 - Child Development Credits: 3

**Additional Information**

Students in the education emphasis who transfer or change majors may make these substitutions with advisor approval:

- CHM 241 may replace CHM 245/246
- CHM 242 may replace CHM 247/248

Students in the education emphasis seeking a degree certified by the American Chemical Society (ACS) must also complete:

- At least 190 lab hours in additional elective CHM courses above the 200 level.
- Seven additional credits of CHM courses above the 200 level, which must include either CHM 462 or CHM 477

CHM 490 and CHM 499 lab hours and credits may be used to satisfy the ACS certification requirements.

**Suggested Order of Coursework for a Major in Chemistry (B.S.)**

This option assumes students will complete the required skills and general education courses and select electives with the help of their advisor.

**First Year**

- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5

**Second Year**

- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 245 - Principles of Organic Chemistry I Credits: 4
- CHM 246 - Principles of Organic Chemistry I Lab Credits: 1
- CHM 247 - Principles of Organic Chemistry II Credits: 3
- CHM 248 - Principles of Organic Chemistry II Lab Credits: 1
- CHM 273 - Principles of Inorganic Chemistry Credits: 3
- PHY 231 - Principles of Physics II Credits: 5

**Third Year**

- CHM electives
- CHM 325 - Instrumental Analysis Credits: 4
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 356 - Physical Chemistry I Credits: 3
- CHM 358 - Physical Chemistry II Credits: 3
- CHM 391 - Chemistry Seminar I Credits: 1

**Fourth Year**

- CHM electives
- CHM 461 - Biochemistry I Credits: 4
- CHM 491 - Chemistry Seminar II Credits: 1 (Capstone course)

**Suggested Order of Coursework for a Major in Chemistry - Education Emphasis (B.S.)**

This option assumes students will complete the required skills and general education courses and select electives with the help of their advisors.

**First Year**

- BIO 120 - General Biology I Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- MTH 201 - Calculus I Credits: 4
- PHY 220 - General Physics I Credits: 5
- PSY 101 - Introductory Psychology Credits: 3

**Second Year**

- BIO 121 - General Biology II Credits: 4
- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 245 - Principles of Organic Chemistry I Credits: 4
- CHM 246 - Principles of Organic Chemistry I Lab Credits: 1
- CHM 247 - Principles of Organic Chemistry II Credits: 3
- CHM 248 - Principles of Organic Chemistry II Lab Credits: 1
- CHM 273 - Principles of Inorganic Chemistry Credits: 3
- PHY 221 - General Physics II Credits: 5

**Third Year**

- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 391 - Chemistry Seminar I Credits: 1
- EDS 379 - Universal Design for Learning: Secondary Credits: 3
- GEO 111 - Exploring the Earth Credits: 4
- PSY 301 - Child Development Credits: 3

## Chinese Studies

### Fourth Year

- CHM 419 - Chemistry in Secondary Education Credits: 3
- CHM 461 - Biochemistry I Credits: 4
- CHM 491 - Chemistry Seminar II Credits: 1
- EDF 315 - Diverse Perspectives on Education Credits: 3
- EDI 337 - Introduction to Learning and Assessment Credits: 3

## Chemistry Minor

### Requirements for a Minor in Chemistry

#### 1. Minimum Requirements

A minor in chemistry requires the following courses:

- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 5  
**OR** (CHM 245 - Principles of Organic Chemistry I Credits: 4  
**PLUS** CHM 246 - Principles of Organic Chemistry I Lab Credits: 1)
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4  
**OR** (CHM 247 - Principles of Organic Chemistry II Credits: 3  
**PLUS** CHM 248 - Principles of Organic Chemistry II Lab Credits: 1)

Plus, one elective course from the following:

- CHM 232 - Biological Chemistry Credits: 4
- CHM 273 - Principles of Inorganic Chemistry Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 419 - Chemistry in Secondary Education Credits: 3
- CHM 421 - Green Chemistry For Sustainable Environment Credits: 3
- CHM 442 - Synthetic Polymers: Life Cycle and Emerging Sustainable Technologies Credits: 3
- CHM 461 - Biochemistry I Credits: 4

#### 2. 2.0 GPA Requirement

A minimum 2.0 GPA in all chemistry courses that are applied to satisfy the chemistry minor requirements.

#### 3. Teacher Certification

A chemistry minor for teacher certification requires the following course and a minimum GPA of 2.7 in chemistry courses applied to the minor:

- CHM 419 - Chemistry in Secondary Education Credits: 3

## Certificate in Green Chemistry - Program Description

A certificate in green chemistry will be a strong curricular addition to the degrees offered at GVSU. This 13 to 14 credit hour certificate in green chemistry provides students at Grand Valley State University with a foundational knowledge of green, benign chemistry and its principles. This certificate can be completed in one calendar year, if all prerequisites were completed previously. Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree.

A certificate in green chemistry is neither a major nor a minor; it can/should be used as a focus investigation area of chemistry, environmental sciences, engineering, environmental studies, or sustainability.

## Certificate in Green Chemistry

### Requirements for a Certificate in Green Chemistry

Students must earn a bachelor's degree to earn this certificate. Students who seek a certificate in green chemistry are required to complete 12 to 13 credits from the courses as follows:

- CHM 421 - Green Chemistry For Sustainable Environment Credits: 3
- CHM 442 - Synthetic Polymers: Life Cycle and Emerging Sustainable Technologies Credits: 3
- \*CHM 399 - Readings in Chemistry Credits: 1 or 2  
**OR** CHM 490 - Chemistry Laboratory Internship Credits: 1 to 4  
**OR** CHM 499 - Investigation Problems Credits: 1 to 5  
**AND** one of the following courses:

- CHM 427 - Green and Environmental Chemistry Laboratory Credits: 3
- ECO 345 - Environmental and Resource Economics Credits: 3
- GEO 300 - Geology and the Environment Credits: 3
- GEO 445 - Introduction to Geochemistry Credits: 3
- GPY 412 - Global Environmental Change Credits: 3
- NRM 330 - Environmental Pollution Credits: 3
- NRM 451 - Natural Resource Policy Credits: 3

\*CHM 399 - Readings in Chemistry, CHM 490 - Chemistry Laboratory Internship, and CHM 499 - Investigation Problems are variable credit independent study courses. Any combination of independent projects approved by the advisor adding up to three credits satisfies this requirement.

## Chinese Language (minor)

### Requirements for a Minor in Chinese Language

- CHI 202 - Intermediate Chinese II: Language and Culture Credits: 4
- CHI 301 - Advanced Intermediate Chinese I Credits: 3
- CHI 302 - Advanced Intermediate Chinese II Credits: 3

Twelve credits of elective courses from the following, including at least one course from CHI 341 and CHI 351. Study abroad courses can count for no more than six of the 12 credits:

- CHI 321 - Ancient Chinese Culture Credits: 3
- CHI 322 - Classical Chinese Culture Credits: 3
- CHI 323 - Late Imperial Chinese Culture Credits: 3
- CHI 341 - Introduction to Classical Chinese Credits: 3
- CHI 351 - Practical Chinese Credits: 3
- CHI 380 - Special Topics in Chinese Credits: 3 (with prior consent).
- CHI 185 / CHI 285 / CHI 385 up to 3 credits (study abroad course).
- CHI 386 / CHI 387 / CHI 380 up to 3 credits (study abroad course).

## Chinese Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/eas](http://www.gvsu.edu/eas)

China represents one fifth of the world's population and has the world's oldest uninterrupted culture. A major unifying factor in this culture is the language, kept alive through one of the richest literary traditions of the world. Throughout much of its history, China was the most culturally, intellectually, economically, and technologically dominant civilization in Asia and the world. With the recent developments in China, the country is exerting an ever-broadening influence on the world community. The Chinese Studies major allows one to not only build a solid knowledge of China and its culture but also develop new perspectives on the U.S. culture and enriched self-understanding.

Housed in the College of Interdisciplinary Studies, the Chinese studies major provides students who are interested in China a cross-disciplinary basis for understanding its rich cultural resources, its importance in the contemporary world, and the complexities of U.S.-China relations. At the core of the program is a strong emphasis on the language, culture, history, philosophy, and politics. Elective courses from different departments and disciplines can be combined to build a strong and personalized understanding of China. A study abroad requirement assures students a firsthand experience with the Chinese language and culture. This enables students to have a broad vision and open mind as educated persons and responsible citizens of the world.

## Bachelor of Arts in Chinese Studies

### Requirements for the B.A. in Chinese Studies

Thirty-three semester hours (24 required, nine electives), with six of the 33 earned in studying abroad in mainland China or Taiwan.

## Requirements for a Major in Chinese Studies

### Required Courses (24 credits)

- CHI 301 - Advanced Intermediate Chinese I Credits: 3
- CHI 302 - Advanced Intermediate Chinese II Credits: 3
- CHI 321 - Ancient Chinese Culture Credits: 3
- CHI 322 - Classical Chinese Culture Credits: 3
- CHS 495 - Advanced Topics in Chinese Studies Credits: 3
- HST 333 - Modern China Credits: 3
- PHI 210 - Eastern Philosophy Credits: 3
- PLS 283 - Chinese Politics and U.S.-China Relations Credits: 3

### Elective Courses (9 credits)

- CHI 323 - Late Imperial Chinese Culture Credits: 3
- CHS 333 - Study Abroad - Chinese Studies Credits: 1 to 6
- CHI 341 - Introduction to Classical Chinese Credits: 3
- CHI 351 - Practical Chinese Credits: 3
- CHI 380 - Special Topics in Chinese Credits: 3
- EAS 201 - East Asia in the Contemporary World Credits: 3
- EAS 301 - Masterpieces of East Asian Literature Credits: 3
- GPY 354 - Geography and Globalization of Asia Credits: 3
- HST 310 - Cultural and Social Topics in Nonwestern History Credits: 3
- HST 240 - A History of East Asia to 1800 Credits: 3
- HST 241 - A History of East Asia since 1800 Credits: 3
- HST 342 - History of Buddhism and East Asian Religions Credits: 3
- PHI 306 - Wisdom of the East: Asian Philosophy Credits: 3

### Study Abroad Requirement

All majors will earn at least six credits of the 33 in a study abroad program in mainland China or Taiwan in order to gain firsthand experience with the language and culture. These six credits can be taken as part of the required or elective credits. Students who need financial support to achieve this requirement will be able to apply their financial aid for study abroad, apply for a grant through the Freeman Foundation, and/or receive a grant from the Padnos International Center. Minimum requirements for study abroad: six weeks.

Currently we have numerous study abroad options that could contribute to this requirement:

- ECNU summer program in Shanghai
- Chinese language and culture summer program in Nanjing
- Chinese language and culture summer program in Taiwan
- Social work program in Shanghai
- Traditional Chinese medicine program in Beijing
- ECNU long-term exchange program in Shanghai
- NonGVSU study abroad programs
- Internships in Shanghai and Wuxi
- In addition, GVSU students have the opportunity to choose programs in China sponsored by other universities and organizations.

Students will meet with their advisors to plan their study abroad programs. Credits from a study abroad program in mainland China/Taiwan will be evaluated by the program director and when approved, applied to the Chinese studies major as are all credits from study abroad programs. Students are required to seek program approval before studying abroad.

## Classics - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/classics](http://www.gvsu.edu/classics)

Classics is the interdisciplinary study of ancient Greece and Rome, which stand among the world's most exciting, important, and influential civilizations. The program in classics spans the many different aspects of the Greek and Roman world - its languages and literatures, its art and archaeology, its history, its religious and philosophical traditions, and its social and legal forms - from the Bronze Age to the period of the late Roman Empire and early Christianity.

The cultural riches of classical civilization are as rewarding as anything the liberal arts has to offer, but the value of classics has another dimension as well. Insofar as classics examines the artistic, intellectual, and social traditions that have shaped the Western world over the course of a hundred generations of human history, it provides an informed and critical perspective on many of the ideas, values, and institutions that continue to shape the world in which we live today.

Founded in 2000, Grand Valley's Department of Classics offers a strong undergraduate major and works closely with students to encourage success in all walks of life. The department is large enough to offer a complete preparation for students seeking a wide range of postgraduate and career opportunities, yet it remains small enough to allow our faculty and staff to get to know all of our students individually and to work with them closely.

This student-centered approach is something we encourage: it fosters collaboration and mutual respect and promotes cooperation, discussion, and intellectual interaction. These are the hidden, and often neglected, elements of a first-rate education.

Courses and programs in classics are designed to meet the needs of a variety of students. For students who pursue a major or minor in the field, classics provides a broad and solid liberal arts education that will be useful in many careers and vital to the development of their full human capacity.

For students in other disciplines, classics offers a valuable opportunity to investigate at firsthand the works and traditions that have provided much of the intellectual background of their own chosen fields. Many find that working with the classical languages improves their grasp of English and their skills as readers and writers.

Today's challenges demonstrate the need for leaders and managers who take words and ideas seriously, who are capable of looking outside of their own cultural and historical assumptions and approaching problems from every angle, and whose choices are informed by long-term perspectives and a concern for the judgment of posterity. The study of classics has long been recognized as among the most demanding academic programs and an excellent preparation for a wide range of professions and careers.

### Classical Civilization (CLA)

All of the courses offered by classics share an emphasis on encountering the classical world through primary sources, both textual and material. Complementing this emphasis is the study of the living tradition that has shaped - and continues to shape - the way in which we construct our world today.

Encountering this material in translation offers many people their initial opportunity to discover their love for the literature and the mythology, the history and the art, of ancient Greece and Rome. Studying classical civilization can be the springboard to a lifelong experience with literature, philosophy, and culture.

Often these encounters provide inspiration for learning the languages that allow one to meet the ancient cultures of Greece and Rome on their own terms, to examine the wellsprings of the Western tradition, and to challenge conscious and subconscious assumptions about life, values, and knowledge.

Studies in the classical tradition examine connections between the world of classical Greece and Rome and the cultures of other places and other times. Examples of this process can be seen all around us and range from the paintings of Botticelli and Raphael in the Italian renaissance, through the dramas of Shakespeare and the West African playwrights Efu Sutherland and Wole Soyinka, to the ideas behind the American Constitution.

In the bargain, students profit from a practical education that offers valuable pre-professional training and marketable job skills. Classics students acquire and refine analytical and communications skills that make

## Classics

them better able to approach any problem creatively and successfully; they distinguish themselves as scholars, work on archaeological excavations, participate in cultural events, demonstrate leadership and committed citizenship, and travel and study abroad; the study habits and work ethic they develop are those needed for success in demanding graduate and professional programs and in real-world careers.

The department offers elementary, intermediate, and advanced instruction in classical civilization (courses marked CLA through the 400 level). Many satisfy general education Foundations or Issues requirements. Certain courses identified as Distributed Classical Civilization (DCC) courses satisfy requirements for the major and minor programs in classics.

### Ancient Greek (GRK) and Latin (LAT)

Access to the languages in which the seminal works of the ancient world were composed provides students with a special perspective on ancient culture and gives them a unique insight into the foundations of poetry, drama, history, philosophy, religion, law, and the sciences. Training in the classical languages represents the kind of serious mental rigor and discipline that is an excellent training for a variety of careers.

### Ancient Greek

Greek is the language of Homer and Sappho, of Aeschylus and Aristophanes, of Herodotus and Thucydides, of Plato and Aristotle, and (in its koinê or “common” form) of the Christian New Testament.

The department offers elementary, intermediate, and advanced instruction (courses marked GRK through the 400 level) in ancient Greek. Note, however, that the Department does not offer instruction in modern Greek.

Ancient Greek is especially important for students of literature and philosophy and for those who are preparing for seminary or who wish to examine the origins and context of early Christianity.

### Latin

Latin was the language of ancient Rome. Even after the Roman Empire collapsed, Latin continued as the language of literature, science, philosophy, medicine, law, and religion for over a thousand years: John Milton, Isaac Newton, Baruch Spinoza, and Thomas Aquinas all wrote in the same language as Cicero, Virgil, Caesar, and Plautus.

The department offers elementary, intermediate, and advanced instruction (courses marked LAT through the 400 level) in Latin, including Latin composition.

Latin will benefit students of literature and history, pre-law and pre-medicine students, students of modern Romance languages, and those who are interested in the culture of medieval and renaissance Europe.

### B.A. Degree Requirements in Language Study

In addition to general education requirements, the B.A. (Bachelor of Arts) degree requires a third-semester proficiency in a foreign language. Completion or placement out of GRK 201 or LAT 201 fulfills this requirement.

### General Education Requirements

GRK 202 and LAT 202 fulfill the World Perspectives requirement of the General Education Program. Many classical civilization (CLA) courses satisfy general education requirements.

### Placement in Language Courses

Students who have studied Latin in high school should take a placement examination, administered by the Department of Classics, prior to enrolling in Latin courses. Transfer students with prior college study in Latin or ancient Greek should seek advice from the department about the appropriate level at which to enroll.

### Study Abroad

Students interested in classics are encouraged to seek study abroad experience in a program emphasizing the civilization of the classical world, such as those offered by the Intercollegiate Center for Classical Studies in Rome and the College Year in Athens. Summer internships at archaeological excavations of classical sites are also available. For more

information about opportunities to study classics abroad, students should contact the Department of Classics and the Padnos International Center.

### Participating Programs

Faculty in classics hold joint appointments in the Frederik Meijer Honors College and regularly staff the honors classes, as well as courses cross-listed in classics and honors.

The department also cooperates with the Departments of Anthropology and History in offering the interdepartmental archaeology minor (ARC).

Through the department, Grand Valley State University holds institutional memberships in The American Philological Association, The Classical Association of the Middle West and South, The American Academy in Rome, The American School of Classical Studies at Athens, and The Intercollegiate Center for Classical Studies in Rome.

## Bachelor of Arts in Classics

### Requirements for a Major in Classics

Students majoring in classics are required to complete at least 30 credits. They must satisfy the cultural core and language core requirements and select one of three emphases: classical languages, classical studies, or Latin secondary education.

### Core Requirements (6-9 credits)

Six to nine credits: Six in cultural core and zero to three in language core beyond fulfillment of the Bachelor of Arts degree requirement.

### Cultural Core Requirement (including Capstone)

Students majoring in classics complete six credits of instruction in a sequence of courses intended to introduce them to the interdisciplinary dimension of classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization.

All classics majors take:

- CLA 195 - Introduction to Ancient Greece and Rome Credits: 1 ordinarily by the end of their sophomore year.
- CLA 395 - Research Methods in Classics Credits: 2 by the end of their junior year.
- CLA 495 - Notions of the Classics (Capstone) Credits: 3 during their senior year.

### Language Core Requirement

- Students majoring in classics complete Intermediate language study in either ancient Greek or Latin, typically by taking GRK 202 - Intermediate Ancient Greek II Credits: 3 or LAT 202 - Intermediate Latin II Credits: 3. Those commencing language study typically fulfill the Bachelor of Arts degree requirement through three semesters of study in GRK/LAT 101-102-201 (12 credits). Others may satisfy these requirements through language placement administered by the Department of Classics; they must nevertheless complete the 30-credit minimum through additional coursework in the major.

### Emphases

#### Classical Languages Emphasis

Minimum of 21 credits beyond completion of the core requirements.

The classical languages emphasis offers a course of undergraduate study in classics that stresses the languages and literature of the classical world. Students electing the classical languages emphasis ordinarily study one language (either ancient Greek or Latin) to an advanced level and the other language to at least the intermediate level.

Requirements in addition to the core requirements:

- At least 18 credits of instruction in ancient Greek (GRK) and Latin (LAT), including at least six credits in one language at the 300 level or above.
- At least three credits of instruction in any course in Classics (CLA), in HNR 222 - The Worlds of Greece and Rome 4 Credits: 3, or in an approved substitute.

### Classical Studies Emphasis

Minimum of 21 credits beyond completion of the core requirements.

The classical studies emphasis offers a course of undergraduate study in classics that investigates Greco-Roman civilization from a range of perspectives and subject areas. Students electing the classical studies emphasis select courses at an advanced level across the program curriculum.

Requirements in addition to the core requirements:

- At least 15 credits of instruction at the 300 level or above in at least two of the following areas.
  - Archaeology:
    - CLA 350 - Issues in Classical Archaeology Credits: 3
  - Cultural Studies:
    - CLA 301 - Re-imagining the Classics Credits: 3
    - CLA 302 - The Stages of Greek and Roman Drama Credits: 3
    - CLA 311/PHI 311 - Ancient Great Philosophers Credits: 3
    - CLA 315 - Ancient Religion Credits: 3
    - CLA 325/WGS 325 - Body, Gender, Sexuality in Antiquity Credits: 3
    - CLA 365 - Stoicism, Identity and the Happy Life Credits: 3
    - CLA 367 - Thinking Like a (Roman) Lawyer Credits: 3
  - Ancient Greek (GRK) or Latin (LAT) at the 300 level or above.
- At least six credits of instruction in any courses in classics (CLA), in HNR 221 - The Worlds of Greece and Rome 3 Credits: 3 and HNR 222 - The Worlds of Greece and Rome 4 Credits: 3, or in an approved substitute.

### Latin Secondary Education Emphasis

Minimum of 21 credits beyond completion of the core requirements.

The Latin secondary education emphasis offers prospective Latin teachers preparation in Latin comprehension and instruction and in classical civilization at a level consistent with state and national norms. These students work within both the Department of Classics and the College of Education. While the College of Education is ultimately responsible for overseeing the certification process for students, the Department of Classics is responsible for overseeing the major and for recommending qualified students for admission to the College of Education.

Students with a baccalaureate degree and a major in classics from another institution can be certified to teach by earning at least three credits of instruction in Latin in the classics department and completing the professional education requirements of the College of Education. The required courses in Latin must be approved by the department chair or designee.

Requirements in addition to the core requirements:

- At least 18 credits of instruction in Latin (LAT) at the 300 level or above, three of which must be LAT 353 - Latin Prose Composition Credits: 3.
- At least three credits of instruction in any course in Classics (CLA), in HNR 222 - The Worlds of Greece and Rome 4 Credits: 3, or in an approved substitute.

### Suggested Order of Coursework for a Major in Classics (B.A.)

The classics major is designed to be flexible. Declaring classics as a double major or a minor is an effective way of enhancing one's transcript and drawing the attention of employers and postgraduate programs.

In order to ensure timely progress toward graduation, commencing study in either ancient Greek or Latin at an early stage is key.

Prospective majors are encouraged to contact the Department of Classics in order to receive individualized advising. The following is merely a suggestion.

Consult your advisor about completing required basics skills and general education requirements.

### First Year:

- GRK 101 or LAT 101 (four credits)
- CLA 101 - Greek and Roman Mythology (three credits; general education Philosophy and Literature Foundation)
- Honors students: HNR 211/212 - Classical World I (six credits; alternative general education curriculum)
- WRT 150 (three credits, if required)
- CLA 195 (one credit)
- GRK 102 or LAT 102 (four credits)
- CLA 121 - Greek Civilization
  - OR CLA 131 - Roman Civilization (three credits; general education Historical Perspectives Foundation)
- Honors students: HNR 221/222 - Classical World II (six credits; alternative general education curriculum; prerequisite for CLA 350)

### Second Year:

- Continue second year of language study: GRK 201 (four credits) and 202 (three credits)
  - OR LAT 201 (four credits)
    - AND 202 (three credits - fulfills B.A. degree requirement and general education World Perspectives requirements; fulfills language core requirement)
- Classical languages emphasis: Commence first year of study in the second classical language
- CLA 201 (three credits; general education Philosophy and Literature Foundation; Supplemental Writing Skills [SWS])
- CLA 250 (three credits; general education Arts Foundation; prerequisite for CLA 350)

### Third Year:

- Classics majors are strongly encouraged to consider spending a semester or academic year in a study abroad program
- CLA 395 (two credits)
- Honors students: Many CLA 300+ courses are cross-listed as Honors junior seminars
- Classical languages emphasis: Continue third year of language study (GRK 300+ or LAT 300+); continue second year of study in the second classical language
- Classical studies emphasis: Select elective courses (CLA 300+; three credits; many fulfill general education Issues and other requirements)

### Fourth Year:

- Classics majors are strongly encouraged to explore opportunities for undergraduate research projects
- Complete CLA 495 Classics Capstone (three credits)
- Classical languages emphasis, or majors contemplating postgraduate study in Classics: continue language study (GRK 300+/400+ or LAT 300+/400+; three credits)
- Classical studies emphasis: Select elective courses (CLA 300+; three credits; many fulfill general education Issues and other requirements)
- Honors students: Senior project

## Classics Minor

Minimum 21 credits.

The classics minor is designed to be flexible and to serve students with an interest in the classical world whose plans do not allow them to complete the major. At the same time, work done toward the minor is completely and seamlessly transferable toward the major, should an opportunity arise to do so.

### Requirements for a Minor in Classics

All classics minors take:

- CLA 195 - Introduction to Ancient Greece and Rome Credits: 1
- CLA 395 - Research Methods in Classics Credits: 2
- At least six credits of instruction in either ancient Greek or Latin at 200 level or above.
- At least nine credits of instruction at the 300 level or above in at least two of the following areas.
  - Archaeology:
    - CLA 350 - Issues in Classical Archaeology Credits: 3

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- Cultural Studies:
  - CLA 301 - Re-imagining the Classics Credits: 3
  - CLA 302 - The Stages of Greek and Roman Drama Credits: 3
  - CLA 311 /PHI 311 - Ancient Great Philosophers Credits: 3
  - CLA 315 - Ancient Religion Credits: 3
  - CLA 325 /WGS 325 - Body, Gender, Sexuality in Antiquity Credits: 3
  - CLA 365 - Stoicism, Identity and the Happy Life Credits: 3
  - CLA 367 - Thinking Like a (Roman) Lawyer Credits: 3
- Ancient Greek (GRK) or Latin (LAT) at the 300 level or above.

At least three credits of instruction in any course in Classics (CLA), in HNR 222 - The Worlds of Greece and Rome 4 Credits: 3, or in an approved substitute.

## Clinical Dietetics - Program Description

College of Health Professions (CHP)  
Department of Public Health

### Degree Offered

Master of Science in clinical dietetics (M.S.C.D.)

This graduate program in clinical dietetics has been developed for two distinct audiences: Students requiring supervised practice in order to take the national dietetic registration examination (Track A) and those interested in only a master's degree because supervised practice hours have already been met or are not desired (Track B).

Track A's supervised practice sites are diverse, providing access to different health systems, and a wide demographic of patients. These practice sites are available locally, regionally, and internationally. In addition to the supervised practice sites, clinical applications will be taught in technologically superior simulation laboratories. The M.S. in clinical dietetics will use problem-based learning, meaningful and sustainable group projects, and multiple opportunities to demonstrate critical thinking as they emerge as highly trained and sought after registered dietitians and dietetic professionals.

Track B is developed for the practicing professional who seeks an advanced degree in clinical dietetics. Track B requires 39-42 credits. The track will address pathophysiology and the role of nutrition in prevention and treatment.

## Admission Requirements

### Program Prerequisites

Students who do not have an undergraduate degree from an ACEND accredited dietetic program will need to complete certain prerequisites. An unofficial transcript of undergraduate work can be sent to the CHP academic advising office for review and feedback on courses that need to be completed before application to the program. A grade of B- or better is required in the following undergraduate courses:

- Pharmacological aspects of biomedical science (pharmacology)
- Biological chemistry (biochemistry)
- Clinical nutrition (medical nutrition therapy)
- Pathophysiology

### Program Location

Cook-DeVos Center for Health Sciences, with faculty offices at 545 Michigan Street, Suite 300.

**Website:** [www.gvsu.edu/grad/clinicaldiet](http://www.gvsu.edu/grad/clinicaldiet)

## Master of Science in Clinical Dietetics

### Degree Requirements

Demonstration of completion of the 39-54 credits in the professional curriculum is required for the student to be granted the M.S.C.D. degree. General graduate academic policies and regulations can be found elsewhere in this catalog or in the Grand Valley State University graduate bulletin.

In addition, for each CD course or a discrete unit of instruction in the professional curriculum, a minimum proficiency level is described in each course syllabus. A minimum grade of 85% is required for passing all CD courses, additionally, the students overall G.P.A. must never drop below the B minimum in any semester or the student may be placed on academic probation or dismissed from the CD program.

### Coordinated Program Curriculum: Track A

Fall Semester 1 (12 credits, 180 hours supervised practice)

- CD 501 - Emerging Professional Practice Issues in Clinical Dietetics Credits: 2
- CD 510 - Nutritional Assessment Credits: 3
- CD 516 - Food and Culinary Science Credits: 4
- CD 520 - Supervised Practice: Food Management Systems Credits: 3 (180 hours)

Winter Semester 1 (12 credits, 180 hours supervised practice)

- CD 530 - Supervised Practice: Community Nutrition I Credits: 3 (180 hours)
- CD 560 - Advanced Nutrition Education, Counseling, and Coaching Credits: 2
- CD 600 - Advanced Medical Nutritional Therapy I Credits: 3
- CD 690 - Research Methodology in Clinical Dietetics Credits: 1
- STA 610 - Applied Statistics for Health Professions Credits: 3

Spring/Summer Semester 1 (variable credits, 420 hours supervised practice)

- CD 550 - Food, Culture and the Health Environment Credits: 2
- CD 610 - Advanced Medical Nutritional Therapy II Credits: 3
- CD 625 - Supervised Practice: Clinical Nutrition I Credits: 5 (300 hours)
- CD 630 - Supervised Practice: Community Nutrition II Credits: 2 (120 hrs; **60 hrs may be taken internationally**)
- CD 693 - Master's Project Credits: 1-3  
**OR** CD 695 - Thesis Research in Clinical Dietetics Credits: 1 to 6

Fall Semester 2 (variable credits, 420 hours supervised practice)

- CD 505 - Health Care Regulation and Policy in Dietetic Practice Credits: 2
- CD 640 - Supervised Practice: Clinical Nutrition II Credits: 5 (300 hours)
- CD 650 - Supervised Practice: Area of Specialization Credits: 2
- CD 689 - Seminar in Clinical Dietetics Credits: 1
- CD 693 - Master's Project Credits: 1-3  
**OR** CD 695 - Thesis Research in Clinical Dietetics Credits: 1 to 6

Total credits: 49 (52)

Clinical experience = 1200 hours, including 180 optional international hours.

### Curriculum: Track B (MS only)

Track B is set up to be a part-time hybrid program which includes research, informatics and grant writing classes in addition to advanced medical nutrition therapy and micronutrient metabolism.

Fall Semester 1 (7 credits)

- CD 501 - Emerging Professional Practice Issues in Clinical Dietetics Credits: 2
- CD 505 - Health Care Regulation and Policy in Dietetic Practice Credits: 2
- CD 510 - Nutritional Assessment Credits: 3

Winter Semester 1 (8 credits)

- CD 560 - Advanced Nutrition Education, Counseling, and Coaching Credits: 2
- CD 600 - Advanced Medical Nutritional Therapy I Credits: 3
- NUR 703 - Nursing Informatics Credits: 3

Spring/Summer Semester 1 (9 credits)

- CD 610 - Advanced Medical Nutritional Therapy II Credits: 3
- PA 535 - Grant Writing Credits: 3
- PH 525 - Quantitative Research Methods in Public Health Credits: 3

## Fall Semester 2 (7 credits)

- CD 620 - Micronutrient Metabolism and Genetic Considerations in Clinical Dietetics Credits: 3
- CD 690 - Research Methodology in Clinical Dietetics Credits: 1
- STA 610 - Applied Statistics for Health Professions Credits: 3

## Winter Semester 2 (variable credits)

- CD 550 - Food, Culture and the Health Environment Credits: 2
- CD 693 - Master's Project Credits: 1 to 3
- OR CD 695 - Thesis Research in Clinical Dietetics Credits: 1 to 6
- PSM 650 - Ethics and Professionalism in Applied Science Credits: 3

## Spring/Summer Semester 2 (variable credits)

- CD 693 - Master's Project Credits: 1 to 3
- OR CD 695 - Thesis Research in Clinical Dietetics Credits: 1 to 6

Total Credits: 39 (42)

## Communication Studies - Program Description

For additional information about opportunities your college offers, please refer to the School of Communications website.

**Website:** [www.gvsu.edu/soc](http://www.gvsu.edu/soc)

Because our lives — publicly, privately, and professionally — vitally depend upon various communication processes, the communication studies major fosters in students a broad-based multidisciplinary orientation, believing that this best prepares them for life-long learning, promotes professional and personal development, and helps them take fuller ownership of their responsibilities as citizens of local, national, and global communities. Students are brought to understand communication as a practice as well as a reflective inquiry into that practice.

Communication studies stresses fundamental capacities for expression and comprehension, including learning how to analyze difficult texts, articulate nuanced questions, cultivate aesthetic and ethical sensibilities, build persuasive appeals, and develop critical sensitivities to the persuasive appeals of others. The major in communication studies is designed to combine a broad overview of the field of communications with practice in other majors (emphasis areas) in the School of Communications. The aim is for students to become adaptable, artful, resourceful, and generally educated communicators who can draw upon all the ways of looking at communication embodied in and beyond the curriculum.

### Internships

The School of Communications faculty believes that an internship can be a significant part of the individual's undergraduate program. Students may elect to take multiple internships. Students are strongly urged to work closely with their faculty advisor or internship coordinator in identifying internships that best suit their interests and career ambitions.

## Bachelor of Arts or Bachelor of Science in Communication Studies

### Requirements for a Major in Communication Studies

#### 1. Core Credits: 12

All students majoring in the School of Communications must complete the following core courses, for a total of 12 credits:

- COM 101 - Concepts of Communication Credits: 3
- COM 295 - Communication Theory Credits: 3
- COM 201 - Speech Credits: 3

Capstone requirement:

- COM 495 - Issues in Communication (Capstone) Credits: 3

All students majoring in the School of Communications must take COM 495 (three credits) during their senior year. This Capstone course offers a synthesis of ideas and theories about one or more current critical issues in communication.

### B.A. and B.S. Degree

All undergraduate programs in the School of Communications offer both the B.A. degree and the B.S. degree. All students selecting majors in the School of Communications must choose either the B.A. degree requirement or the B.S. degree requirement intended for a particular undergraduate program.

#### B.A. Degree Requirement

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

#### B.S. Degree Requirement

The B.S. degree requirement for communication studies:

- STA 215 - Introductory Applied Statistics Credits: 3
- COM 275 - Foundations of Communication Research Credits: 3
- COM 375 - Communication Research Credits: 3

### 2. Communication Studies Core

At least 24 credits.

- COM 202 - Critical Interpretation Credits: 3
- OR COM 203 - Argument and Analysis Credits: 3
- COM 498 - Senior Thesis/Project Credits: 1 to 6
- OR COM 490 - Internship Credits: 1 to 6

At least 18 unduplicated credits from the following communication studies courses (courses with the COM prefix), at least 12 credits of which must be at the 300-level or above:

- COM 202 - Critical Interpretation Credits: 3
- COM 203 - Argument and Analysis Credits: 3
- COM 209 - Health Communication Systems Credits: 3
- COM 210 - Nonverbal Communication Credits: 3
- COM 220 - Media Literacy Credits: 3
- COM 271 - History of Communications Technologies Credits: 3
- COM 301 - Interpersonal Communication Credits: 3
- COM 302 - Small Group Communication Credits: 3
- COM 303 - Debate Credits: 3
- COM 320 - Vision and Culture Credits: 3
- COM 371 - Media and Society Credits: 3
- COM 372 - Global Communications Credits: 3
- COM 376 - Communications Policy and Law Credits: 3
- COM 378 - Intercultural Communication Credits: 3
- COM 380 - Special Topics in Communications Credits: 1 to 6
- COM 399 - Independent Study Credits: 1 to 6
- COM 438 - Communication Ethics Credits: 3

Can include more than one COM 380. Can include no more than three credits in COM 399. Up to six COM 490 credits allowed in the core/major.

### 3. Elective Credits \*\*

At least nine credits.

Any of the following approved courses in the other School of Communications major programs:

#### Advertising and Public Relations:

- CAP 210 - Fundamentals of Advertising Credits: 3
- CAP 220 - Fundamentals of Public Relations Credits: 3
- CAP 310 - Advertising Management and Cases Credits: 3
- CAP 315 - Advertising Copywriting Credits: 3
- CAP 320 - Public Relations Management and Cases Credits: 3
- CAP 321 - Media Relations Writing Credits: 3

#### Multimedia Journalism:

- CMJ 184 - Television Media Production Credits: 3
- CMJ 236 - News in Society Credits: 3
- CMJ 256 - News Reporting Credits: 3
- CMJ 284 - Broadcast News I Credits: 3
- CMJ 290 - Journalism History Credits: 3
- CMJ 316 - News Editing and Graphics Credits: 3

#### Film and Video Production:

- CFV 123 - Survey of Media Production Modes Credits: 3
- CFV 125 - Media Production I Credits: 3

## Communications

- CFV 225 - Film Culture Credits: 3
- CFV 373 - Issues of Representation Credits: 3
- CFV 376 - Latin American Cinema Credits: 3

### Photography:

- CPH 171 - Photography I Credits: 4
- CPH 172 - Photography II Credits: 3
- CPH 175 - Understanding Still Photography Credits: 3
- CPH 266 - History of Photography I Credits: 3
- CPH 272 - Digital Photography I Credits: 3
- CPH 279 - Color Photography I Credits: 3

### Theatre:

- CTH 151 - Acting Process Credits: 3
- CTH 161 - Theatre Production Credits: 3
- CTH 162 - Play Analysis Credits: 3
- CTH 261 - Stagecraft I Credits: 3
- CTH 362 - Production Dramaturgy Credits: 3
- CTH 371 - Theatre History I Credits: 3
- CTH 372 - Theatre History II Credits: 3

### Health Communication:

- COM 209 - Health Communication Systems Credits: 3
- CAP 220 - Fundamentals of Public Relations
- COM 410 - Senior Seminar in Health Communication Credits: 3

\*\* Courses cannot count for both elective credits and communication studies core credits. COM prefix courses not otherwise applied to the major may be eligible for substitution as elective course credits, pending advisor approval. Other courses may qualify for application to the major but may not be listed, see your advisor.

## Suggested Pattern of Coursework

This option assumes students will complete the required skills, general education, and cognate courses.

### First Year:

- COM 101 - Concepts of Communication
- COM 201 - Speech
- COM 2XX

### Second Year:

- COM 202 - Critical Interpretation  
**OR** COM 203 - Argument and Analysis (both SWS)
- COM 295 - Communication Theory
- COM 2XX
- 1 class emphasis area
- 1 class emphasis area

### Third Year:

- COM 3/4XX
- COM 3/4XX
- COM 3/4XX
- 1 class emphasis area

### Fourth Year:

- COM 3/4XX
- COM 495 - Issues in Communication (Capstone)
- COM 498 - Senior Thesis/Project  
**OR** COM 490 - Internship

## Master of Science in Communications

**Website:** [www.gvsu.edu/soc](http://www.gvsu.edu/soc)

As the field of communications has matured, the value of empirically based decision-making has become increasingly clear. Communication professionals must be knowledgeable about acquiring and assessing relevant information and integrating the analysis of that information into the decision-making process.

The Master of Science degree in the School of Communications is a versatile program that meets the needs of various aspects of professional communication. Individuals in public relations, advertising, journalism, and broadcasting, to name a few, as well as those seeking a degree that will enhance their effectiveness and leadership skills within an

organization, find this to be a rewarding and beneficial program. Communication professionals who become managers and decision-makers will increasingly be selected because they have leadership skills, knowledge of theory and research and their application, the ability to access information to solve communication problems, and the ability to effectively implement information into the decision-making process. The curriculum of the master's program is attendant to these skills.

The 36-credit master's program is designed with working professionals in mind. Courses are scheduled during evenings and offered at Grand Valley's Pew Grand Rapids Campus. Taken part-time, the Master of Science in communications is completed in two to three years.

### Admission to the Master of Science in Communications Program

Applicants must provide all information required by the university. This includes official transcripts of all previous college/university coursework, a baccalaureate degree or equivalent international credential, and a 500-word essay that addresses the candidate's career goals and how the GVSU graduate program in communication is relevant to these goals. Please note the following additional criteria for admission:

- Undergraduate GPA of 3.0 on a 4.0 scale for the last 60 credits of undergraduate work.
- Applicants with less than a 3.0 may meet alternate admissions criteria such as professional work experience, personal interview, or academic success in specified courses.
- Background coursework in communication theory and research methods advisable.
- Two letters of recommendation.
- A telecommunications interview with a representative from the School of Communications.

### Course Requirements for the Master of Science in Communications

The following courses (27 credits) are required of all students.

- COM 600 - Systems Theory and Communication Credits: 3
- COM 610 - Secondary Information and Analysis Credits: 3
- COM 620 - Empirical Methods in Communication Credits: 3
- COM 634 - Ethics in Professional Communication Credits: 3
- COM 641 - Emerging Communication Technologies Credits: 3
- COM 642 - Communication Law Credits: 3
- COM 660 - Communication Management and Cases Credits: 3

### EITHER

- COM 693 - Master's Project Credits: 3  
**OR** COM 695 - Master's Thesis Credits: 6

### AND EITHER

- PA 520 - Foundations of Public Service Credits: 3  
**OR** BUS 631 - Leadership and Organizational Dynamics Credits: 3

### Elective courses Credits: 6-9

Elective courses are selected from the list as follows, from 600-level courses in business, public administration, and from other programs for which students are eligible. See the School of Communications Graduate Program Director for approval.

- COM 643 - Small Group Communication and Leadership Credits: 3
- COM 680 - Special Topics in Communications Credits: 3
- COM 699 - Independent Study Credits: 1 to 4

\*Note: Students choosing to complete a project (COM 693) must complete a minimum of nine elective credits. Students choosing to complete a thesis (COM 695) must complete a minimum of six elective credits.

## Suggested Order of Coursework for an M.S. in Communications

The following schedule assumes that the student has satisfied all background courses. For more information about the program, contact the School of Communications.

### First Year

#### Fall

- COM 600 - Systems Theory and Communication Credits: 3

**Winter**

- COM 610 - Secondary Information and Analysis Credits: 3

**Spring/Summer**

- Elective course

## Second Year

**Fall**

- COM 620 - Empirical Methods in Communication Credits: 3

**Winter**

- PA 520 - Foundations of Public Service Credits: 3
- **OR** BUS 631 - Leadership and Organizational Dynamics Credits: 3
- COM 634 - Ethics in Professional Communication Credits: 3

**Spring/Summer**

- Elective course

## Third Year

**Fall**

- Elective course
- COM 641 - Emerging Communication Technologies Credits: 3

**Winter**

- COM 642 - Communication Law Credits: 3
- COM 660 - Communication Management and Cases Credits: 3

**Spring/Summer**

- COM 693 - Master's Project Credits: 3
- **OR** COM 695 - Master's Thesis Credits: 3

## Comprehensive Science and Arts for Teaching Major - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/csat](http://www.gvsu.edu/csat)

The comprehensive science and arts for teaching (CSAT) major is designed for students seeking certification to teach in specialized areas at the elementary and/or middle school levels. It provides a solid foundation in subject-matter knowledge and pedagogical approaches across all content areas taught at these levels: fine arts, health and physical education, integrated science, language arts, mathematics, and social studies. Students complete several field experiences in classrooms, as well as learning to plan instruction and assessments and to understand and work with diverse populations, including extraordinary-needs learners. Our graduates have a unique combination of skills and experiences that are highly valued.

**Associated Programs****Special Education Program**

Students seeking special education teaching certification complete the comprehensive science and arts for teaching (CSAT) major as well as a second major in special education through the College of Education, with two special education endorsements. These additional courses include the professional program, special education core, and endorsement requirements.

Successful completion of both the CSAT major and the special education major certifies the student to teach the special education endorsement areas in kindergarten through twelfth grade. It also permits teaching any subject in kindergarten through fifth grade or any subject in kindergarten through eighth grade in self-contained classrooms. Our graduates have a unique combination of skills and experiences that are highly valued.

**Spanish Elementary Education**

Students seeking an endorsement in Spanish elementary education complete the comprehensive science and arts for teaching major and the Spanish elementary education minor, as well as a second major in elementary education through the College of Education.

Successful completion of the CSAT major, the Spanish elementary education minor and the elementary education major, as well as other state

certification requirements, certifies the student to teach Spanish and other content areas in a self-contained classroom in levels kindergarten through sixth grade (as either a specialist or in a Spanish immersion classroom), or Spanish in grades 6-8.

## Bachelor of Arts or Bachelor of Science in Comprehensive Science and Arts for Teaching

### Requirements for a Comprehensive Science and Arts for Teaching Major

Students planning to obtain a comprehensive science and arts for teaching major must complete the following requirements and must also meet with a CSAT major advisor.

**Major Requirements**

1. Language Arts
    - ENG 302 - Introduction to Language Arts: Teaching Writing and Children's Literature Credits: 3
    - ENG 308 - Teaching Reading: The Necessary Skills Credits: 4
    - ENG 400 - Critical Issues in K-12 Literacy Credits: 3
  2. Mathematics
    - **BOTH** MTH 221 - Mathematics for Elementary Teachers I Credits: 4
    - **AND** MTH 222 - Mathematics for Elementary Teachers II Credits: 3
    - **OR** MTH 223 - Mathematics for Elementary Teachers III Credits: 5
  3. Social Studies
    - SST 309 - Teaching Social Studies: Elementary Credits: 3
- AND** one of the following:
- HST 203 - World History to 1500 A.D. Credits: 3
  - HST 204 - World History since 1500 Credits: 3
  - HST 205 - American History to 1877 Credits: 3
  - HST 206 - American History since 1877 Credits: 3
4. Integrated Science
    - SCI 225 - Integrated Life Science for K-8 Teachers Credits: 4
    - SCI 226 - Integrated Physical Science for K-8 Teachers Credits: 3
  5. World Languages
    - ENG 467 - Language Disorders and English Literacy Credits: 3
    - **OR** SPA 314 - Teaching Methods Credits: 3
  6. Fine Arts
    - MAT 300 - Music, Art, and Theatre for Elementary Education Credits: 3
  7. Health and Physical Education
    - PED 265 - Teaching Health in Elementary Schools Credits: 2
    - PED 266 - Move-Dance-Learn! PE and Dance for Elementary Education Credits: 2
  8. Foundations
    - PSY 301 - Child Development Credits: 3
  9. Capstone
    - SAT 495 - Teaching Sciences and Arts in Elementary Classrooms Credits: 3

**B.A. and B.S. Degree Requirements**

Students seeking a Bachelor of Science must complete the following requirements to satisfy program requirements:

- STA 215 - Introductory Applied Statistics Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- **OR** HST 290 - Research Methods in History Credits: 3
- SAT 495 - Teaching Sciences and Arts in Elementary Classrooms Credits: 3

Students seeking a Bachelor of Arts in the comprehensive science and arts for teaching major must demonstrate third-semester proficiency in a foreign language by successfully completing a 201-level language course, passing a proficiency exam in the language chosen or through AP credit.

## Computer Information Systems

Suggested Order of Coursework for the Comprehensive Science and Arts for Teaching Major

### First Year:

- HST 205 - American History to 1877 Credits: 3
- PED 265 - Teaching Health in Elementary Schools Credits: 2
- PED 266 - Move-Dance-Learn! PE and Dance for Elementary Education Credits: 2
- SCI 225 - Integrated Life Science for K-8 Teachers Credits: 4

### Second Year:

- MAT 300 - Music, Art, and Theatre for Elementary Education Credits: 3
- MTH 221 - Mathematics for Elementary Teachers I Credits: 4
- PSY 325 - Educational Psychology Credits: 3
- SCI 226 - Integrated Physical Science for K-8 Teachers Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Third Year:

- ENG 302 - Introduction to Language Arts: Teaching Writing and Children's Literature Credits: 3
- ENG 308 - Teaching Reading: The Necessary Skills Credits: 4
- ENG 400 - Critical Issues in K-12 Literacy Credits: 3
- ENG 467 - Language Disorders and English Literacy Credits: 3
- MTH 222 - Mathematics for Elementary Teachers II Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- SAT 495 - Teaching Sciences and Arts in Elementary Classrooms Credits: 3
- SPA 314 - Teaching Methods Credits: 3
- SST 309 - Teaching Social Studies: Elementary Credits: 3

## Endorsement Areas

The comprehensive science and arts for teaching major is designed for students seeking certification to teach in specialized areas at the elementary and/or middle school levels, and is combined with either of the following programs:

The special education major in the College of Education. The CSAT major is required for the special education endorsements (cognitive impairment, emotional impairment, learning disabilities, and early childhood education), but it is only one part of the requirements for teacher certification.

The Spanish elementary education minor (in the department of modern languages) and the elementary education major in the College of Education. The CSAT major is required for the endorsement in Spanish elementary education, but it is only one part of the requirements for teacher certification.

## Master of Science in Computer Information Systems - Program Description

For additional information about opportunities your college offers, please refer to the Seymour and Esther Padnos College of Engineering and Computing section of this catalog.

The Master of Science degree in computer information systems is offered in the School of computing and information systems. The primary purpose of the program is to make educational opportunities available to the professional computing community in West Michigan. It is intended for computer professionals who are already working in industry. Because the Master of Science degree in computer information systems is offered for the working professional, the courses are scheduled in a one night per week (6-9 p.m.) format and located downtown at the Pew Grand Rapids Campus in Kennedy Hall. The program consists of eleven 3-credit courses (33 credit hours), consisting of two content areas of 9 credits each, electives, and either a Capstone course, a project course or a thesis option. The content areas available are biomedical informatics, database management, distributed computing, information systems management, software design and development, and software engineering. The last

two courses in the content area must be completed at Grand Valley State University.

### Degrees Offered

M.S. in computer information systems.

The Master of Science degree in computer information systems is offered in the School of Computing and Information Systems. It provides a solid foundation in computer information systems for working professionals and those with prior experience in computer science and information systems.

### School of CIS Mission

The mission of the School of Computing and Information Systems is to provide the GVSU student community with the intellectual foundations and experiences necessary to use information technology effectively in their chosen careers.

To enable students to attain this goal, the CIS faculty have two primary responsibilities. First, we will offer a solid conceptual foundation required for a career in information technology. Second, we will provide direct, experiential knowledge of technology necessary to be a productive user/producer of information technology.

To achieve these goals, we

- work continuously to keep our curriculum relevant to our mission;
- ensure that work-relevant experience is part of every class;
- establish and nurture industrial contacts;
- establish an integrated, supported co-op experience for CIS majors; and
- provide all students, regardless of their major interests, fundamental knowledge of computers and information processing.

**Website:** [www.cis.gvsu.edu/graduate/cis](http://www.cis.gvsu.edu/graduate/cis)

### Admission

In addition to the requirements listed in the Graduate Admission section, candidates must satisfy all of the following:

- All international students must have a satisfactory score on their GRE Test;
- U.S. students with a GPA below 3.0 from all of their undergraduate coursework must contact the School of Computing and Information Systems for advising.
- Candidates must possess knowledge of a programming language.
- Candidates are expected to possess knowledge in the following areas. Candidates lacking coursework or work experience in one or more of these may be considered for conditional admission. Please speak with the Graduate Program Director for advising.
  - Computer architecture and/or organization
  - Data structures and algorithms
  - Databases
  - Discrete math
  - Networking
  - Operating systems
  - Software engineering
- Submit acceptable recommendations from at least two individuals attesting to the likelihood of the candidate's successful completion of the program.
- Submit a resume detailing work experiences and accomplishments.
- Submit a personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.

### Program Location

Courses are normally scheduled in the evenings from 6-9 p.m. downtown at the Pew Grand Rapids Campus in Kennedy Hall.

### Minimum Number of Hours for Graduation

Eleven three-credit courses (33 credit hours) comprise the Master of Science in computer information systems degree.

## Requirements for the M.S. in Computer Information Systems

All candidates for the degree must complete a total of 33 credits, as indicated as follows:

- Foundation courses (6 credits)
- Core (9 credits)
- Concentration (9 credits)
- Electives (3 or 6 credits)
- Capstone (3 or 6 credits)

## Master of Science in Computer Information Systems

### Requirements for the M.S. in Computer Information Systems

All candidates for the degree must complete a total of 33 credits, as indicated as follows:

- Foundation courses (6 credits)
- Core (9 credits)
- Concentration (9 credits)
- Electives (3 or 6 credits)
- Capstone (3 or 6 credits)

### Foundation Courses (6 credits)

All candidates are expected to complete the two foundation courses, CIS 500 and CIS 501. However, a placement exam can be taken to demonstrate proficiency in the topics covered by the Foundation courses. A successful score on the placement exam will result in waiving the requirement of the Foundation Courses (33 credits are still required for the degree).

- CIS 500 - Fundamentals of Software Practice Credits: 3
- CIS 501 - Fundamentals of Modern Computer Systems Credits: 3

### Core (9 credits)

Students are required to complete one course in three of the following areas:

#### Data Engineering

- CIS 673 - Principles of Database Design Credits: 3

#### Management of Systems Development

- CIS 641 - Systems Analysis and Design Credits: 3
- CIS 642 - IS Project Management Credits: 3

#### Software Engineering

- CIS 611 - Introduction to Software Engineering Credits: 3
- CIS 612 - Requirements Specification Credits: 3
- CIS 613 - Software Testing Credits: 3
- CIS 622 - Software Design Methodologies Credits: 3

#### Networking

- CIS 654 - Computer Networking Credits: 3

### Concentrations

All candidates are required to complete one of the following concentrations:

#### Biomedical Informatics

- CIS 661 - Introduction to Medical and Bioinformatics Credits: 3
- AND** two of the following:
- CIS 635 - Knowledge Discovery and Data Mining Credits: 3
  - CIS 660 - Information Management and Science Credits: 3
  - CIS 665 - Clinical Information Systems Credits: 3
  - CIS 671 - Information Visualization Credits: 3
  - CIS 677 - High-performance Computing Credits: 3
  - CIS 678 - Machine Learning Credits: 3

#### Cybersecurity

- CIS 615 - Information Security Principles Credits: 3
- AND** two of the following:
- CIS 616 - Data Security and Privacy Credits: 3
  - CIS 617 - Digital Forensics and Investigations Credits: 3
  - CIS 618 - Secure Software Engineering Credits: 3

#### Database Management

- CIS 673 - Principles of Database Design Credits: 3
- CIS 676 - Database Systems Performance Credits: 3
- CIS 679 - Advanced Topics in Database Management Credits: 3

#### Distributed Computing

- CIS 654 - Computer Networking Credits: 3
- CIS 656 - Distributed Systems Credits: 3
- CIS 658 - Web Architectures Credits: 3

#### Information Systems Management

- CIS 641 - Systems Analysis and Design Credits: 3
- CIS 642 - IS Project Management Credits: 3
- CIS 643 - Information Systems Policy and Strategy Credits: 3

#### Software Design and Development

- CIS 611 - Introduction to Software Engineering Credits: 3
- CIS 641 - Systems Analysis and Design Credits: 3

#### Electives (choose one):

- CIS 657 - Mobile Application Development Credits: 3
- CIS 673 - Principles of Database Design Credits: 3

#### Software Engineering

- CIS 611 - Introduction to Software Engineering Credits: 3
- CIS 612 - Requirements Specification Credits: 3
- CIS 613 - Software Testing Credits: 3

#### Web and Mobile Computing

- CIS 657 - Mobile Application Development Credits: 3
- CIS 658 - Web Architectures Credits: 3

#### **AND** one of the following:

- CIS 654 - Computer Networking Credits: 3
- CIS 656 - Distributed Systems Credits: 3
- CIS 673 - Principles of Database Design Credits: 3

### Additional Elective Courses

Any 500- or 600-level CIS course (other than Foundations courses) can be used as an elective toward the MS-CIS degree. Current electives include:

- CIS 623 - Graphical User Interface Design Credits: 3
- CIS 672 - Computer Systems Architecture Credits: 3
- CIS 675 - Compiler Construction Credits: 3

### Capstone

Each candidate must complete either the Capstone course, the project course, or the thesis sequence. Please contact the graduate program director one semester prior to starting any of these.

- CIS 693 - Master's Project Credits: 3
- CIS 690 - Thesis Research Preparation Credits: 3
- CIS 692 - Master's Capstone Credits: 3

## Computer Science - Program Description

For additional information about opportunities your college offers, please refer to the Seymour and Esther Padnos College of Engineering and Computing section in this catalog.

**Website:** [www.cis.gvsu.edu/degrees/cs](http://www.cis.gvsu.edu/degrees/cs)

### Degrees Offered

M.S. in computer information systems, M.S. in medical and bioinformatics. B.S. in computer science, B.S. in information systems. Minors offered: computer engineering, computer science, computer science (6-12 secondary teacher certification), health care information systems, information security systems, information systems, and information technology.

Undergraduate and graduate computing programs at Grand Valley State University are offered by the School of Computing and Information Systems. Computing programs prepare IT professionals for a rewarding career that is in high-demand.

One of the strengths of the computing programs at Grand Valley is flexibility. We offer majors in computer science and information systems. All programs share faculty, courses, and laboratory resources. Also, by

## Computer Science

choosing electives and minors in related subject areas, students can further tailor their degrees to fit their individual needs and career goals.

Two key elements in computer education are a theoretical foundation and practical experience. Computer science majors prepare to design and implement software, discover new uses of computing, and to solve computing problems.

Theoretical and practical aspects of computing are emphasized. Operating systems, software engineering, data communications, programming languages and their implementation, and the analysis of algorithms are among the topics covered. Cognate courses emphasize communication and analytical reasoning.

### School of CIS Mission

The mission of the School of Computing and Information Systems is to provide the GVSU student community with the intellectual foundations and experiences necessary to use information technology effectively in their chosen careers.

To enable students to attain this goal, the CIS faculty have two primary responsibilities. First, we offer a solid conceptual foundation required for a career in information technology. Second, we provide direct, experiential knowledge of technology necessary to be a productive user/producer of information technology.

To achieve these goals, we

- work continuously to keep our curriculum relevant to our mission;
- ensure that work-relevant experience is part of every class;
- establish and nurture industrial contact;
- establish an integrated, supported co-op experience for CIS majors; and
- provide all students, regardless of their major interests, fundamental knowledge of computers and information processing.

### Computer Science Objectives

Three years after graduation, our typical computer science alumni are expected to be computing professionals who:

- Use technical communication and teamwork skills to solve problems and develop software systems.
- Continue to develop their professional knowledge and skills.
- Behave ethically while contributing to their profession and to society.

By the time of graduation, computer science students will:

- Demonstrate an understanding and apply computing fundamentals, contemporary computing topics, and mathematical principles to solve problems.
- Use integrated development tools with a variety of programming languages, and familiarity with more than one computing platform.
- Analyze a problem and design, implement, and test software systems of varying complexity to meet desired needs.
- Demonstrate an understanding of ethical, professional, and social responsibilities; and the ability to analyze the impact of computing in a global context.
- Function effectively on teams.
- Communicate effectively with a range of audiences.
- Show recognition of the need for, and ability to engage in, continuing professional development.

### Accreditation

The computer science major is accredited under the General Criteria and Computer Science Criteria by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD, 21202-4012. Telephone: (410) 347-7700, [www.abet.org](http://www.abet.org).

The information systems major is accredited under the General Criteria and Information Systems Criteria by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: (410) 347-7700, [www.abet.org](http://www.abet.org).

### The School of Computing and Information Systems Advisory Board

The School of Computing and Information Systems Advisory Board (CISAB) is composed of the school's director and leading computing and information systems experts in West Michigan. The board meets twice each year and advises the school on curriculum development and continuing education. It serves as an important interface between the school and the computing community.

### Admission to the Computer Science Major

Admission to major standing in computer science (CS) is competitive and requires an application for admittance into the major. Applicants must meet the following criteria:

1. Overall GPA of 2.5 or above in all Grand Valley State University coursework.
2. Completion of each course in the CS Foundation with a grade of C or above (C- is not sufficient).
3. GPA of 2.5 or above in the CS Foundation or the IS Foundation.

The CS foundation includes CIS 162 and 163; MTH 225; STA 215, 312 or 318; and either COM 201 or WRT 350. Completing the CS foundation courses require programming, analytical reasoning, and communication skills. These skills are important to excel in the computing field.

The CS foundation GPA is calculated on no more than one repeat per course. Achievement of the minimum requirements does not guarantee admission to the major. The School of CIS will also consider internship availability and the applicant's suitability for internships before granting admission. Transfer students must complete at least six hours of CIS coursework before applying, but should consult with a CIS advisor before scheduling their first semester.

Note: While admission to major standing in computer science may be achieved with completion of the Information Systems foundation instead of the CS foundation, it is still necessary to complete all the required courses of the computer science major.

### Participating Programs

The School of Computing and Information Systems currently is participating with the following programs/colleges/schools to offer students varying computing programs.

- The professional science master's program: Master of Science in medical and bioinformatics
- The School of Engineering: computer engineering major
- The School of Engineering: computer engineering minor
- The Allied Health Sciences Department in The College of Health Professions: healthcare information systems minor
- The School of Criminal Justice: information security systems minor

### Honors Organizations

**Upsilon Pi Epsilon** is the international Honor Society for the Computing and Information disciplines. The Gamma Chapter of Michigan (GVSU's student chapter) was established on April 4, 1992. It has received endorsements from the two largest computer organizations in the world, the Association for Computing Machinery (ACM), and the IEEE Computer Society (IEEE-CS). According to certain criteria, students are invited to become members and are inducted at the Initiation Ceremony, which is scheduled in the fall of each year.

To be eligible for election to membership, undergraduate students

1. shall have attained a general scholarship rating, in all college work thus far completed, of not less than 3.0/4.0 grade-points provided; and
2. shall have completed at least 45 semester hours of college work including 15 semester hours in the basic courses in the computing and information disciplines.

## Bachelor of Science in Computer Science

Students who wish to major in computer science must complete the following.

## Requirements for a Major in Computer Science

### 1. University Degree Requirements

As identified in the General Academic Regulations section of the catalog.

### 2. Admission to the Computer Science Major

Admission to major standing in computer science (CS) or information systems (IS) is competitive and requires an application for admittance into the major. Applicants must meet the following criteria:

1. Overall GPA of 2.5 or above in all Grand Valley State University coursework.
2. Completion of each course in the CS foundation or the IS foundation with a grade of C or above (C- is not sufficient).
3. GPA of 2.5 or above in the CS foundation or the IS foundation.

The CS foundation includes CIS 162 and CIS 163; MTH 225; STA 215, STA 312; and COM 201. (The IS foundation is listed in the catalog with the information systems major.) Completing the CS (or IS) foundation courses requires programming, analytical reasoning, and communication skills. These skills are important to excel in the computing field.

The CS/IS foundation GPA is calculated on no more than one repeat per course. Achievement of the minimum requirements does not guarantee admission to the major. The School of CIS will also consider internship availability and the applicant's suitability for internships before granting admission. Transfer students must complete at least six hours of CIS coursework before applying, but should consult with a CIS advisor before scheduling their first semester.

Note: While admission to major standing in computer science may be achieved with completion of the IS foundation instead of the CS foundation, it is still necessary to complete all the required courses of the computer science major.

### 3. Computer Science Major

All computer science majors must complete the following 41-44 credits of required CIS classes and nine hours of CIS electives with a minimum 2.0 GPA.

#### Required Computer Science Courses

- CIS 162 - Computer Science I Credits: 4
- CIS 163 - Computer Science II Credits: 4
- CIS 241 - System-level Programming and Utilities Credits: 3
- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 290 - CIS Internship Preparation Credits: 1
- CIS 343 - Structure of Programming Languages Credits: 3
- CIS 350 - Introduction to Software Engineering Credits: 3
- CIS 351 - Computer Organization and Assembly Language Credits: 4
- CIS 353 - Database Credits: 3
- CIS 452 - Operating Systems Concepts Credits: 4
- CIS 457 - Data Communications Credits: 4
- CIS 467 - Computer Science Project Credits: 3 (Capstone course)
- CIS 490 - Internship Credits: 2 to 5

#### Computer Science Elective Courses

All computer science majors must select three electives (at least nine hours) from the following:

- CIS 335 - Data Mining Credits: 3
- CIS 357 - Mobile Application Development Credits: 3
- CIS 360 - Information Management and Science Credits: 3
- CIS 365 - Artificial Intelligence Credits: 3
- CIS 367 - Computer Graphics Credits: 3
- CIS 368 - Usability Design and Evaluation Credits: 3
- CIS 371 - Web Application Programming Credits: 3
- CIS 375 - Wireless Networking Systems Credits: 3
- CIS 380 - Special Topics in Computer Information Systems Credits: 1 to 4
- CIS 430 - Computer and Cyber Forensics
- CIS 443 - Software Development Tools Credits: 3
- CIS 451 - Computer Architecture Credits: 3
- CIS 458 - System Security Credits: 3

- CIS 461 - Compiler Design and Construction Credits: 3
- CIS 465 - Automata and Theory of Computation Credits: 3
- CIS 480 - Special Topics in Computer Information Systems Credits: 1 to 4

### 4. Cognate Courses

Computer science majors must complete the following cognate courses.

Required:

- COM 201 - Speech Credits: 3
- MTH 201 - Calculus I Credits: 4
- MTH 225 - Discrete Structures: Computer Science Credits: 3
- MTH 325 - Discrete Structures: Computer Science 2 Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- **OR** STA 312 - Probability and Statistics
- WRT 350 - Business Communication Credits: 3

Select one math elective:

- MTH 202 - Calculus II Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- MTH 465 - Automata and Theory of Computation Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
- STA 418 - Statistical Computing and Graphics with R Credits: 3

Select one science elective:

- BIO 120 - General Biology I Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 4
- PHY 220 - General Physics I Credits: 5
- PHY 230 - Principles of Physics I Credits: 5

## Suggested Order of Coursework for a Major in Computer Science

This suggested order of coursework assumes that students will complete the CS foundation and general education courses with the help of their advisor and apply for admission at the end of the winter semester of their first year. The following course sequence also assumes a strong mathematics background for the entering student. If mathematics deficiencies exist, completing the mathematics prerequisites should be the student's top priority.

### First Year

- CIS 162 - Computer Science I Credits: 4
- MTH 124 - Precalculus: Functions and Models Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3
- General education course
- CIS 163 - Computer Science II Credits: 4
- COM 201 - Speech Credits: 3
- MTH 225 - Discrete Structures: Computer Science Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

### Second Year

- CIS 241 - System-level Programming and Utilities Credits: 3
- CIS 290 - CIS Internship Preparation Credits: 1
- MTH 201 - Calculus I Credits: 4
- MTH 325 - Discrete Structures: Computer Science 2 Credits: 3
- General education course
- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 351 - Computer Organization and Assembly Language Credits: 4
- Math elective
- General education courses

### Third Year

- CIS 350 - Introduction to Software Engineering Credits: 3
- CIS 353 - Database
- CIS 457 - Data Communications Credits: 4
- General education courses
- CIS 343 - Structure of Programming Languages Credits: 3
- Computer science elective
- Science elective
- General education course

### Fourth Year

- CIS 452 - Operating Systems Concepts Credits: 4
- WRT 350 - Business Communication Credits: 3

## Criminal Justice

- Computer science elective
- General education course
- CIS 467 - Computer Science Project Credits: 3
- CIS 490 - Internship Credits: 2 to 5
- Computer science elective
- General education course

## Computer Science Minor

### Requirements for a Minor in Computer Science

The following minor requires a minimum GPA of 2.0 to be approved.

- CIS 162 - Computer Science I Credits: 4
- CIS 163 - Computer Science II Credits: 4
- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 350 - Introduction to Software Engineering Credits: 3
- CIS 351 - Computer Organization and Assembly Language Credits: 4
- MTH 225 - Discrete Structures: Computer Science Credits: 3
- MTH 325 - Discrete Structures: Computer Science 2 Credits: 3

Select one of the following:

- CIS 353 - Database Credits: 3
- CIS 241 - System-level Programming and Utilities Credits: 3
- CIS 457 - Data Communications Credits: 4

## Computer Science Minor (6–12 Secondary Teacher Certification)

### Requirements for a Minor in Computer Science for Teacher Certification

The following minor requires a GPA of 2.7 to be recommended for teacher certification.

- CIS 162 - Computer Science I Credits: 4
- CIS 163 - Computer Science II Credits: 4
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 237 - Introduction to Network Management Credits: 3
- CIS 309 - Teaching Computer Science Credits: 3
- CIS 351 - Computer Organization and Assembly Language Credits: 4
- MTH 225 - Discrete Structures: Computer Science Credits: 3  
OR MTH 227 - Linear Algebra I Credits: 3 (for math certification majors)

## Criminal Justice - Program Description

For additional information about opportunities, please refer to the College of Community and Public Service section in this catalog.

**Website:** [www.gvsu.edu/cj](http://www.gvsu.edu/cj)

The School of Criminal Justice offers a bachelor of science or Bachelor of Arts and a master's degree in criminal justice. Students take a variety of required and elective courses to educate them as critical thinkers and to provide them with a comprehensive knowledge of the field. The school also offers an undergraduate major in legal studies for students seeking to become paralegals. For information about the paralegal program, consult the legal studies section in the Grand Valley State University Undergraduate and Graduate Catalog. Summer course offerings will be determined on an annual basis. Please check the schedule of courses.

### School of Criminal Justice Mission Statement

**Vision:** The School of Criminal Justice educates students to become knowledgeable, competent, and ethical leaders in the criminal justice and legal professions.

**Mission:** To promote the growth of students through teaching, mentoring, creative scholarship, and community engagement.

Graduates will possess a solid foundation of knowledge and performance skills in the criminal justice field and legal system and will also have the ability to make ethically sound and appropriate decisions in response to the challenges presented to them in their professional and personal lives.

Faculty and staff of the School of Criminal Justice will demonstrate, model, and promote a respect for diversity and commitments to integrity, intellectual and moral virtues, and lifelong learning through effective teaching, active scholarship, and service.

### The Michigan State Requirements for Certification in Law Enforcement

The School of Criminal Justice at Grand Valley State University operates a Michigan Commission on Law Enforcement Standards (MCOLES) approved Police Academy during the summer months. The program leads to eligibility for law enforcement licensing in Michigan. The courses taken in this program can also be used for graduation. Non-Grand Valley students who meet the MCOLES minimum eligibility requirements may apply. The Grand Valley Police Academy has a proven reputation for excellence. Entry is extremely competitive and is not guaranteed. Those wishing to apply will be required to pass the MCOLES Reading and Writing and Physical Agility tests and meet the minimum state standards as part of the application process. Grand Valley State University students may apply for the academy during their senior year. Non-Grand Valley students must possess at least an Associate's degree prior to the start date of the academy. Application packets will be available on our website ([www.gvsu.edu/cj/policeacademy](http://www.gvsu.edu/cj/policeacademy)) during the yearly application process. MCOLES requirements can be found at [www.mcoles.org](http://www.mcoles.org) under the Licensure and Professional Development section.

Grand Valley State University offers two unique police academy programs: a 16-week Basic Police Academy and an abbreviated eight week Military Police Basic Training Program (MPBTP) designed specifically for military police veterans. Both academy programs are conducted during the spring and summer semester. Upon completion of either program, participants will have all of the qualifications necessary to be a licensed law enforcement officer in the State of Michigan. Students selected to attend the 16-week Basic Police Academy must enroll in the following courses (15 credits): CJ 415, CJ 416, CJ 417, CJ 418, and CJ 419. Students selected to attend the 8-week MPBTP must enroll in the following courses (6 credits): CJ 415 and CJ 416.

Eligibility for the MPBTP requires that a candidate must have performed as a military police officer (in any branch of the US Military) for a minimum of 2,080 hours in a specified law enforcement MOS; have satisfactorily completed military police training at a federal service school; possess an honorable discharge or be currently serving; and not be separated from employment in a specified law enforcement MOS for more than five years.

### Internships

The School of Criminal Justice allows selected students to complete internships at specified job sites. Upper-division undergraduate students may elect from one to nine hours of CJ 490 if they are approved by the internship coordinator and a job site supervisor unless otherwise specified by a particular organization. Students taking three credits of CJ 490, are normally expected to put in 15 hours at the internship site per week. Credit hours are based on site requirements. Graduate students without prior criminal justice or private security work experience are highly encouraged to complete a CJ 640 internship (see Criminal Justice Master Degree Requirements). No more than six credit hours may be applied to the undergraduate major; no more than three credit hours may be applied to the graduate internship. To apply for an internship, contact the internship coordinator.

### Honors Organizations

Alpha Phi Sigma is the nationally recognized honor society for students in the criminal justice sciences. The society recognizes academic excellence by undergraduates and graduate students of criminal justice. Members participate in many activities, including community service, career workshops, and fundraisers.

## Bachelor of Arts or Bachelor of Science in Criminal Justice

### Requirements for a Major in Criminal Justice

To complete the requirements for graduation with a bachelor's degree in criminal justice or legal studies, students must fulfill the general education requirements. While most courses taken at accredited colleges and universities are transferable for full credit, only four courses will be considered toward criminal justice major programs. Students should take at least two-thirds of the credits constituting their major from Grand Valley State University.

### Bachelor of Arts or Bachelor of Science Degree Requirements

#### Requirements for B.A. Degree

- The B.A. degree requires third-semester proficiency in a foreign language.

#### Requirements for B.S. Degree

- STA 215 - Introductory Applied Statistics Credits: 3
- CJ 300 - Research Methods in Criminal Justice Credits: 3
- CJ 400 - Qualitative Methods Credits: 3

### Core Courses/Major Degree Requirements for B.A. and B.S. Degrees

All majors must take the following nine courses. Credit hours: 27

- CJ 101 - Justice and Society Credits: 3
- CJ 201 - Criminology Credits: 3
- CJ 305 - Constitutional Rights and Civil Liberties Credits: 3
- CJ 312 - Police Process Credits: 3
- CJ 330 - Correctional Process Credits: 3
- CJ 340 - Courts Process Credits: 3
- CJ 350 - Juvenile Justice Process Credits: 3
- CJ 482 - Culture, Crime and Justice Credits: 3
- CJ 495 - Issues in Criminal Justice (Capstone) Credits: 3

### Electives

In addition, majors must select 12 credit hours of electives from criminal justice courses (not including the B.S. degree course requirements CJ 300 and CJ 400 or Police Academy courses (CJ 415, 416, 417, 418, and 419.)

That is, they may choose from:

- CJ 302 - Criminal Law Credits: 3
- CJ 311 - Criminal Investigation Credits: 3
- CJ 315 - Principles of Security Credits: 3
- CJ 320 - Crimes Against Women Credits: 3
- CJ 325 - Criminal Justice and Human Rights Credits: 3
- CJ 355 - Youth Culture and Crime Credits: 3
- CJ 360 - Inside-Out Prison Exchange Program Credits: 3
- CJ 370 - Environmental Crime and Justice Credits: 3
- CJ 380 - Special Topics in Criminal Justice and Legal Studies Credits: 1 to 3
- CJ 399 - Independent Readings in Criminal Justice Credits: 1 to 3
- CJ 405 - Terrorism Credits: 3
- CJ 408 - White-Collar and Corporate Crime Credits: 3
- CJ 411 - Community Policing Credits: 3
- CJ 420 - Juvenile Correctional Counseling Credits: 3
- CJ 442 - Victimology Credits: 3
- CJ 464 - Security Management Credits: 3
- CJ 465 - Criminal Justice Administration Credits: 3
- CJ 490 - Criminal Justice Internship Credits: 1 to 9
- CJ 499 - Independent Study and Research Credits: 1 to 3

### Grand Valley Police Academy

The GVSU Basic Police Academy is an annual 16-week intensive program that meets the Michigan Commission on Law Enforcement Standards (MCOLES) training requirements and prepares students for the Michigan Law Enforcement Licensing Examination. Upon completion of the program, participants will have all of the qualifications necessary to be a licensed law enforcement officer in the State of Michigan. Students enrolled in the GVSU police academy must take the following courses (a total of 15 credits):

### Core Courses

- CJ 415 - Law Enforcement Physical Education, Defensive Tactics and Firearms Credits: 3
- CJ 416 - Special Operations and Training Credits: 3
- CJ 417 - Criminal Investigations II Credits: 3
- CJ 418 - Patrol and Traffic Administration and Procedure Credits: 3
- CJ 419 - Michigan Criminal Law Credits: 3

Courses recommended for prospective Police Academy applicants:

- CJ 302 - Criminal Law Credits: 3
- CJ 305 - Constitutional Rights and Civil Liberties Credits: 3
- CJ 311 - Criminal Investigation Credits: 3
- CJ 465 - Criminal Justice Administration Credits: 3
- CJ 490 - Criminal Justice Internship Credits: 1 to 9

### Grand Valley Military Police Basic Training Program

The GVSU Military Police Veteran's Academy is an annual eight-week intensive program designed to transition eligible candidates to a civilian law enforcement career. The program meets the Michigan Commission on Law Enforcement Standards (MCOLES) training requirements and prepares students for the Michigan Law Enforcement Licensing Examination. To be eligible for consideration, a candidate must have performed as a military police officer (in any branch of the US Military) for a minimum of 2,080 hours in a specified law enforcement MOS; have satisfactorily completed military police training at a federal service school; possess an honorable discharge or be currently serving; and not be separated from employment in a specified law enforcement MOS for more than five years. Upon completion of the program, participants will have all of the qualifications necessary to be a licensed law enforcement officer in the State of Michigan. Students enrolled in the GVSU military police basic police training program must take the following courses (a total of 6 credits):

- CJ 415 - Law Enforcement Physical Education, Defensive Tactics and Firearms Credits: 3
- CJ 416 - Special Operations and Training Credits: 3

### Suggested Order of Coursework for a Major in Criminal Justice (B.A.)

#### Year 1

- WRT 150 (basic skills) Credits: 4
- CJ 101 (general education/SS and CJ core) Credits: 3
- General education course (ART, P&L, SS, or MTH) Credits: 3
- Foreign Language 101 (cognate) Credits: 4 (To ensure proper placement, contact the modern languages department for testing)
- MTH 110 (basic skills) Credits: 4
- General education course (ART, P&L, SS, or MTH) Credits: 3
- General education course (ART, P&L, HST, SS, or MTH) Credits: 3
- Foreign Language 102 (cognate) Credits: 4

#### Year 2

- General education science course (with lab) Credits: 4 to 5
- CJ 201 (CJ core) Credits: 3
- General education course (ART, P&L, SS, or MTH) Credits: 3
- Foreign Language 201 (cognate) Credits: 4
- Minor or general elective course Credits: 1
- General education science course (nonlab) Credits: 3
- General education course (ART, P&L, SS, or MTH) Credits: 3
- CJ 312, CJ 330, CJ 340 or CJ 350 (CJ core) Credits: 3
- CJ 312, CJ 330, CJ 340 or CJ 350 (CJ core) Credits: 3
- Minor or general elective course Credits: 3

#### Year 3

- CJ 312, CJ 330, CJ 340 or CJ 350 (CJ core) Credits: 3
- CJ 305 (CJ core) Credits: 3
- World Perspectives course (general education) Credits: 3
- General education Issues course Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 1
- CJ major elective Credits: 3
- General education Issues course Credits: 3

## Criminal Justice

- CJ 482 (CJ core) Credits: 3
- General education U.S. Diversity course Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 1

### Year 4

- CJ major elective Credits: 3
- CJ major elective Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 3
- CJ 495 (Capstone - CJ core) Credits: 3
- CJ major elective Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 3

## Suggested Order of Coursework for a Major in Criminal Justice (B.S.)

### Year 1

- WRT 150 (basic skills) Credits: 4
- CJ 101 (general education/SS and CJ core) Credits: 3
- General education science course (with lab) Credits: 4
- General education course (ART, P&L, SS, or HST) Credits: 3
- MTH 110 (basic skills) Credits: 4
- General education course (ART, P&L, SS, or HST) Credits: 3
- General education science course (nonlab) Credits: 3
- Minor or general elective course Credits: 3

### Year 2

- CJ 201 (CJ core) Credits: 3
- STA 215 (general education/MTH SCI and CJ cognate) Credits: 3
- General education World Perspectives course (general education) Credits: 3
- General education course (Art, P&L, SS or HST) Credits: 3
- Minor or general elective course Credits: 3
- CJ core (CJ 312, CJ 330, or CJ 350) Credits: 3
- CJ core (CJ 312, CJ 330, or CJ 350) Credits: 3
- General education U.S. Diversity course Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 3

### Year 3

- CJ 300 (CJ cognate) Credits: 3
- CJ 305 (CJ core) Credits: 3
- CJ 340 (CJ core) Credits: 3
- General education Issues course Credits: 3
- General education Issues course Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 3
- CJ core (CJ 312, CJ 330, or CJ 350) Credits: 3
- CJ 400 (CJ cognate and SWS) - CJ 300 prerequisite Credits: 3
- Minor or general elective course Credits: 3

### Year 4

- CJ major elective Credits: 3
- CJ major elective Credits: 3
- CJ 482 (CJ core) Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 3
- CJ 495 (Capstone - major) Credits: 3
- CJ major elective Credits: 3
- CJ major elective Credits: 3
- Minor or general elective course Credits: 3
- Minor or general elective course Credits: 3

## Master of Science in Criminal Justice

Website: [www.gvsu.edu/cj](http://www.gvsu.edu/cj)

The 33-36 credit hour Master of Science degree in criminal justice at Grand Valley State University is designed to prepare graduate students

to be criminal justice leaders, planners, practitioners and academicians. The program's mission is to improve the criminal justice profession by producing exemplary graduates who are ethical, capable leaders and managers with a high level of knowledge, skills, and organizational wisdom. Our program also seeks to create a dynamic community of criminal justice professionals and scholars who will work in concert to critique, challenge, and advance the study and practice of criminal justice. Our faculty believes that professional education is best reinforced by concrete application of theoretical concepts. Graduate courses will provide students the opportunity to apply to their agencies or professional endeavors the skills, concepts, and knowledge acquired in the program. The result of this applied process is a bridge between theory and practice and between the classroom and the professional field.

The criminal justice curriculum encompasses applied concepts of ethics, political and social justice, historical analysis of institutions and policy, leadership and management, theories and research. The curriculum also prepares students who plan to apply to a doctoral program with appropriate theoretical, research, analytical and critical interpretation skills.

### School of Criminal Justice Vision and Mission Statement

**Vision:** The School of Criminal Justice educates students to become knowledgeable, competent, and ethical leaders in the criminal justice and legal professions.

**Mission:** To promote the growth of students through teaching, mentoring, creative scholarship and community engagement.

### Admission to Master of Science in Criminal Justice Program

- Undergraduate GPA of at least a 3.0 on a 4.0 scale calculated from the last 60 hours of undergraduate work.
- Three letters of recommendation (at least two are from current or former professors).
- A personal statement essay detailing academic preparation, background experiences and professional, educational and career goals for entry into a master's program in criminal justice, and any special topic areas that you would like to pursue at the master's level.
- The Graduate Committee reserves the right to require additional information it deems appropriate, including GRE test scores and writing samples. The committee may also require applicants to appear for an oral interview. The decisions of the Graduate Committee are final.
- Students who have not earned a degree in criminal justice or criminology may be required to take undergraduate criminal justice courses at the discretion of the MCJ graduate program coordinator. Approved courses such as, introduction to criminal justice, criminology, research methods, and statistics are highly recommended.
- Applications for fall admission should be received by May 1; winter admission applications should be received by November 1.

### Transfer Credit

Up to nine hours of transfer credit may be applied to the degree program. Such credit must meet the requirements specified in the Transfer of Credit section of this catalog, be recommended as applicable to the degree program by a graduate faculty advisor, and be approved for transfer application by the MCJ graduate program coordinator.

### Dual Credit

In accordance with Grand Valley State University policy, undergraduates may enroll in some graduate courses (see prerequisites) but must have at least a 3.0 GPA, have completed 85 semester hours, and obtain permission from the MCJ graduate program coordinator. Credit earned can be used as part of an undergraduate program or as part of a future graduate program but cannot be used for both purposes.

### Program Location

Pew Grand Rapids Campus, DeVos Center

## Requirements for the M.S. in Criminal Justice

Students must complete a minimum of 33-36 graduate courses: 18-hours of core courses, and 18 hours of electives with a comprehensive examination or nine- hours of electives with a six-credit hour thesis.

### Core

Core of required courses consists of 18 credit hours as follows:

- CJ 600 - Qualitative Methodology Credits: 3
- CJ 601 - Criminal Justice Leadership Credits: 3
- CJ 602 - Legal and Ethical Issues Credits: 3
- CJ 604 - Criminal Justice Policy and Program Evaluation Credits: 3
- CJ 606 - Research Methodology and Data Analysis Credits: 3
- CJ 607 - Criminology Credits: 3

### Electives

Choose from the following courses (18 credits if completing the comprehensive examination or 12 if completing CJ 695):

- CJ 620 - Policing and Society Credits: 3
- CJ 621 - Corrections and Punishment Credits: 3
- CJ 622 - Juvenile Justice Systems and Issues Credits: 3
- CJ 640 - Graduate Internship Credits: 3
- CJ 642 - Victimology Credits: 3
- CJ 680 - Special Topics in Criminal Justice and Legal Studies Credits: 1 to 4
- CJ 691 - Issues in Research and Writing Credits: 3
- CJ 699 - Directed Readings Credits: 1 to 3

Students may also choose up to 3 credits of electives outside of the criminal justice curricula. These credits must be pre-approved by the MCJ Graduate Program Coordinator.

### Comprehensive Examination or Thesis

Prerequisites: The comprehensive examination option requires students to complete 36 hours of coursework. The noncredit comprehensive examination serves as a culminating experience within the graduate program in lieu of the six-credit-hour thesis option.

The comprehensive examination is a two-part examination. Part A (written section) of the examination can be completed after 18 credits of coursework, to include: CJ 601 (Leadership), CJ 606 (Research Methods), and CJ 607 (Criminology). Part B of the examination (oral section) can be completed in the last semester or second to last semester of the degree program.

- CJ 695 - Criminal Justice Thesis Credits: 1 to 6

## Criminal Justice Minor

### Requirements for a Minor in Criminal Justice

Minors are required to complete the following nine credit hours of core courses:

- CJ 101 - Justice and Society Credits: 3
- CJ 201 - Criminology Credits: 3
- CJ 305 - Constitutional Rights and Civil Liberties Credits: 3

They must also complete an additional 12 credit hours from any criminal justice course(s).

## Juvenile Justice Minor

The juvenile justice minor, offered by the School of Criminal Justice, is a 21-credit interdisciplinary program open to all students. This minor is designed to promote an awareness and understanding of juvenile offenders and at-risk youth. This minor is also designed to provide students with a comprehensive education that will prepare them for careers in the field of human services as it relates to juvenile offenders and at-risk youth.

Only nine credits maximum may apply to both the criminal justice major and juvenile justice minor. Seek advising for assistance.

### Requirements for a Minor in Juvenile Justice

Twenty-one credits, including:

- CJ 101 - Justice and Society Credits: 3
- CJ 201 - Criminology Credits: 3

- CJ 355 - Youth Culture and Crime Credits: 3
- CJ 420 - Juvenile Correctional Counseling Credits: 3

Elective courses:

- CJ 350 - Juvenile Justice Process Credits: 3
- LS 350 - Family Law Credits: 3
- SOC 285 - Families in Society Credits: 3
- SOC 252 - Sociology of Drug Use and Abuse Credits: 3
- SOC 389 - Child Maltreatment Credits: 3
- PSY 301 - Child Development Credits: 3
- PSY 302 - Psychology of Adjustment Credits: 3
- SW 150 - Human Needs in Complex Societies Credits: 3
- SW 320 - Children and Child Welfare Services Credits: 3
- REC 302 - Leisure, Health, and Wellness Credits: 3

See the director of the School of Criminal Justice for additional information.

## Dance - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

In addition to the full-time faculty, several distinguished dance educators with extensive professional experience teach classes on a part-time basis.

**Website:** [www.gvsu.edu/dance](http://www.gvsu.edu/dance)

The dance program, which is part of the Department of Music, Theatre, and Dance, offers a major in the Bachelor of Arts degree. The B.A. in dance provides students extensive training to develop and refine techniques in various idioms of dance. Students develop their abilities through a wide range of courses combining practical and theoretical skills that emphasize critical thought and growth as an artist. The department encourages collaboration across disciplines and provides opportunities to explore innovative areas in dance history, theory, dance and technology, choreography, pedagogy, anatomy and physiology, and production. We highlight performance opportunities in the work of world-renowned guest artists, maintain currency in the dance community at large, and graduate informed members of the dance community. Class sizes are small and offer each student individual attention from dance faculty.

### Admission

Participation in the dance program is by audition only. An audition schedule and application form can be found at [www.gvsu.edu/dance/](http://www.gvsu.edu/dance/). When considerable geographical distance prevents a personal audition, the applicant may, with the permission of the program, submit a DVD or link to online video containing ballet barre and center classroom work and modern or jazz center classroom work along with a resume. Scholarships are awarded on the basis of individual talent and potential, and are renewable annually if performance and academic standards are maintained. Auditions will consist of a ballet technique class, a modern technique class, performance of a short solo, and meeting with the faculty.

## Bachelor of Arts in Dance

### Requirements for a Major in Dance

Students in the dance major must complete a minimum of 47 credit hours in dance:

Dance Core (42 credit hours)

- DAN 241 or DAN 341 or DAN 441 - Ballet technique: Eight credits from a combination of 241, 341, and 441 (two credits each)
- DAN 251 or DAN 351 or DAN 451 - Modern technique: Eight credits from a combination of 251, 351, and 451 (two credits each)
- DAN 281 or DAN 381 or DAN 481 - Jazz technique Credits: 2
- DAN 175 - Freshman Company Credits: 2
- DAN 275 - Dance Company Credits: 2

The preceding courses must be repeated for credit.

- DAN 211 - Choreography and Improvisation Credits: 3
- DAN 245 - Dance History: Evolving Traditions Credits: 3
- DAN 311 - Choreography And Production Credits: 3

## Diagnostic Medical Sonography

- DAN 333 - Dance Costuming Credits: 2
- DAN 345 - Dance History: Expanding Performance Credits: 3
- DAN 420 - Dance Pedagogy Credits: 3
- DAN 495 - Senior Project Credits: 3

### Dance Theory (one course from the following; three credit hours)

- DAN 392 - Site-Specific Dance Credits: 3
- DAN 393 - Dance Conditioning Credits: 3
- DAN 394 - Dance on Camera Credits: 3

### Dance Electives (2 credit hours)

- Two credits can be taken as any currently listed dance course except DAN 200. For technique courses this would be any course taken beyond the required eight credits.

### Suggested General Education Courses (7 credit hours)

- BMS 202 - Anatomy and Physiology Credits: 4
- MUS 100 - Introduction to Music Literature Credits: 3

### Mid-Program Review

- At the end of the sophomore year, students enrolled in the dance major program will sign-up for a Mid-Program Review to determine if they can proceed to upper division courses. The Mid-Program Review is reviewed and adjudicated by the Dance faculty.
- The following courses must be successfully completed by the end of the semester the student completes the Mid-Program Review: two semesters in ballet (DAN 241, 341, or 441), two semesters in modern dance (DAN 251, 351, or 451), DAN 175, DAN 275, DAN 211, and DAN 245.

### Suggested Order of Coursework for a Major in Dance

#### First Year

- DAN 175 - Freshman Company Credits: 2
- DAN 241 - Ballet Technique 2 Credits: 4
- DAN 251 - Modern Technique 2 Credits: 4
- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4
- General education courses - 13 credits

Total: 31

#### Second Year

- BMS 202 - Anatomy and Physiology Credits: 4
- DAN 211 - Choreography and Improvisation Credits: 3
- DAN 245 - Dance History: Evolving Traditions Credits: 3
- DAN 275 - Dance Company Credits: 1
- DAN 281 or DAN 381 or DAN 481 Jazz Technique Credits: 2
- DAN 341 - Ballet Technique 3 Credits: 2
- DAN 351 - Modern Technique 3 Credits: 2
- Dance theory Credits: 3
- General education Courses (in addition to BMS 202) Credits: 2
- Foreign language Credits: 8

Total: 30

#### Third Year

- DAN 275 - Dance Company Credits: 1
- DAN 311 - Choreography And Production Credits: 3
- DAN 333 - Dance Costuming Credits: 2
- DAN 345 - Dance History: Expanding Performance Credits: 3
- DAN 441 - Ballet Technique 4 Credits: 2
- DAN 451 - Modern Technique 4 Credits: 2
- General education courses Credits: 13
- Foreign Language Credits: 4

Total: 31

#### Fourth Year

- DAN 420 - Dance Pedagogy Credits: 3
- DAN 441 - Ballet Technique 4 Credits: 2
- DAN 451 - Modern Technique 4 Credits: 2
- DAN 495 - Senior Project Credits: 3
- MUS 100 - Introduction to Music Literature Credits: 3
- General education courses (in addition to MUS 100) Credits: 16

Total: 29

## Dance Minor

### Requirements for a Minor in Dance

A student choosing to minor in dance must complete a minimum of 23 credit hours in dance:

- DAN 175 - Freshman Company Credits: 1 Repeat for 2 credits total
- DAN 211 - Choreography and Improvisation Credits: 3
- DAN 241 or DAN 341 or DAN 441 - Ballet Technique Credits: 4
- DAN 251 or DAN 351 or DAN 451 - Modern Dance Credits: 4
- DAN 281 or DAN 381 or DAN 481 - Jazz Technique Credits: 2
- DAN 245 - Dance History: Evolving Traditions Credits: 3
- DAN 345 - Dance History: Expanding Performance Credits: 3
- Dance Electives -Credit Hours: 2 (all dance courses count as dance electives)

Total: 23

## Diagnostic Medical Sonography - Program Description

Diagnostic medical sonography is a radiologic and imaging sciences specialty with eight subspecialties. Grand Valley State University offers six of these subspecialties. Diagnostic medical sonography is considered an entry-level profession in that students may enter GVSU without previous college experience and may aspire to complete the entire B.S. degree program in four years. Students are required to choose a concentration in either general sonography (abdominal and obstetrics-gynecology) or echocardiography and vascular sonography. Students choosing echocardiography and vascular sonography spend their third year in adult echocardiography and then are assigned to either pediatric echocardiography or vascular sonography for their fourth year of study.

Breast ultrasound is offered as an emphasis in the DMS major. GVSU students desiring registration in breast ultrasound may complete the courses in this emphasis as electives while pursuing their initial credential in diagnostic and medical sonography. In other situations, registered sonographers who find significant breast ultrasound to be part of their workload may return to GVSU to complete the coursework and qualify for the national examinations.

Sonographers practice a form of medical imaging that uses complex computerized high frequency sound wave and Doppler signal equipment to visualize subtle differences between healthy tissues and pathologic areas of the body, evaluate vascular flow information, and document pathologic and other conditions. The sonographer must acquire excellent knowledge of sectional anatomy, clinical medicine, pathology, and the use of sonographic instrumentation. Sonographers are responsible for patient care during procedures, which may include inpatient, outpatient, surgery, and mobile work. It is critical that sonographers have exceptional critical thinking and problem solving skills in order to develop a high level of interpersonal relationships with patients, sonographers, other staff, physicists, and physicians. Sonographers work collaboratively with radiologists, cardiologists, vascular surgeons, and other physicians to discuss differential diagnoses.

Students receive didactic, laboratory, and clinical experiences in both existing and emerging diagnostic medical sonography practices in the university's state-of-the-art laboratories and through a clinical education system that requires students to attend full days of clinical practice under the supervision of registered sonographers at clinical education sites located as far as about two hours from GVSU (although most clinical assignments are within one hour from campus). Students must have transportation available to these sites.

Students working toward a B.S. degree in radiologic and imaging sciences with a major in diagnostic medical sonography from GVSU become eligible for the American Registry of Diagnostic Medical Sonographers (ARDMS) examinations specific to the concentrations completed. Eligibility for ARDMS examinations is achieved upon completion of 1,680 contact hours (which occurs in November or December of the senior

year before graduation the following April). Granting of the baccalaureate is not contingent upon passing ARDMS examinations.

Individuals who have been involved in a criminal proceeding or charged with or convicted of a crime may not be eligible for national certification by the American Registry of Diagnostic Medical Sonographers. Students are strongly advised to work with the ARDMS for pre-application review of eligibility for certification from their website at [www.ardms.org](http://www.ardms.org) (Credentials and Examinations, Application Process and Resources). The ARDMS may be contacted by phone at (301)738-8401 for more information.

The diagnostic medical sonography program is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS). The program adheres to JRC-DMS standards. Upon accreditation, students have the right to notify the JRC-DMS if they believe the university is not adhering to these standards. The JRC-DMS is at 6021 5University Boulevard, Suite 500, Elliott City, MD 21043. Phone (443) 973-3251.

**Diagnostic Medical Sonography General Emphasis  
Abdominal and Obstetrics-Gynecology Concentrations**  
The diagnostic medical sonography general emphasis prepares students for clinical practice in abdominal and obstetrics-gynecology. Vascular sonography is an elective option that is taken concurrently.

General (abdominal and obstetrics-gynecology) sonographers work collaboratively with radiologists or other specialized physicians to diagnose a diverse range of conditions using invasive and noninvasive procedures using complex computerized high frequency sound wave and Doppler signal equipment. The sonographer must acquire excellent knowledge of sectional anatomy, clinical medicine, pathology, and the use of sonographic instrumentation.

## Bachelor of Science in Diagnostic Medical Sonography

### Requirements for a Major in Diagnostic Medical Sonography

#### Diagnostic Medical Sonography - General Prerequisites

Contains some required general education courses.

- AHS 100 - Medical Terminology Credits: 3
- BIO 120 - General Biology I Credits: 4
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- MTH 122 - College Algebra Credits: 3
- PHY 220 - General Physics I Credits: 5
- PSY 101 - Introductory Psychology Credits: 3
- SOC 105 - Social Problems Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

**AND** one of the following:

- AHS 301 - Introduction to Health Care Research Credits: 3
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3

#### Remaining General Education Courses

- WRT 150 - Strategies in Writing Credits: 4
- General education (Art) Credits: 3
- General education (Philosophy) Credits: 3
- General education (History) Credits: 3
- General education (World Perspectives) Credits: 3
- Issues Credits: 6

#### B.S. Program Requirements (10 credits)

- STA 215 - Introductory Applied Statistics Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4

**AND** one of the following:

- PSY 300 - Research Methods in Psychology Credits: 3
- AHS 301 - Introduction to Health Care Research Credits: 3

- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3

Note: STA 215 is a prerequisite for these three research courses.

### Diagnostic Medical Sonography - General (Abdomen and Obstetrics-Gynecology) Courses (68 credits)

The diagnostic medical sonography general emphasis prepares students for clinical practice in abdominal and obstetrics-gynecology. Vascular sonography is additional coursework that is taken concurrently.

General (abdominal and obstetrics-gynecology) sonographers work collaboratively with radiologists or other specialized physicians to diagnose a diverse range of conditions using invasive and non-invasive procedures using complex computerized high frequency sound wave and Doppler signal equipment. The sonographer must acquire excellent knowledge of sectional anatomy, clinical medicine, pathology, and the use of sonographic instrumentation.

- Issues (fulfills one of two Issues courses)
- AHS 340 - Health Care Management Credits: 3 (fulfills one of two Issue courses)
- RIU 301 - DMS Image Evaluation I Credits: 1
- RIU 302 - DMS Image Evaluation II Credits: 1
- RIU 320 - Applied Ultrasound Physics Instruction I Credits: 2
- RIU 321 - Applied Ultrasound Physics Instruction I Lab Credits: 1
- RIU 322 - Principles of Radiologic Imaging Sciences Credits: 3
- RIU 324 - Applied Doppler Ultrasound Physics Credits: 2
- RIU 330 - Abdominal Sonography I Credits: 4
- RIU 331 - Abdominal Sonography I Lab Credits: 2
- RIU 332 - Obstetrics-Gynecology Sonography I Credits: 3
- RIU 333 - Obstetrics-Gynecology Sonography Lab Credits: 1
- RIU 360 - Introduction to Clinical Ultrasound Credits: 2
- RIU 361 - Clinical Ultrasound Education I Credits: 2
- RIU 362 - Clinical Ultrasound Education II Credits: 4
- RIU 420 - Applied Ultrasound Physics Instruction II Credits: 2
- RIU 430 - Abdominal Sonography II Credits: 2
- RIU 431 - Abdominal Sonography II Lab Credits: 1
- RIU 434 - Breast Sonography Procedures Credits: 2
- **OR** Elective Credits: 2
- RIU 435 - Obstetrics-Gynecology Sonography II Credits: 2
- RIU 436 - Vascular Technology Procedures I For General Ultrasound Credits: 2
- RIU 437 - Vascular Technology Procedures I For General Ultrasound Lab Credits: 1
- RIU 438 - Vascular Technology Procedures II For General Ultrasound Credits: 2
- RIU 439 - Vascular Technology Procedures II For General Ultrasound Lab Credits: 1
- RIT 441 - Gross Human Sectional Anatomy Credits: 4
- RIU 454 - Advanced Obstetric- Gynecologic Sonography Credits: 3
- RIT 458 - Neoplasms Credits: 3
- RIU 460 - Clinical Ultrasound Education III Credits: 3
- RIU 461 - Clinical Ultrasound Education IV Credits: 3
- RIU 495 - Advanced Clinical Problems in Ultrasound Credits: 3

### Suggested Order of Coursework for a Major in Diagnostic Medical Sonography - General

#### Freshman Fall Semester

- BIO 120 - General Biology I Credits: 4
- MTH 110 - Algebra Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

#### Freshman Winter Semester

- AHS 100 - Medical Terminology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3
- SOC 105 - Social Problems Credits: 3

## Digital Studies

### Sophomore Fall Semester

- BMS 251 - Anatomy and Physiology II Credits: 4
- PHY 220 - General Physics I Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3
- General education (History) Credits: 3

### Sophomore Winter Semester

One of the following:

- AHS 301 - Introduction to Health Care Research Credits: 3
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3

#### AND

- General education (Arts) Credits: 3
- General education (Philosophy) Credits: 3
- General education (World Perspectives) Credits: 3

### Junior Fall Semester: Enrolled in Diagnostic Medical Sonography Program - General

- RIU 320 - Applied Ultrasound Physics Instruction I Credits: 2
- RIU 321 - Applied Ultrasound Physics Instruction I Lab Credits: 1
- RIU 330 - Abdominal Sonography I Credits: 4
- RIU 331 - Abdominal Sonography I Lab Credits: 2
- RIU 360 - Introduction to Clinical Ultrasound Credits: 2
- Optional: RIU 434 - Breast Sonography Procedures Credits: 2

### Junior Winter Semester

- RIU 301 - DMS Image Evaluation I Credits: 1
- RIU 322 - Principles of Radiologic Imaging Sciences Credits: 3
- RIU 324 - Applied Doppler Ultrasound Physics Credits: 2
- RIU 332 - Obstetrics-Gynecology Sonography I Credits: 3
- RIU 333 - Obstetrics-Gynecology Sonography Lab Credits: 1
- RIU 361 - Clinical Ultrasound Education I Credits: 2
- RIT 441 - Gross Human Sectional Anatomy Credits: 4

### Junior Spring/Summer Semester

- RIU 362 - Clinical Ultrasound Education II Credits: 4
- Issues course Credits: 3

### Senior Fall Semester

- RIU 302 - DMS Image Evaluation II Credits: 1
- RIU 420 - Applied Ultrasound Physics Instruction II Credits: 2
- RIU 430 - Abdominal Sonography II Credits: 2
- RIU 431 - Abdominal Sonography II Lab Credits: 1
- RIU 435 - Obstetrics-Gynecology Sonography II Credits: 2
- RIU 436 - Vascular Technology Procedures I For General Ultrasound Credits: 2
- RIU 437 - Vascular Technology Procedures I For General Ultrasound Lab Credits: 1
- RIT 458 - Neoplasms Credits: 3
- RIU 460 - Clinical Ultrasound Education III Credits: 3

### Senior Winter Semester

- AHS 340 - Health Care Management Credits: 3
- RIU 438 - Vascular Technology Procedures II for General Ultrasound Credits: 2
- RIU 439 - Vascular Technology Procedures II for General Ultrasound Lab Credits: 1
- RIU 454 - Advanced Obstetric- Gynecologic Sonography Credits: 3
- RIU 461 - Clinical Ultrasound Education IV Credits: 3
- RIU 495 - Advanced Clinical Problems in Ultrasound Credits: 3 (SWS)

### Summary of Coursework

- Diagnostic medical sonography - General prerequisites: 42 credits
- Remaining general education courses: 22 credits
- Diagnostic medical sonography - General: 62 credits

Total: 126 credits

## Digital Studies Minor

Website: [www.gvsu.edu/ds](http://www.gvsu.edu/ds)

Digital studies is the exploration and analysis of how data and contemporary technologies are used, as well as how these technologies are creatively applied. The program in digital studies enables students to evaluate social and political consequences of the flow of data in our lives, gain insight through information literacy, learn how computational and visualization tools are used, and apply these concepts in technologically rich environments.

There are two overarching goals of the minor, both oriented toward helping students navigate the increasingly digitized world that we inhabit. The first is to teach students the skills necessary to use digital skills and tools foundational to their careers, including data literacy, visualization, multimedia production, visual rhetoric, and design. The second is to gain the knowledge to critically assess digital culture, including the interrogation of social media, digital identity and representation, and exploring the ethical implications of digital access.

The minor in digital studies requires 21 credits and is designed to serve students from all disciplines since we are all connected within our digital world.

### Requirements for a Minor in Digital Studies

#### Core Courses

All students minoring in digital studies are required to complete the following two courses:

- DS 201 - Digital Identities and Communities Credits: 3
- DS 202 - Digital Data and Design Credits: 3

#### Module Courses

All students minoring in digital studies are required to complete two courses from each of the following modules. Students must take two courses from different disciplines in the Digital Tools and Production module. Students must take at least one digital studies designated course in the Digital Culture module. With approval from the director of digital studies, students may complete DS 490 - Digital Studies Internship\* in place of one of the two required module courses.

#### Module 1: Digital Tools and Production

- ART 109 - Graphic Design Basics Credits: 3
- ART 321 - Digital 3D Credits: 3
- CFV 125 - Media Production I Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 238 - Internet Media and Programming Credits: 3
- CIS 320 - Visualization of Data and Information Credits: 3
- CMJ 260 - Multimedia Journalism Workshop Credits: 3
- CPH 175 - Understanding Still Photography Credits: 3
- DS 310 - Digital Preservation and Archiving Credits: 3
- DS 490 - Internship in Digital Studies Credits: 3
- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- MKT 360 - Marketing on the Internet Credits: 3
- PA 311 - Public Sector Information Technology Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
- WRT 351 - Writing for the World Wide Web Credits: 3
- WRT 455 - Multimodal Composing Credits: 3

#### Module 2: Digital Culture

- CIS 358 - Information Assurance Credits: 3
- DS 330 - Game and Culture Credits: 3
- DS 340 - Identity and Representation in Digital Culture Credits: 3
- DS 350 - Social Media in Culture Credits: 3
- DS 360 - Ethics of Digital Culture Credits: 3
- DS 490 - Internship in Digital Studies Credits: 3
- PLS 340 - Mass Media and American Politics Credits: 3
- SOC 366 / LIB 366 - American Society and Media Credits: 3
- STA 340 - Statistics in the Media Credits: 3

#### Capstone Requirements

All students minoring in digital studies are required to complete the Capstone course:

- DS 495 - Digital Studies Capstone Credits: 3

## Bachelor of Science in Earth Science

For additional information about opportunities your college offers, please refer to The College of Liberal Arts and Sciences in this catalog.

### Requirements for a Major in Earth Science

The earth science B.S. is designed for students who want to pursue a career in secondary education. The major can also serve as a pathway to other careers. Michigan teacher certification requires completion of the College of Education professional program and a minor area of study. The geology department strongly recommends students in this major complete a biology minor. Earth science majors with a biology minor can earn a science (DI) endorsement with an additional 9 credits coursework. Students are encouraged to visit their advisor to design the best possible curricular track. A minimum of 2.7 GPA in the major is required for recommendation for teacher certification.

Completion of a major in earth science requires the following.

#### 1. General University Degree Requirements

As identified in the General Academic Regulations section of the Grand Valley State University Graduate and Undergraduate Catalog.

#### 2. Geology Courses

Thirty-three semester credit hours of geology courses with a minimum overall GPA of 2.0.

- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 4
- GEO 175 - Research Tools for Geosciences Credits: 1
- GEO 203 - Weather and Climate for Pre-Service Teachers Credits: 3
- GEO 214 - Solid Earth Materials and Systems Credits: 4
- GEO 220 - Earth Surface Materials and Systems Credits: 4
- GEO 319 - Earth Science in Secondary Education Credits: 4
- GEO 320 - Geomorphology Credits: 4
- GEO 430 - Oceanography Credits: 3
- GEO 485 - Geology Research and Writing Seminar Credits: 1
- GEO 486 - Geology Reading Seminar Credits: 1

#### 3. Cognate Science Courses

Twenty-three semester credit hours of science cognate courses with a minimum overall GPA of C (2.0).

- CHM 115 - Principles of Chemistry I Credits: 4
- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3
- PHY 105 - Descriptive Astronomy Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

### Suggested Order of Coursework for a Major in Earth Science

The CLAS Academic Advising Center has Earth Science curriculum guides for the major.

## Earth Science Minor

### Requirements for a Minor in Earth Science

An earth science minor for teacher certification requires a minimum overall GPA of 2.7 in the minor and a minimum of 21 credits, including the following courses (substitutions must be approved by the geology department chair):

- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 4
- GEO 203 - Weather and Climate for Pre-Service Teachers Credits: 3
- GEO 220 - Earth Surface Materials and Systems Credits: 4
- PHY 105 - Descriptive Astronomy Credits: 3

### Sample Curriculum for a Minor in Earth Science

#### Fall I

- GEO 111 - Exploring the Earth Credits: 4
- PHY 105 - Descriptive Astronomy Credits: 3

#### Winter I

- GEO 112 - Earth History Credits: 4
- GEO 203 - Weather and Climate for Pre-Service Teachers Credits: 3

#### Fall II

- GEO 220 - Earth Surface Materials and Systems Credits: 4

#### Winter II

- GEO 319 - Earth Science in Secondary Education Credits: 4

## East Asian Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/eas](http://www.gvsu.edu/eas)

The East Asian studies program at Grand Valley State University explores languages, cultures, histories, politics, and economics of China and Japan. The program recognizes the complex traditions and historical contributions of these countries, while acknowledging the essential roles they play in the world today.

China, with 5,000 years of civilization, more than a billion people, and a fast-growing economy, and Japan, with its unparalleled economic success and its unique geopolitical position, command the attention of the world. The East Asian studies curriculum provides students with a balanced liberal arts and professional perspective on the study of the rich cultural resources, economic potentials, and comparative politics of these two countries. Students gain intercultural knowledge and competence that benefit them in this increasingly globalized world.

Students who minor in East Asian studies can participate in the study abroad programs at East China Normal University in Shanghai, Nanjing University in Nanjing, National Taiwan Normal University in Taipei, Japanese studies program at International Christian University (ICU), or the Japan Center for Michigan Universities (JCMU). Consult the Padnos International Center or the director of the East Asian studies program for more information.

Completion of the minor in East Asian studies requires a total of 21 to 22 credit hours. Normally this includes nine credits of core courses, four credits of either Chinese or Japanese above the 201 level, and nine credits of electives, for a total of 22 credits.

Students who enter the university competent in Japanese or Chinese at the 202 level or higher will take one extra elective course for a total of 21 credits. No more than two courses from any department other than EAS may be counted toward the minor. There is no limit on the courses designated EAS that may apply to the minor.

### Participating Programs

Grand Valley students majoring in areas such as business, communications, English, history, international relations, philosophy, and political science, among others, will find that this program provides a unique perspective on these two dynamic countries and a valued complement to their major programs. Students studying Chinese or Japanese at the primary or secondary level, transfer students who began studying these languages at other two- and four-year institutions, and study abroad participants may also choose to minor in East Asian studies.

## East Asian Studies Minor

### Requirements for a Minor in East Asian Studies

#### Core Courses

Students must complete all three:

- EAS 201 - East Asia in the Contemporary World Credits: 3
- EAS 301 - Masterpieces of East Asian Literature Credits: 3
- PHI 210 - Eastern Philosophy Credits: 3

#### Additional Required Courses

In addition to the three required courses, students will choose nine credit hours of elective courses from the following list:

- CHI 321 - Ancient Chinese Culture Credits: 3
- CHI 322 - Classical Chinese Culture Credits: 3
- CHI 323 - Late Imperial Chinese Culture Credits: 3

## Economics

- CHI 380 - Special Topics in Chinese Credits: 3
- EAS 180 - Special Topics in East Asian Studies Credits: 1 to 4
- EAS 280 - Special Topics in East Asian Studies Credits: 1 to 4
- EAS 333 - Study Abroad - East Asian Studies Credits: 1 to 6
- EAS 380 - Special Topics in East Asian Studies Credits: 1 to 4
- EAS 399 - Independent Studies Credits: 1 to 3
- EAS 480 - Special Topics in East Asian Studies Credits: 1 to 4
- ENG 204 - World Mythology Credits: 3 (when taught by EAS faculty)
- GPY 354 - Geography and Globalization of Asia Credits: 3
- HST 310 - Cultural and Social Topics in Nonwestern History Credits: 3
- HST 333 - Modern China Credits: 3
- HST 240 - A History of East Asia to 1800 Credits: 3
- HST 241 - A History of East Asia since 1800 Credits: 3
- HST 342 - History of Buddhism and East Asian Religions Credits: 3
- PHI 306 - Wisdom of the East: Asian Philosophy Credits: 3
- PLS 283 - Chinese Politics and U.S.-China Relations Credits: 3

### Additional Information

Current and potential special topics include Classical Chinese Poetry, Classical Chinese Prose, Japanese Theater and Cinema, Chinese Theater and Cinema, Women in Chinese/Japanese Literature, Japanese Management and Corporations, and Strategic Japanese Communications.

Current and past study abroad courses that are also acceptable for electives include Contemporary Chinese Culture and Society, Advanced Readings in Japanese, Modern Japanese Literature in English Translation, Modern Japanese International Relations, Introduction to Asian Religions, Japanese Linguistics, and Strategic Japanese Communications.

Students may choose one course for their elective requirement from comparative international courses taught at Grand Valley. These comparative courses must have a minimum of 25 percent of their content devoted to East Asia. Following are examples of some courses that may qualify. Check with the Director of the East Asian studies program for a current list of acceptable courses.

- ANT 204 - Peoples and Cultures of the World Credits: 3
- ECO 365 - Comparative Economic Systems Credits: 3
- SOC 350 - Family and Gender in the Developing World Credits: 3 (Cross-listed as WGS 351)

### Transfer Credits

Credits transferred from study abroad programs will be evaluated and applied where appropriate to the EAS minor. However, of the 21-22 credits required, a minimum of six credits must be taken in residence at Grand Valley.

## Economics - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

**Website:** [www.gvsu.edu/economics](http://www.gvsu.edu/economics)

The economics program, part of the Seidman College of Business, is designed to give students an understanding of the structure and operations of the United States and international economies and an opportunity to develop a specialty within economics or in a related field, such as finance, mathematics, or political science.

## Bachelor of Arts or Bachelor of Science in Economics

### Requirements for a Major in Economics

Economics majors may earn a B.S. or B.A., while business economic majors may earn a B.B.A. degree. Completion of the B.A. degree requires demonstrated third-semester proficiency in a foreign language. Students who wish to earn a B.B.A. in business economics should consult the business section of the Grand Valley State University Undergraduate and

Graduate Catalog. Majors earning a B.S. or B.A. must complete 30 hours of economics, including ECO 210, 211, 312, 313, and 495. All B.A. and B.S. economics majors are required to take STA 215 - Introductory Applied Statistics and STA 216 - Intermediate Applied Statistics, as degree requirements. In addition, students must take either PHI 103 - Logic, MTH 122 - College Algebra, MTH 125 - Survey of Calculus, or MTH 201 - Calculus I.

Because economics is a department in the Seidman College of Business, students must achieve a 2.5 or higher cumulative GPA, have completed 55 semester hours, and achieved a 2.5 or higher combined GPA in ECO 210, ECO 211, and STA 215 to be admitted to the economics program. In order to graduate, upper-division economics majors must achieve a 2.5 minimum cumulative GPA and a 2.5 minimum GPA in all economics courses. A student whose cumulative GPA falls below 2.5 will not be permitted to take additional 300 and 400-level economics or business courses. However, such students may repeat 300 and 400-level Seidman economics and business courses for which they received a low grade. Students may repeat up to three different economics and business courses in their undergraduate career, but no single economics or business course can be repeated more than once. Exceptions are made only with the approval of the associate dean of the Seidman College of Business. Economics majors are eligible to participate in the business internship program.

Students who plan to enter a graduate program in economics or a related field are highly encouraged to take the following courses: MTH 201, MTH 202, MTH 203, and MTH 227. These students should also consider a mathematics or statistics minor and consult with their advisors at an early date to explore alternatives and plan their coursework.

Social studies group majors who choose an emphasis area in economics should make their economics course selections with the advice of an economics faculty member.

### Requirements for an Honors Emphasis in Economics

The undergraduate honors emphasis in economics is for students pursuing a B.S., B.A., or B.B.A. degree in economics. Students must achieve a minimum 3.2 GPA in their economics courses and a 3.2 GPA overall to receive the honors emphasis designation. Courses cannot be taken on a credit/no credit basis. Students are required to complete the following classes, with an honors section of either ECO 210, ECO 211, or both (honors-designated sections require good standing with the Meijer Honors College or a 3.5 GPA overall):

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- ECO 300 - Applied Economic Analysis Credits: 3
- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- ECO 401 - Honors Seminar in Microeconomics Credits: 1
- ECO 402 - Honors Seminar in Macroeconomics Credits: 1
- ECO 403 - Honors Capstone Seminar Credits: 1
- ECO 495 - Senior Economic Project (Capstone) Credits: 3

## Economics Minor

Eligible business majors who elect to complete one of the business minors may be required to extend their degree programs beyond the minimum 120-semester hour university degree requirement. Students seeking to complete an economic minor are required to complete at least 21 hours in economics, including ECO 210 and ECO 211. Students must achieve a minimum 2.5 grade point average in these courses to receive the economics minor designation. Courses may not be taken on a credit/no credit basis.

### Requirements for a Minor in Economics

The undergraduate minor program in economics is for both business and nonbusiness students with the exception of those majoring in business economics or economics. Students must achieve a minimum 2.5 GPA in

these courses to receive the economics minor designation. Courses cannot be taken on a credit/no credit basis. Students are required to complete at least 21 hours in economics, including:

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3

### Requirements for an Honors Minor in Economics

The undergraduate honors minor program in economics is for both business and nonbusiness students with the exception of those majoring in business economics or economics. Students must achieve a minimum 3.2 GPA in these courses and a 3.2 GPA overall to receive the economics honors minor designation. Courses cannot be taken on a credit/no credit basis. Students are required to complete at least 21 hours in economics, including the following classes and an honors section of either ECO 210, ECO 211, or both:

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- ECO 300 - Applied Economic Analysis Credits: 3
- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- ECO 401 - Honors Seminar in Microeconomics Credits: 1
- ECO 402 - Honors Seminar in Macroeconomics Credits: 1
- ECO 403 - Honors Capstone Seminar Credits: 1
- ECO 495 - Senior Economic Project (Capstone) Credits: 3

## Teacher Certification in Economics

### Requirements for the Teacher Certification in Economics

Students seeking teacher certification in economics should note that besides economics, the new standards established by the Michigan State Board of Education require basic knowledge of geography, history, and political science. Students can qualify for certification by taking the following coursework:

#### Economics Minor with Teacher Certification

- ECO 210 - Introductory Macroeconomics Credits: 3
  - ECO 211 - Introductory Microeconomics Credits: 3
  - ECO 312 - Applied Microeconomics Credits: 3
  - ECO 313 - Business Cycles and Growth Credits: 3
- AND EITHER**
- ECO 349 - Emerging Markets Issues Credits: 3
  - OR** ECO 369 - International Economic Issues Credits: 3

### Additional Requirements

#### Coursework

In addition, students must take the following or equivalent to obtain basic knowledge in political science, history, and geography:

- GPY 235 - Geography for a Changing World Credits: 3
- HST 206 - American History since 1877 Credits: 3
- PLS 102 - American Government and Politics Credits: 3

#### Michigan Test for Teacher Certification

Besides coursework, students are required to obtain a satisfactory score in the Michigan Test for Teacher Certification (MTTC) in economics. For further details, please contact the chair of the department.

## Undergraduate Education - Program Description

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders to a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

### Undergraduate Teacher Education Description

The teacher preparation program reflects a belief in strong backgrounds in the liberal arts, familiarity with learning theory, and practical experience in diverse settings. Education faculty teach courses and seminars in educational philosophy and psychology, methods and materials, school organization and management, technology, and assessment. Faculty from the College of Liberal Arts and Science teach content-related areas.

### Advising and Course Planning

Teacher preparation is an upper-division professional program and second major. During the freshman and sophomore years students work toward fulfilling degree requirements, major and minor requirements, and prerequisite courses in education to permit application to the College of Education. CSAT majors are strongly encouraged to pass the MTTC Elementary certification exam during the semester of their CSAT Capstone course (SAT 495). Students will have two advisors: an advisor in the student's content area major and an education major advisor. Transfer students follow the same dual advising process. Students also consult with education faculty prior to admission. Students should discuss career and employment opportunities with their advisors and with the university career center. Candidates should also review policies in the Undergraduate Teacher Education Student Advising Handbook, available at advising sessions. In addition, advising materials and sample four-year course sequences are available in the College of Education Student Information and Services Center.

### Academic Policies

Due to stringent requirements being set forth by the State of Michigan Department of Education, students pursuing initial certification, first or second renewal of their provisional certification, additional endorsement, school counseling license, and professional or administrator certification are now being held to a higher standard. Students who have certain misdemeanors, multiple misdemeanors or a felony may be denied and/or not recommended for any level of certification by GVSU College of Education and/or State of Michigan. If a student is recommended to the Michigan Department of Education for provisional certification, additional endorsement, school counseling license, professional or administrator certification, the conviction could have an adverse effect on being granted a certificate. If a certificate is granted, there is no guarantee of employability.

### Application Procedures

Deadlines for application to Undergraduate Teacher Education are September 15 for winter admission and field placement; February 1 for fall admission and field placement. Application packets are available on the College of Education's website. Packets must be complete at the time of application. Students who postpone admission must reapply. Students must follow the holiday break schedule designated by the K-12 district for their school placement/assignment, not the GVSU holiday break schedule. Students should apply during the semester before they expect to do their first field placement (EDI 330, 331, EDS 332), except for the following:

1. Students seeking a CSAT major with special education must apply during the winter semester (February 1) for fall admission.
2. Students seeking a CSAT major are strongly encouraged to pass the MTTC Elementary certification exam during the semester of their CSAT Capstone course (SAT 495).
3. Students seeking a major in music education major must apply during the winter semester (February 1) for fall admission (i.e. fall teacher assisting).
4. Students seeking a major in world languages must pass the Oral Proficiency Interview (OPI) prior to their student teaching semester.

## Undergraduate Education

Refer to [www.gvsu.edu/coe/undergraduate/how-to-apply-4.htm](http://www.gvsu.edu/coe/undergraduate/how-to-apply-4.htm) for more information on applying to the College of Education.

### Program Location

DeVos Center, Pew Grand Rapids Campus,  
located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/coe](http://www.gvsu.edu/coe)

### Minimum Admission Criteria

In keeping with the Council for the Accreditation of Educator Preparation Programs (CAEP) guidelines and unit policies, Undergraduate Teacher Education considers students who fulfill the following criteria. As a unit-granting secondary admission, admission requirements are those that appear in the Grand Valley State University catalog at the time of application to the unit. Unless otherwise noted, all requirements must be complete at the time of application.

#### 1. Test Scores:

- Applicants must submit an official copy of the reading, mathematics, and writing sub-scores from the ACT or SAT.

#### 2. Academic Achievement:

- An established 2.7 Grand Valley GPA overall and in the teaching major, minor, and education major program. Currently, these content area majors require a 3.0 GPA: art education, language arts, social studies, English (major and minor), and history (major and minor). The minimum Grand Valley GPA must be established by the time of application.
    - Most general education requirements completed.
    - Significant progress in the content area major as determined by the content area major advisor.
    - Significant progress in the content area as determined by the content area advisor.
    - For elementary education, completion of ENG 308 is required.
    - For elementary education, completion of MTH 221 and MTH 222; or completion of MTH 223 is required.
    - At least one meeting completed with assigned education advisor.
    - All remaining requirements met.
  - Secondary Review Process: An established 2.699-2.50 Grand Valley GPA overall and in the content area major, minor and education major program. Currently, these content area majors require an established 2.999-2.7 GPA for secondary review: art education, language arts, social studies, English (major and minor), and history (major and minor).
    - Most general education requirements completed.
    - Most requirements in the content area major completed, as determined by content area major advisor.
    - Significant progress in the content area minor as determined by the content area advisor.
    - For Elementary Education, completion of ENG 308 is required.
    - For Elementary Education, completion of MTH 221 and MTH 222; or completion of MTH 223 is required.
    - Subject area and certification tests taken and passed during the semester application is submitted (e.g. September applicants take the October test; February applications take the January or April tests). Secondary candidates take the teaching major and minor tests. Elementary candidates take the elementary test and teaching major test. Special education candidates take the elementary test only.
    - Two meetings completed with assigned education advisor, including a signed Secondary Review Process form submitted with application.
    - All remaining application requirements met.
- #### 3. Admission Test Requirement: All teacher candidates must meet the SAT or ACT score requirement prior to student teaching.
- Students seeking the CSAT major are strongly encouraged to pass the MTTC Elementary Exam prior to COE application.

1. Prerequisite Courses: Prerequisite courses may be in progress during the semester of application, but preference will be given to candidates who have completed the requirements at the time of application. A cumulative GPA of 2.7 or better must be established in these three courses, with no grade lower than C and none of these courses recorded as credit or no credit.
  - General Education
    - EDF 315 - Diverse Perspectives on Education
    - EDI 337 - Introduction to Learning and Assessment
    - PSY 301 - Child Development
    - Flex Course 1 - This course is taken before OR after admission to the College of Education. It must be completed before student teaching.
      - EDS 378 - Universal Design for Learning: Elementary
      - OR** EDS 379 - Universal Design for Learning: Secondary
  - Special Education
    - EDF 315 - Diverse Perspectives on Education Credits: 3
    - PSY 304 - The Psychology and Education of the Exceptional Child Credits: 3
    - PSY 325 - Educational Psychology Credits: 3
    - Both courses required for undergraduate endorsement
      - PSY 310 - Behavior Modification Credits: 3
      - AND/OR** PSY 326 - Intellectual/Developmental Disabilities Credits: 3
  - Additional required prerequisites for elementary and special education candidates:
    - ENG 308 - Teaching Reading: The Necessary Skills
    - MTH 221 and MTH 222; or completion of MTH 223 - Mathematics for Elementary Teachers I and II; or III.
2. University requirements: Completion of university course requirements or test equivalents in Writing 150 and Mathematics 110.
3. Advisor recommendations: One from the content area major advisor/department and another from a College of Education advisor. Students with dual majors must submit a major advisor recommendation form for each major/department.
4. Positive recommendation: One from an unrelated individual who can address the candidate's ability as a prospective teacher.
5. Experience: Documentation of 25 hours of experience with children or youth. The experience must be with the age group for which the applicant intends to seek certification. This would rule out, for example, working in the university tutoring center. Special education candidates should have experience working with persons with disabilities, e.g., camp experience, Special Olympics, respite care. For additional options, contact the Community Service Learning Center.
6. Academic progress: Completion of at least 60 semester credits and junior status.
7. Felony and Misdemeanor Conviction Statement: Review procedures for those who have been convicted or pleaded no contest to a felony or certain misdemeanors are available from the College of Education. Conviction or a plea of no contest may cause the candidate to be denied for admission, field placement, or final certification. Candidates are required to pay a fee for conducting a Live Scan Criminal Background Check; information on conducting Live Scan will be provided while turning in your application for admission to the College of Education.
8. MyPath degree evaluation: Copy of myPath and current course listings of classes being taken at another college or university.
9. Resume: Two copies of current resume on plain white paper with an objective stated and a minimum of three references listed.

All admissions decisions will be rendered by the Dean of the College of Education based on faculty recommendations.

**Field Placement Requirements**

Flex Course 2: This course is taken after admission to the College of Education. It must be completed before student teaching.

EDT 370 - Technology in Education Credits: 3 (Grade B- or better).

Teacher Assisting (Education EDI 330, EDI 331, EDS 332)

Upon admission to undergraduate teacher education, the student will be placed in teacher assisting for the following semester, contingent upon an interview and acceptance by the school administrator. Students who postpone their entrance after admission must reapply as new applicants if they seek readmission. Field placements are generally made within a 50-mile radius from campus unless further placement is deemed necessary for suitable supervision and effective use of unit resources.

**See the College of Education Undergraduate Advising Handbook for additional placement policies.**

Student Teaching (Education EDI 430, EDI 431 and EDI 432, EDS 471, EDS 472)

1. Submission of completed application packet by September 15 for winter placement, February 1 for fall placement.
2. Completion of teacher assisting with a grade of B- or better and positive recommendations.
3. Completion of EDF 310 and EDR 320, or EDR 321 with a B- or better.
4. Completion of EDT 370 and EDS 378, or EDS 379 (elementary and secondary general education students only) with a B- or better.
5. Continued 2.7 GPA overall and in the content area major, minor, and education major sequence. Currently, these content area majors require a 3.0 GPA: art education, language arts, social studies, English (major and minor), and history (major and minor).
6. Interview and acceptance by school administrator.

Students must inform the associate director for placement if they must withdraw from a field placement course. Notification must be immediate and in writing. Failure to do so will result in removal from the program.

**Exit Requirements**

Recommendation for the Michigan Provisional Certificate requires the following:

1. Completion of degree requirements and content area major, minor, and education major program requirements.
2. An established 2.7 Grand Valley GPA overall and in the content area major, minor, and Education major program. Currently, these content area majors require a 3.0 GPA: art education, language arts, social studies, English (major and minor), and history (major and minor).
3. Grades of B- or better and positive recommendations in professional fieldwork courses, EDF 310, EDR 320 or EDR 321, EDT 370, EDS 378 or EDS 379; EDI 330, EDI 331 and EDS 332, EDI 430, EDI 431 and EDI 432, EDS 471, and EDS 472, and EDF 485.
4. All teacher candidates must meet the SAT or ACT score requirement prior to student teaching.
5. Passing scores on Michigan Subject Area Tests. Elementary candidates must pass the elementary test; if they also pass subject area tests in their academic areas or special education endorsement areas, these will also be added to their certificates. Secondary candidates must pass subject area tests in their teaching major and minor.
6. Current certification of CPR (Adult/Child) instruction and first aid (Standard or Basic).
7. If your criminal background information has changed since you originally applied for admission to the College of Education, contact the Student Information and Services Center (SISC) to confirm the change(s) are on file.

**Postbaccalaureate Additional Endorsement Requirements**

Students may return to Grand Valley State University to obtain a post baccalaureate endorsement to append to their teaching certificate by

adding one or more content areas. Students may choose to add any endorsement for which Grand Valley State University has approval from the Michigan Department of Education (MDE). Students must meet all of the MDE requirements for an endorsement, which includes taking and passing all courses identified on the endorsement planned program (course substitutions will be permitted with prior departmental approval), meeting GVSU GPA program requirements, taking and passing the associated subject area test for the endorsement through the Michigan Test for Teacher Certification and meeting any and all other requirements, which might include, but not be limited to, a criminal background check and providing other university transcripts.

**Please note:** A student seeking a Grand Valley State University recommendation that the Michigan Department of Education add a content-area endorsement to an existing Michigan teaching certificate must be certified at the appropriate level. Six credits of the planned program minor and 12 credits of the planned program major must be earned at Grand Valley State University. For a complete list of the content area endorsements that Grand Valley State University offers, please refer to the CLAS Academic Advising Center website: [www.gvsu.edu/clasadvising/endorsements-87.htm](http://www.gvsu.edu/clasadvising/endorsements-87.htm)

**General Information**

For additional information about opportunities your college offers, please refer to your college's section in this catalog.

**International Teaching Certificate Program**

The goal of this program is to recognize the importance of preparing teachers to be culturally competent in a global society. This program will recognize the candidate's interest in preparing to teach diverse populations in domestic or foreign settings. The courses required for completion of the certificate are typically accomplished in 2 semesters. All courses required for the certificate, except EDF 320 (1 credit), are also required for a degree in teacher education and Michigan teacher certification. Additional courses, beyond those required for the Certificate of International Teaching Experience, are required to earn a degree in teacher education and Michigan teaching certification. Admission into the College of Education is required. Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. Completion of coursework with grade of B- or better is required.

Courses needed to obtain certification:

- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDF 320 - International Teaching Certificate Preparation Credits: 1
- EDF 485 - The Context of Educational Issues Credits: 3
- EDI 330 - Teacher Assisting - Elementary Credits: 5  
**OR** EDI 331 - Methods and Strategies of Secondary Teaching Credits: 5  
**OR** EDI 430 - Student Teaching, Elementary Credits: 10;  
**OR BOTH** EDI 431 - Student Teaching, Secondary Credits: 8  
**AND** EDI 432 - Student Teaching, Secondary Content Practicum Credits: 2

Participation in one of the following COE study abroad programs:

- Teacher assisting in South Africa
- Teacher assisting in Spain
- Teacher assisting/student teaching in Germany
- Student teaching with COST program

Upon completion of requirements the candidate will receive recognition on his/her transcript and a certificate of completion.

## Elementary Teacher Certification (General Education)

Michigan Elementary Provisional Certification allows the holder to teach any subject in kindergarten through fifth grade; major and minor subjects in sixth through eighth; all subjects in kindergarten through eighth in self-contained classrooms. In addition to degree requirements, candidates must complete the teaching major, minor, and education major program.

### 1. Teaching Major—Elementary Certification

The Michigan State Board of Education sets elementary education standards that ensure teachers are prepared with depth and breadth of content knowledge. Students pursuing an elementary provisional teaching certificate may select from the following four state approved major programs:

- Integrated science
- Mathematics
- Group social studies
- Language arts

In addition to selecting one of the listed teachable majors, education candidates must complete requirements for the elementary teaching minor and the education major program for elementary certification. **Students should meet with their advisor before selecting courses for the elementary minor.**

**Website:** [www.gvsu.edu/coe](http://www.gvsu.edu/coe)

### 2. Requirements for an Elementary Teaching Minor — Elementary Certification

Candidates must complete the following 31-credit program. At least one field semester must be completed in a multicultural setting.

#### a. English

- ENG 308 - Teaching Reading: The Necessary Skills Credits: 4

#### b. Mathematics

- MTH 221 - Mathematics for Elementary Teachers I Credits: 4  
**AND** MTH 222 - Mathematics for Elementary Teachers II Credits: 3  
**OR** MTH 223 - Mathematics for Elementary Teachers III Credits: 5

Elementary candidates must take each of the following courses, except the course listed in their chosen content major area:

#### c. Fine Arts

- MAT 300 - Music, Art, and Theatre for Elementary Education Credits: 3

#### d. Language Arts

- ENG 302 - Introduction to Language Arts: Teaching Writing and Children's Literature Credits: 3

#### e. Science

- SCI 225 - Integrated Life Science for K-8 Teachers Credits: 4
- SCI 226 - Integrated Physical Science for K-8 Teachers Credits: 3

#### f. Physical Education/Health

- PED 265 - Teaching Health in Elementary Schools Credits: 2
- PED 266 - Move-Dance-Learn! PE and Dance for Elementary Education Credits: 2

#### g. Social Studies

- SST 309 - Teaching Social Studies: Elementary Credits: 3

### 3. Requirements for the Education Major Program — Elementary Certification

Candidates must complete the following 39-credit education major. At least one field semester must be completed in a multicultural setting.

**Flex Course 1 - This course is taken before OR after admission to the College of Education. It must be completed before student teaching.**

- EDS 378 - Universal Design for Learning: Elementary Credits: 3

Prior to admission to undergraduate teacher education:

- EDF 315 - Diverse Perspectives on Education Credits: 3
- PSY 301 - Child Development Credits: 3

- EDI 337 - Introduction to Learning and Assessment Credits: 3

**Flex Course 2 - This course is taken after admission to the College of Education. It must be completed before student teaching.**

- **EDT 370 - Technology in Education Credits: 3**

Teacher assisting semester:

- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDR 320 - Reading: Assessment and Instruction Credits: 3
- EDI 330 - Teacher Assisting - Elementary Credits: 5

Student teaching semester:

- EDI 430 - Student Teaching, Elementary Credits: 10
- EDF 485 - The Context of Educational Issues Credits: 3  
(May be taken after EDI 430 but before certification).

## Secondary Teacher Certification (General Education)

Michigan Secondary Provisional Certification allows the holder to teach subject area majors and minors in the sixth through twelfth grades. Visual arts, music, and physical education are endorsed K-12 in their major. In addition to degree requirements, candidates must complete the teaching major, teaching minor, and the education major program.

### 1. Teaching Major — Secondary Certification

The 15 areas approved by the State of Michigan at Grand Valley are listed as follows. Specific requirements are outlined in this catalog and must be planned with the student's teaching major advisor.

**Humanities:** visual arts K-12, English, French, German, Latin, Spanish, music K-12.

**Science and Mathematics:** biology, chemistry, earth/space science, mathematics, physical education K-12, physics.

**Social Sciences:** history, social studies.

**Website:** [www.gvsu.edu/coe](http://www.gvsu.edu/coe)

### 2. Requirements for Teaching Minor - Secondary Certification

The 17 areas approved by the State of Michigan are listed as follows. Specific requirements are outlined in this catalog and must be planned with the student's advisor. Music majors should consult with their advisors for minor requirements.

**Humanities:** English, French, German, Spanish.

**Science and Mathematics:** biology, chemistry, computer science, earth/space science, school health education, mathematics, physical education, physics.

**Social Sciences:** economics, geography, history, political science, psychology.

Note: Students who have declared or completed a teaching major and minor in a science discipline may complete additional courses for an integrated science secondary endorsement. The Michigan Department of Education will allow teachers with the integrated science secondary endorsement to teach biology, chemistry, Earth science, and physics at the secondary level. Refer to the science section of this catalog for details.

### 3. Requirements for the Education Major Program - Secondary Education

Candidates must complete the following 39-credit education major. At least one field semester must be done in a multicultural setting.

**Flex Course 1 - This course is taken before OR after admission to the College of Education. It must be completed before Student Teaching.**

- EDS 379 - Universal Design for Learning: Secondary Credits: 3

Prior to admission to undergraduate teacher education:

- EDF 315 - Diverse Perspectives on Education Credits: 3
- PSY 301 - Child Development Credits: 3
- EDI 337 - Introduction to Learning and Assessment Credits: 3

**Flex Course 2 - This course is taken after admission to the College of Education. It must be completed before student teaching.**

- EDT 370 - Technology in Education Credits: 3

## Teacher assisting semester:

- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDR 321 - Content Area Literacy Credits: 3
- EDI 331 - Methods and Strategies of Secondary Teaching Credits: 5

## Student teaching semester:

- EDI 431 - Student Teaching, Secondary Credits: 8
- EDI 432 - Student Teaching, Secondary Content Practicum Credits: 2
- EDF 485 - The Context of Educational Issues Credits: 3  
(May be taken after EDI 431 and EDI 432, but before certification.)

**Elementary Teacher Certification - Comprehensive (CSAT) (General Education/Spanish)**

The comprehensive science and arts for teaching (CSAT) major is designed for students seeking certification to teach in specialized areas at the elementary and/or middle school levels. It provides a solid foundation in subject-matter knowledge and pedagogical approaches across all content areas taught at these levels: fine arts, health and physical education, integrated science, language arts, mathematics, and social studies. Students complete several field experiences in classrooms, as well as learn to plan instruction and assessments and to understand and work with diverse populations, including extraordinary-needs learners. Our graduates have a unique combination of skills and experiences that are highly valued. Students will meet with a CSAT major advisor in the CLAS advising center, as well as a College of Education advisor.

In addition to degree requirements, general education candidates must complete the CSAT major, elementary general education major, and the Spanish minor. Prior to beginning in the College of Education, students are expected to complete most courses in general education and the CSAT major (except SAT 495). In addition, they must complete the College of Education prerequisite courses EDF 315, PSY 301, and EDI 337.

**1. Requirements for the Comprehensive Science and Arts for Teaching (CSAT) Major**

The 46-credit CSAT major must be planned with the student's CSAT advisor. It consists of the following courses:

## Language Arts

- ENG 302 - Introduction to Language Arts: Teaching Writing and Children's Literature Credits: 3
- ENG 308 - Teaching Reading: The Necessary Skills Credits: 4
- ENG 400 - Critical Issues in K-12 Literacy Credits: 3

## Mathematics

- MTH 221 - Mathematics for Elementary Teachers I Credits: 4  
AND MTH 222 - Mathematics for Elementary Teachers II Credits: 3  
OR MTH 223 - Mathematics for Elementary Teachers III Credits: 5

## Social Studies

- SST 309 - Teaching Social Studies: Elementary Credits: 3  
AND one of the following:
- HST 203 - World History to 1500 A.D. Credits: 3
- HST 204 - World History since 1500 Credits: 3
- HST 205 - American History to 1877 Credits: 3
- HST 206 - American History since 1877 Credits: 3

## Integrated Science

- SCI 225 - Integrated Life Science for K-8 Teachers Credits: 4
- SCI 226 - Integrated Physical Science for K-8 Teachers Credits: 3

## World Languages

- ENG 467 - Language Disorders and English Literacy Credits: 3  
OR SPA 314 - Teaching Methods Credits: 3

## Fine Arts

- MAT 300 - Music, Art, and Theatre for Elementary Education Credits: 3

## Health and Physical Education

- PED 265 - Teaching Health in Elementary Schools Credits: 2
- PED 266 - Move-Dance-Learn! PE and Dance for Elementary Education Credits: 2

## Foundations

- PSY 301 - Child Development Credits: 3

## Capstone

- SAT 495 - Teaching Sciences and Arts in Elementary Classrooms Credits: 3

**2. Requirements for the Certificate - Elementary Special Education Major**

Candidates must complete the following 39-credit education major. At least one field semester must be done in a multicultural setting.

**Flex Course 1 - This course is taken before OR after admission to the College of Education. It must be completed before student teaching.**

- EDS 378 - Universal Design for Learning: Elementary Credits: 3

## Prior to admission to undergraduate teacher education:

- EDF 315 - Diverse Perspectives on Education Credits: 3
- EDI 337 - Introduction to Learning and Assessment Credits: 3
- PSY 301 - Child Development Credits: 3

**Flex Course 2 - This course is taken after admission to the College of Education. It must be completed before student teaching.**

- EDT 370 - Technology in Education Credits: 3

## Teacher assistant semester:

- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDI 330 - Teacher Assisting - Elementary Credits: 5
- EDR 320 - Reading: Assessment and Instruction Credits: 3

## Student teaching semester:

- EDF 485 - The Context of Educational Issues Credits: 3  
(may be taken after EDI 430 but before certification)
- EDI 430 - Student Teaching, Elementary Credits: 10

**3. Requirements for a Spanish Elementary Education Minor**

Students choosing Spanish as a teachable minor for elementary education certification (in conjunction with the comprehensive science and arts for teaching major) must complete 27 credits through the Spanish Department in CLAS. Due to the complex and extensive nature of the combined programs, minors in Spanish elementary education should consult regularly with both CSAT and Spanish advisors.

It is a requirement of the Michigan Department of Education and Grand Valley's College of Education that teacher candidates achieve the advanced low level on the oral proficiency interview (OPI) in Spanish before student teaching. Students interested in teaching in immersion or dual-language programs should plan to develop advanced high oral proficiency. Information sessions on the OPI and other requirements for certification are provided regularly, but students should work closely with an advisor in Spanish. Students are urged to meet with a Spanish advisor as early as possible in their program and strongly encouraged to study abroad for at least one semester.

For more information, see the Spanish minor requirements.

**Elementary Teacher Certification - Comprehensive (CSAT) (Special Education)**

The comprehensive science and arts for teaching (CSAT) major is designed for students seeking certification to teach in specialized areas at the elementary and/or middle school levels. It provides a solid foundation in subject-matter knowledge and pedagogical approaches across all content areas taught at these levels; fine arts, health and physical

## Undergraduate Education

education, integrated science, language arts, mathematics, and social studies. Students complete several field experiences in classrooms, as well as learning to plan instruction and assessments and to understand and work with diverse populations, including extraordinary-needs learners. Our graduates have a unique combination of skills and experiences that are highly valued.

In addition to degree requirements, special education candidates must complete the CSAT major, elementary special education major, special education core curriculum, and endorsement requirements for two endorsements. Prior to beginning in the College of Education, students are expected to complete all courses in general education and the major. In addition, they must complete PSY 325, PSY 304, EDF 315, PSY 310 and/or PSY 326.

Apply to the College of Education by February 1 for fall admission.

### 1. Requirements for the Comprehensive Science and Arts for Teaching (CSAT) Major

The 46-credit CSAT major must be planned with the student's CSAT advisor. It consists of the following courses:

#### Language Arts

- ENG 302 - Introduction to Language Arts: Teaching Writing and Children's Literature Credits: 3
- ENG 400 - Critical Issues in K-12 Literacy Credits: 3
- ENG 308 - Teaching Reading: The Necessary Skills Credits: 4

#### Mathematics

- **BOTH** MTH 221 - Mathematics for Elementary Teachers I Credits: 4  
**AND** MTH 222 - Mathematics for Elementary Teachers II Credits: 3  
**OR** MTH 223 - Mathematics for Elementary Teachers III Credits: 5

#### Social Studies

- SST 309 - Teaching Social Studies: Elementary Credits: 3  
**AND** one of the following:
- HST 203 - World History to 1500 A.D. Credits: 3
- HST 204 - World History since 1500 Credits: 3
- HST 205 - American History to 1877 Credits: 3
- HST 206 - American History since 1877 Credits: 3

#### Integrated Science

- SCI 225 - Integrated Life Science for K-8 Teachers Credits: 4
- SCI 226 - Integrated Physical Science for K-8 Teachers Credits: 3

#### World Languages

- ENG 467 - Language Disorders and English Literacy Credits: 3
- SPA 314 - Teaching Methods Credits: 3

#### Fine Arts

- MAT 300 - Music, Art, and Theatre for Elementary Education Credits: 3

#### Health and Physical Education

- PED 265 - Teaching Health in Elementary Schools Credits: 2
- PED 266 - Move-Dance-Learn! PE and Dance for Elementary Education Credits: 2

#### Foundations

- PSY 301 - Child Development Credits: 3

#### Capstone

- SAT 495 - Teaching Sciences and Arts in Elementary Classrooms Credits: 3

### 2. Requirements for the Certificate - Elementary Special Education Major

At least one field semester must be done in a multicultural setting. Special education candidates must meet with their advisors for the exact sequence of courses.

Prerequisite courses - take first:

- PSY 304 - The Psychology and Education of the Exceptional Child Credits: 3
- PSY 325 - Educational Psychology Credits: 3

- EDF 315 - Diverse Perspectives on Education Credits: 3  
**AND** PSY 326 - Intellectual/Developmental Disabilities Credits: 3  
**AND/OR** PSY 310 - Behavior Modification Credits: 3

Special education major courses:

- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDR 320 - Reading: Assessment and Instruction Credits: 3
- EDS 332 - Methods and Strategies of Special Education Teaching Credits: 5
- EDT 370 - Technology in Education Credits: 3
- EDI 430 - Student Teaching, Elementary Credits: 10
- EDF 485 - The Context of Educational Issues Credits: 3

Requirements for the core curriculum in special education:

- EDS 360 - Language and Reading Development Credits: 3
- EDS 361 - Principles, Processes, and Methods in Special Education Credits: 3
- EDS 495 - Diagnostic and Interpretive Procedures Credits: 3

### 3. Requirements for Special Education Endorsements

Michigan elementary teacher certification with special education endorsements allows the holder to teach the special education endorsement areas in kindergarten through 12th grade. It also permits teaching any subject in kindergarten through fifth grade or any subject in kindergarten through eighth grade in self-contained classrooms.

Cognitive impairment (CI)

Early childhood (ZS)

Emotional impairment (EI)

Learning disabilities (LD)

**The following combinations are possible:**

CI/EI, CI/ZS, CI/LD, EI/ZS, EI/LD

#### Special Education Courses

##### Cognitive Impairment (CI)

- EDS 441 - Curriculum for CI Credits: 3
- EDS 471 - Directed Teaching in Cognitive Impairment Credits: 9
- EDS 497 - Educational Interventions: Cognitive Impairment Credits: 3
- EDS 463 - Educational Practices and Procedures: Cognitive Impairment Credits: 3 (if CI is the second endorsement)

##### Emotional Impairment (EI)

- EDS 442 - Curriculum for EI Credits: 3
- EDS 472 - Directed Teaching in Emotional Impairment Credits: 9
- EDS 498 - Educational Interventions: Emotional Impairment Credits: 3
- EDS 464 - Educational Practices and Procedures: Emotional Impairment Credits: 3 (if EI is the second endorsement)

#### Provisional Certificate

The following are taken in the graduate special education program as part of the initial provisional certificate:

##### Early Childhood (ZS)

Student receives the early childhood ZS endorsement.

Students planning to complete the master's degree in early childhood (ZS) program should meet with their graduate advisor for a planned program.

- EDI 610 - Advanced Studies in Child Development Ages 0-8 Credits: 3
- EDI 611 - Assessment of the Young School Child Credits: 3
- EDI 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDI 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDI 614 - Infant and Toddler Development and Curriculum Credits: 3
- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6

- EDS 646 - Family and Community Collaboration in Early Childhood Education Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3

### Learning Disabled (LD)

The following program is designed to provide a paid school year teaching internship.

Students planning to complete the master's degree in learning disabilities should meet with their graduate advisor for a planned program.

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3
- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Explicit Language Instruction Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities II Credits: 3
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- EDS 685 - Practicum/Graduate Field Experience Credits: 3 or 6

## Graduate Programs in Education

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Website:** [www.gvsu.edu/coe\\_grad](http://www.gvsu.edu/coe_grad)

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

### Graduate Studies in Education

The College of Education offers the Master of Education degree (M.Ed.), Michigan Provisional Certification, School Counseling license and endorsement, programs leading to certificate renewals, certificate endorsements, special education approvals, and professional development.

The major function of the graduate program is to create opportunities for professional renewal and development. The graduate program attempts to increase knowledge and understanding of the learning process and the repertoire of teaching methods and skills.

### Admission to Graduate Study

Graduate admission requires:

1. All students seeking degree, endorsement, approval, license or certificate change at the graduate level must be formally admitted to graduate study.
2. A maximum of six graduate credits earned prior to graduate admission may apply to degree requirements.

In addition to the requirements listed in the Admissions section in this catalog, applicants must have an undergraduate GPA of 3.0 or higher calculated on the last 60 credits of undergraduate work taken from a regionally accredited college or university. Applicants must submit an application, and three professional or academic recommendations on designated forms. Students are encouraged to identify their desired emphasis area with application submission.

Applicants with less than a 3.0 GPA calculated on the last 60 credits of undergraduate work may meet alternate criteria for admission, such as a prior master's degree from a regionally accredited institution, acceptable test scores on the GRE General Test, maintain a 3.0 GPA within the

first six credit hours of graduate coursework, or a final appeal to the department chair with faculty support.

Alternate criteria do not apply to all graduate programs in the College of Education.

The director of the Student Information and Services Center, based on faculty recommendations, will process admissions decisions.

**Academic Policies.** All students seeking a degree, certification, additional endorsement, special education approval, school counseling license or a change in certification status must establish a planned program of professional study with a graduate advisor that specifies program objectives, competencies, and course requirements. Degree candidates must complete the degree within eight years from the first course used for the master's program. A maximum of nine credits may be transferred toward the degree from other institutions. A maximum of six credits earned under non-degree status may be applied to the degree. Applicants for degree, endorsement, or approval must maintain a 3.0 GPA. Endorsement, approval, and professional certification programs require that at least half the credits be earned at Grand Valley. Due to stringent requirements being set forth by the State of Michigan Department of Education, students pursuing initial certification, first or second renewal of their provisional certification, additional endorsement, school counseling license, professional or administrator certification are now being held to a higher standard. Students who have certain misdemeanors, multiple misdemeanors or a felony may be denied and/or not recommended for any level of certification by GVSU College of Education and/or State of Michigan. If a student is recommended to the Michigan Department of Education for provisional certification, additional endorsement, school counseling license, professional or administrator certification, the conviction could have an adverse effect on being granted a certificate. If a certificate is granted, there is no guarantee of employability.

**Responsible Conduct of Research:** Each College of Education graduate student must complete Responsible Conduct of Research (RCR) training prior to completion of 50 percent of the graduate program or prior to engaging in any research activity.

Refer to The Graduate School section in this catalog for additional information.

### Program Areas

#### Master of Education (M.Ed.)

To obtain the M.Ed., students must successfully complete the university requirements for a graduate degree, the College of Education's foundation requirements, and the requirements in one emphasis/focus area under a degree program (educational leadership, educational technology, higher education, instruction and curriculum, literacy studies, school counseling, and special education).

Emphasis areas for the M.Ed. in Higher Education include adult and higher education and college student affairs leadership.

Emphasis areas for the M.Ed. in Instruction and Curriculum include advanced content specialization with a concentration in science, early childhood education, educational differentiation, elementary education, and secondary level education.

Emphasis areas for the M.Ed. in Educational Leadership include educational leadership and special education administration.

Focus area for the M.Ed. in Educational Technology is educational technology integration.

Emphasis areas for the M.Ed. in Literacy Studies include reading/language arts and teaching English to speakers of other languages (TESOL).

Focus area for the M.Ed. in School Counseling is school counseling.

Emphasis areas for the M.Ed. in Special Education include cognitive impairment, emotional impairment, and learning disabilities.

## Graduate Programs in Education

### Certification, Endorsement, Approval, and Emphasis Programs

Programs are also available in the following areas:

1. Michigan provisional certification
2. Early childhood, elementary, and secondary endorsement
3. Reading endorsement: elementary K-8, secondary 6-12, reading specialist K-12
4. English as a second language: elementary K-8, secondary 6-12, and K-12
5. Special education endorsement K-12: learning disabilities, emotional impairment, and cognitive impairment
6. School counseling: license and endorsement
7. Special education approval: directors and supervisors
8. Subject area majors and minors, usually at the undergraduate level.

Students may return to Grand Valley State University to obtain a post baccalaureate endorsement to append to their teaching certificate by adding one or more content areas. Students may choose to add any endorsement for which Grand Valley State University has approval from the Michigan Department of Education (MDE). Students must meet all of the MDE requirements for an endorsement, which includes taking and passing all courses identified on the endorsement planned program (course substitutions will be permitted with prior departmental approval), meeting GVSU G.P.A. program requirements, taking and passing the associated subject area test for the endorsement through the Michigan Test for Teacher Certification, and meeting any and all other requirements, which might include, but not be limited to, a criminal background check and providing other university transcripts.

**Please note:** To be recommended to the Michigan Department of Education by Grand Valley State University to add a content area endorsement to an existing Michigan teaching certificate, the student must be certified at the appropriate level. Six credits of the planned program minor and twelve credits of the planned program major must be earned at Grand Valley. For a complete list of the content area endorsements that Grand Valley State University offers, please check out the following link to our Grand Valley State University website: [www.gvsu.edu/clasadvising/endorsements-87.htm/](http://www.gvsu.edu/clasadvising/endorsements-87.htm/).

### Foundations Program

Foundations of education derive its methods from the humanities, social sciences, and a number of other academic disciplines. Its purpose is to understand, analyze, and critique education and schooling in light of their intent, effects, value orientations, and underlying assumptions. Each candidate for the M.Ed. degree must complete six semester hours in foundation courses in the following areas: research and evaluation (EDF 660); and social foundations of education (EDF 671 or 672).

### Internships

Students graduating from the Grand Valley State University undergraduate special education program may apply for a full-year paid teaching internship in special education. In addition to completing the required coursework, students must pass the Michigan Subject Area Test, and maintain a 3.0 GPA to receive the K-12 endorsement in learning disabilities. Interns may apply the credit hours generated from this internship to the learning disabilities master's degree program.

Because it is necessary to limit the number of students in this program and because paid teaching internship positions must be arranged in the public schools, students must be nominated by the Grand Valley faculty in order to be accepted as intern teachers. Students must pay tuition and fees for this program.

## Master of Education in Instruction and Curriculum in Science

The M.Ed. in instruction and curriculum in science is offered by the College of Education in cooperation with the College of Liberal Arts and Sciences departments of biology, chemistry, geology, and physics. The

content specialization is designed to 1) provide teacher participants with an authentic science laboratory research experience in the area of their specialty (biology, chemistry, geology or physics), and 2) facilitate the integration of their research experience into their classroom through the design, implementation, and evaluation of inquiry-based curricula.

### Admission

Admission to the M.Ed. in instruction and curriculum program with a science concentration requires a teaching certification with a major or minor in biology, chemistry, earth science, or physics, or a major in integrated science, and employment as a middle or high school science teacher concurrent with enrollment in SCI 632. Students must submit three letters of recommendation, transcripts of all previous coursework, and copies of teaching certificates. Students must have a 3.0 or higher G.P.A. calculated on the last 60 credits of undergraduate work or a prior master's degree. The program requires 33 graduate credits, 18 credits in education, and 15 in science. For additional details, see the College of Education section of the catalog.

### Curriculum Overview

The program consists of a minimum of 33 hours, including a minimum of 18 hours (at least six courses) in education and a minimum of 15 hours (seven courses) in science.

Upon admission to the program, the students will meet with a College of Education advisor and a science education advisor from the College of Liberal Arts and Sciences who will evaluate all previous science coursework taken in the major and/or minor. A curricular plan reflecting the student's needs, interests, and goals will be agreed upon.

### Science in Instruction and Curriculum Requirements

The following courses must be taken to satisfy the science in instruction and curriculum requirements.

- SCI 621 - Education Research in Science Credits: 3
- SCI 631 - Inquiry Curriculum Development Credits: 4
- SCI 632 - Inquiry Colloquium Credits: 1
- SCI 633 - Applications of Science Education Credits: 1

## Master of Education in Educational Leadership - Educational Leadership Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**M.Ed. Leadership Website:** [www.gvsu.edu/grad/eduleadership](http://www.gvsu.edu/grad/eduleadership)

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

This performance oriented program emphasizes research, theory, and practice in such areas as: effective leadership and organization, strategies for planning and developing curriculum, supervising employees, school improvement, personnel administration, law, school and community relations, and related topics. Most courses are offered in the weekend leadership academy.

**Accreditation**

Nationally Recognized by Specialty Program Association: Educational Leadership Constituent Council (ELCC) Michigan Department of Education

**Minimum Number of Hours in Program**

The M.Ed. degree in educational leadership requires a minimum of 33 semester hours.

**Program Location**

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/coe\\_grad](http://www.gvsu.edu/coe_grad)

**Requirements for M.Ed. in Educational Leadership**

Each candidate for the M.Ed. degree in educational leadership must complete the following areas:

Social foundations of education (choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Research and evaluation:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis area courses:

- EDL 665 - Educational Leadership Credits: 3
- EDL 666 - Curriculum Leadership Credits: 3
- EDL 668 - Personnel Administration Credits: 3
- EDL 670 - School Law Credits: 3
- EDL 677 - School and Community Relationships Credits: 3

Select one:

- EDL 667 - Elementary Supervision and Evaluation Credits: 3
- EDL 671 - Secondary Supervision and Evaluation Credits: 3

Practicum:

- EDL 685 - Practicum/Graduate Field Experience Credits: 3 to 6

Administrative internship (prerequisite: EDL 685):

- EDL 687 - Administrative Internship Credits: 3

Capstone (choose one):

- EDL 693 - Master's Project Credits: 3
- EDL 695 - Master's Thesis Credits: 3 (two semesters of EDL 695 totaling 6 credits)

## Master of Education in Educational Leadership: Special Education Administration Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, Leading and Learning in a Democratic Society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values expertise to guide our practice, equity to guide our interactions, liberal education to guide our perspectives, and social responsibility to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

The special education administration program is known for its comprehensive approach to preparing individuals for the many facets of special education administration including special education law, finance, personnel administration, staff development, curriculum, and current issues. Students participating in this program can receive a master's degree in special education administration or obtain approval as a special education supervisor or director of special education.

**Accreditation**

Nationally Recognized by Specialty Program Association: Council for Exceptional Children (CEC).

**Minimum Number of Hours in Program**

The M.Ed. degree in educational leadership with an emphasis in special education administration requires a minimum of 45 semester hours. The approval program requires a minimum of 36 semester hours.

**Program Location**

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/coe/grad](http://www.gvsu.edu/coe/grad)

**Requirements for M.Ed. in Special Education Administration**

Candidates seeking a master's in special education administration complete the following:

Social foundation course (choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Research and evaluation course:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis area courses (24 credits):

- EDL 650 - Foundations of Special Education Administration Credits: 3
- EDL 651 - Administration of Special Education Programs and Services Credits: 3
- EDL 652 - Curriculum and Instruction Leadership in Special Education Administration Credits: 3
- EDL 653 - Special Education Law Credits: 3
- EDL 654 - Special Education Finance Credits: 3
- EDL 668 - Personnel Administration Credits: 3
- EDL 677 - School and Community Relationships Credits: 3

Choose one:

- EDL 667 - Elementary Supervision and Evaluation Credits: 3
- EDL 671 - Secondary Supervision and Evaluation Credits: 3

Practicum/graduate field experience (12 credits):

- EDL 685 - K-12 Principal Field Experience Credit: 3 to 6
- EDL 685 - Special Education Supervisor Credit: 3 to 6
- EDL 685 - Special Education Director Credit: 3 to 6
- EDL 687 - Administrative Internship Credits: 3

Capstone (choose one):

- EDL 693 - Master's Project Credits: 3
- EDL 695 - Master's Thesis Credits: 3 (Two semesters of EDL 695 totaling 6 credits)

**Special Education Supervisor and Director Approval and Administrator Certificate:**

Emphasis area courses:

- EDL 650 - Foundations of Special Education Administration Credits: 3
- EDL 651 - Administration of Special Education Programs and Services Credits: 3
- EDL 652 - Curriculum and Instruction Leadership in Special Education Administration Credits: 3
- EDL 653 - Special Education Law Credits: 3
- EDL 654 - Special Education Finance Credits: 3
- EDL 668 - Personnel Administration Credits: 3
- EDL 677 - School and Community Relationships Credits: 3

Choose one:

- EDL 667 - Elementary Supervision and Evaluation Credits: 3
  - EDL 671 - Secondary Supervision and Evaluation Credits: 3
- Practicum/graduate field experience (12 credits):
- EDL 685 - K-12 Principal Field Experience Credit: 3 to 6
  - EDL 685 - Special Education Supervisor Credit: 3 to 6
  - EDL 685 - Special Education Director Credit: 3 to 6
  - EDL 687 - Administrative Internship Credits: 3

## Master of Education in Higher Education - Adult and Higher Education Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

This program is designed for persons who wish to develop their knowledge and competencies in working with adult and higher education students and for individuals who wish to enter student affairs administration in higher education.

### Minimum Number of Hours in Program

The M.Ed. degree in higher education with an emphasis in adult and higher education requires a minimum of 36 semester hours.

### Program Location

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/coe\\_grad](http://www.gvsu.edu/coe_grad)

### Requirements for M.Ed. in Adult and Higher Education

Social foundations of education (Choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Research and evaluation:

- EDF 660 - Educational Inquiry and Evaluation Credits:3

Emphasis area requirements for adult and higher education:

- EDH 648 - The Adult Learner Credits: 3
- EDH 650 - Materials and Methods for Adult and Continuing Education Credits: 3
- EDH 651 - Higher Education and Student Affairs Functions Credits: 3
- EDH 652 - The American College Student Credits: 3
- EDH 656 - Organization and Administration in Higher Education Credits: 3
- EDH 657 - The Community College Credits: 3
- EDH 658 - Critical Issues in Higher Education Credits: 3

Six hours electives (advisor approval required):

- Elective Credits: 3
- Elective Credits: 3

Capstone (choose one):

- EDH 693 - Master's Project Credits: 3
- EDH 695 - Master's Thesis Credits: 3 (Two semesters of EDH 695 totaling 6 credits)

## Master of Education in Educational Technology

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers, and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

This program prepares educators at all levels to integrate technology into classroom settings. Program content includes the educational application of technology, including computers and the Internet, for a variety of professional and instructional purposes. Courses concentrate on pedagogical issues, curriculum integration, software and website evaluation, acquisition and use of instructional materials and media, social and ethical issues for technology use in K-12 settings, school and classroom adoption of technology, and Web-based and on-line instructional development.

Note: Students must take a self-assessment before registering for any courses that lead toward a M.Ed. in educational technology integration. The technology self-assessment is designed to ensure that students who enroll in graduate educational technology courses have the knowledge and skill required to be successful in these classes.

### Career Goals

Educational technology integration is designed for educators and leaders who wish to integrate technology into teaching and learning, coordinate technology, manage technological resources, work in local or regional media centers, or explore the benefits of technology for instruction.

### Program Objectives

Students who complete the program should be able to

- a. use technology in their teaching and professional life;
- b. collaborate with others;
- c. select appropriate technology-based resources for instructional purposes;
- d. use technology for their own professional development;
- e. act as instructional leaders in their educational settings; and
- f. understand the social, ethical, and human issues in the area of educational technology.

The College of Education now offers graduate level courses online as part of the educational technology integration program. The courses are offered online using Blackboard, a Web-based learning environment, and are available for registration.

### Minimum Number of Hours in Programs

The M.Ed. degree in educational technology requires a minimum of 33 semester hours.

### Program Location

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI and online.

**Website:** [www.gvsu.edu/coe\\_grad](http://www.gvsu.edu/coe_grad)

### Requirements for the M.Ed. in Educational Technology

Each candidate for the M.Ed. degree must complete the following:

Social foundations courses, select one (3 credits):

- EDF 672 - Social/Cultural Foundations of Education Credits: 3
- EDF 671 - Educational Policy and Practice Credits: 3

Emphasis area courses (21 credits):

- EDT 619 - Curricular Integration of Ed Technology Credits: 3
- EDT 620 - Evaluating and Applying Instructional Media Credits: 3
- EDT 621 - Topics in Educational Technologies Credits: 3
- EDT 626 - Assessment/Evaluation with Educational Technology Credits: 3
- EDT 629 - Online Instructional Design/Development Credits:3
- EDT 634 - Planning/Managing Educational Technology Credits: 3
- EDT 635 - Instructional Systems Design Credits:3



## Graduate Programs in Education

Capstone (choose one):

- EDI 693 - Master's Project Credits: 3
- EDI 695 - Master's Thesis Credits: 3 (Two semesters of EDI 695 totaling 6 credits.)

### Master of Education in Instruction and Curriculum - Early Childhood Education Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

This program prepares teachers, supervisors, and directors in preschools, day care centers, child development centers, Head Start programs, and kindergartens, as well as researchers and program specialists in the field for general and high-risk students.

#### Accreditation

Nationally recognized by Specialty Program Association: National Association for the Education of Young Child (NAEYC) Michigan Department of Education Approved

#### Minimum Number of Hours in Program

The M.Ed. degree in instruction and curriculum with an emphasis in early childhood education requires a minimum of 33 semester hours.

#### Program Location

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/coe\\_grad](http://www.gvsu.edu/coe_grad)

#### Requirements for M.Ed. in Early Childhood Education:

Social foundations of education (choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Research and evaluation:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis area courses:

- EDI 610 - Advanced Studies in Child Development Ages 0-8 Credits: 3
- EDI 611 - Assessment of the Young School Child Credits: 3
- EDI 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDI 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDI 614 - Infant and Toddler Development and Curriculum Credits: 3
- EDS 646 - Family and Community Collaboration in Early Childhood Education Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3

One elective:

- Elective Credits: 3

Capstone (choose one):

- EDI 693 - Master's Project Credits: 3

- EDI 695 - Master's Thesis Credits: 3 (Two semesters of EDI 695 totaling 6 credits)

#### Requirements for Endorsement in Early Childhood Education

Students desiring only the early childhood endorsement (ZS), must complete the following program requirements for a total of 27 semester hours:

- EDI 610 - Advanced Studies in Child Development Ages 0-8 Credits: 3
- EDI 611 - Assessment of the Young School Child Credits: 3
- EDI 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDI 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDI 614 - Infant and Toddler Development and Curriculum Credits: 3
- EDS 646 - Family and Community Collaboration in Early Childhood Education Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3

Practicum/graduate field experience:

- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6

Note: Candidate adding new endorsement must pass the Michigan Subject Area Test, and maintain a 3.0 GPA.

#### Educational Setting Appropriate to ZS Endorsement

A teacher who has earned an early childhood pre-kindergarten general and special education (ZS) endorsement is qualified to teach in any pre-kindergarten general or special education program. The ZS endorsed teacher will be able to teach in general education early childhood classrooms, inclusive early childhood classrooms, and in early childhood special education programs. The ZS endorsed teacher who also holds an elementary certificate is authorized to teach in all elementary designated settings per the elementary certificate. The ZS endorsed teacher who holds a secondary certification with a categorical special education endorsement is authorized to teach in special education settings authorized by the categorical special education endorsement, and not in any general education elementary setting outside the categorical special education endorsement.

The ZS endorsed teacher has specialized training in early childhood, which is defined as birth through age eight. However, the ZS endorsement is not considered an initial categorical special education endorsement because the standards stipulated in the Michigan Administrative Rules for Special Education 340.1781 and 340.1782, are not met. Additionally, it does not qualify the ZS endorsed teacher to teach as the special education teacher of record beyond pre-kindergarten without a categorical K-12 special education endorsement.

### Master of Education in Instruction and Curriculum - Educational Differentiation Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment

to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

This program prepares classroom teachers and specialists to understand and meet the educational needs of students with exceptional abilities across the learning continuum within the mixed-ability classroom. The program focuses on assessment, methodology, materials, curriculum, and administration.

#### Minimum Number of Hours in Program

The M.Ed. degree in instruction and curriculum with an emphasis in educational differentiation requires a minimum of 33 semester hours.

#### Program Location

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/coe\\_grad](http://www.gvsu.edu/coe_grad)

#### Requirements for M.Ed. in Educational Differentiation

Social foundations of education (choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Research and evaluation:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Core courses:

- EDI 639 - Curriculum Development Credits: 3
- EDI 638 - Facilitating School Environments Credits: 3
- EDI 637 - Assessment: K-12 Models and Practices Credits: 3

Emphasis area courses (choose 3 out of 4):

- EDS 652 - Foundations of Special Education Credits: 3
- EDI 640 - Fundamentals of Talent Development Credits: 3
- EDI 641 - Teaching for Talent Development Credits: 3
- EDS 625 - Inclusive Practices Credits: 3

Practicum/field experience:

- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6

One elective/workshop:

- Elective Credits:3

Capstone (choose one):

- EDI 693 - Master's Project Credits: 3
- EDI 695 - Master's Thesis Credits: 3 (Two semesters of EDI 695 totaling 6 credits)

## Master of Education in Instruction and Curriculum: Elementary Education Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

This program helps teachers continue their professional growth and advance in competence in their work in elementary school classrooms. The program may be used to develop an academic specialization of work with elementary school children or to explore a field of specialization for present or future professional goals.

#### Accreditation

Nationally Recognized by Specialty Program Association: Association for Childhood Education International (ACEI) Michigan Department of Education approved.

#### Minimum Number of Hours in Program

The M.Ed. degree in instruction and curriculum with an emphasis in elementary education requires a minimum of 33 semester hours.

#### Program Location

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/coe\\_grad](http://www.gvsu.edu/coe_grad)

#### Requirements for M.Ed. in Elementary Education

Each candidate for the M.Ed. degree must complete the following.

Social foundations of education (choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Research and evaluation:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Core courses (9 credits):

- EDI 639 - Curriculum Development Credits: 3
- EDI 637 - Assessment: K-12 Models and Practices Credits: 3
- EDI 638 - Facilitating School Environments Credits: 3

Emphasis area courses (12 credits):

- EDI 630 - Teaching Mathematics: K-8 Credits: 3
- EDI 631 - Teaching Science: K-8 Credits: 3
- EDI 633 - Teaching Social Studies and Diversity Credits: 3
- EDR 622 - Developmental Literacy for Children Credits: 3

Field-based practicum (3 credits):

- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6

Capstone (choose one):

- EDI 693 - Master's Project Credits: 3
- EDI 695 - Master's Thesis Credits: 3 (Two semesters of EDI 695 totaling 6 credits)

#### Requirements for Initial Elementary Certification

This program is for postbaccalaureate candidates who do not hold a teaching certificate and wish to pursue elementary education certification. Initial elementary certification candidates must first be admitted to graduate teacher certification, then complete:

- EDS 652 - Foundations of Special Education Credits: 3
- EDI 630 - Teaching Mathematics: K-8 Credits: 3
- EDI 631 - Teaching Science: K-8 Credits: 3
- EDI 632 - Teaching Creative and Performing Arts Credits: 3
- EDI 633 - Teaching Social Studies and Diversity Credits: 3
- EDI 635 - Development and Needs of Students Credits: 3
- EDI 638 - Facilitating School Environments Credits: 3
- EDR 622 - Developmental Literacy for Children Credits: 3
- EDR 627 - Literacy Strategies for Content Areas Credits: 3
- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6

Maintain a 3.0 G.P.A., and pass the Michigan Elementary Test prior to certification. Completion of 15 additional credits will fulfill M.Ed. degree requirements and two foundations courses, EDI 639, EDI 637, and either EDI 693 or EDI 695.

#### Elementary Endorsement for Students Already Certified

Students already certified and seeking an additional Michigan Elementary Endorsement must have Michigan secondary certification; then complete:

- EDI 630 - Teaching Mathematics: K-8 Credits: 3
- EDI 631 - Teaching Science: K-8 Credits: 3
- EDI 632 - Teaching Creative and Performing Arts Credits: 3
- EDI 633 - Teaching Social Studies and Diversity Credits: 3
- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6
- EDT 619 - Curricular Integration of Ed Technology Credits: 3

## Graduate Programs in Education

Select two:

- EDR 622 - Developmental Literacy for Children Credits: 3
- EDR 627 - Literacy Strategies for Content Areas Credits: 3
- EDR 631 - Teaching Writing Credits: 3

Select one:

- EDR 624 - Literature for Children Credits: 3
- EDR 628 - Curriculum and Materials for Language Arts Credits: 3

Candidates must receive a positive recommendation; maintain a 3.0 G.P.A.; and pass the Michigan Elementary Test.

### Master of Education in Instruction and Curriculum: Secondary Level Education Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** - The College of Education values *expertise* to guide our practice, *equity* to guide our interactions, *liberal education* to guide our perspectives, and *social responsibility* to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

This program is designed for teachers who wish to develop their skills and competencies in teaching secondary school students.

#### Minimum Number of Hours in Program

The M.Ed. degree in instruction and curriculum with an emphasis in secondary level education requires a minimum of 33 semester hours.

#### Program Location

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/coe\\_grad](http://www.gvsu.edu/coe_grad)

#### Requirements for M.Ed. in Secondary Level Education

Each candidate for the M.Ed. degree must complete the following.

Social foundations of education (choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Research and evaluation:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Core courses (9 credits):

- EDI 637 - Assessment: K-12 Models and Practices Credits: 3
- EDI 638 - Facilitating School Environments Credits: 3
- EDI 639 - Curriculum Development Credits: 3

Secondary level emphasis courses (12 credits):

- EDI 635 - Development and Needs of Students Credits: 3
- EDI 636 - Instruction in Middle and High Schools Credits: 3
- EDI 685B - Practicum/Graduate Field Experience Credits: 3

Choose one:

- EDR 623 - Developmental Literacy for Adolescents Credits: 3  
OR EDR 625 - Literature for Adolescents Credits: 3

Elective or approved substitution (3 credits):

- Elective Credits: 3

Practicum: Application form required. Apply in advance. Advisor approval required. (3 credits)

- EDI 685B Practicum/Graduate Field Experience Credits: 3 or 6

Capstone (choose one):

- EDI 693 - Master's Project Credits: 3
- EDI 695 - Master's Thesis Credits: 3 (Two semesters of EDI 695 totaling 6 credits.)

#### Requirements for Initial Secondary Certification

This program is for postbaccalaureate candidates who do not have a teaching certificate and want to pursue secondary certification. Initial secondary certification candidates must first be admitted to graduate teacher certification, then complete 27 credits from:

- EDI 635 - Development and Needs of Students Credits: 3
- EDI 636 - Instruction in Middle and High Schools Credits: 3
- EDI 638 - Facilitating School Environments Credits: 3
- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6
- EDR 623 - Developmental Literacy for Adolescents Credits: 3
- EDS 652 - Foundations of Special Education Credits: 3
- EDT 627 - Technology Integration for Secondary Teachers Credits: 3

Candidates must also maintain a 3.0 GPA, possess or complete a secondary teachable minor, pass the Michigan Subject Area test in the minor, and obtain positive recommendations. Completion of 15 additional credits will fulfill M.Ed. degree requirements: two foundation courses, EDI 639, EDI 637 and either EDI 693 or EDI 695.

#### Secondary Level Endorsement for Students Already Certified

Students already certified and seeking an additional secondary level endorsement must have Michigan elementary certification; have or complete a secondary teachable major or minor, and must complete the following:

- EDI 639 - Curriculum Development Credits: 3
- EDI 635 - Development and Needs of Students Credits:3
- EDI 636 - Instruction in Middle and High Schools Credits:3
- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6
- EDR 623 - Developmental Literacy for Adolescents Credits: 3
- EDT 619 - Curricular Integration of Ed Technology Credits: 3

Choose one:

- EDI 637 - Assessment: K-12 Models and Practices Credits: 3
- EDS 625 - Inclusive Practices Credits: 3

Candidates must obtain positive recommendations, maintain a 3.0 GPA, and pass appropriate Michigan Subject Area Tests if adding new subject areas.

### Master of Education in Literacy Studies: Reading/Language Arts Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, leading, and learning in a democratic society.

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The reading/language arts program leading to the M.Ed. degree provides elementary and secondary teachers with the appreciation, theory, and practical skills needed to teach various areas of reading and language arts. The program is helpful for K-12 classroom teachers who want to expand

their abilities to work with students in language arts programs as well as for other professionals who support students' literacy acquisition.

#### Accreditation

Nationally Recognized by Specialty Program Association: International Reading Association (IRA)  
Michigan Department of Education

#### Minimum Number of Hours in Program

All degree-seeking students in the reading/language arts master's program are required to take a minimum of 33 semester hours. If a candidate is pursuing the reading specialist K-12 endorsement, they must complete the 36 credit hours of the reading specialist program.

#### Program Location

DeVos Center, Pew Grand Rapids Campus,  
located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/grad/literacy](http://www.gvsu.edu/grad/literacy)

#### Requirements for the M.Ed. Reading/Language Arts

Each candidate for the (nonendorsement) M.Ed. degree must complete the following.

One social foundations course:

- EDF 671 - Educational Policy and Practice
- OR** EDF 672 - Social/Cultural Foundations of Education

One research and evaluation course:

- EDF 660 - Educational Inquiry and Evaluation

Six emphasis area courses:

- EDR 621 - Current Issues and Trends in Literacy Credits: 3
- EDR 622 - Developmental Literacy for Children Credits: 3
- OR** EDR 623 - Developmental Literacy for Adolescents Credits: 3
- EDR 624 - Literature for Children Credits: 3
- OR** EDR 625 - Literature for Adolescents Credits: 3
- EDR 626 - Literacy Assessment and Instruction Credits: 3
- EDR 628 - Curriculum and Materials for Language Arts Credits: 3
- EDR 631 - Teaching Writing Credits: 3

Practicum:

- EDR 685 - Practicum for Reading Teachers Credits: 3

One of the following supplemental courses:

- EDR 620 - English as a Second Language Methodologies Credits: 3
- EDF 633 - Race, Class, and Language Credits: 3
- EDF 634 - Teaching the At-Risk Student Credits: 3
- EDI 641 - Teaching for Talent Development Credits: 3
- EDR 627 - Literacy Strategies for Content Areas Credits: 3
- EDS 625 - Inclusive Practices Credits: 3
- May choose one approved elective Credits: 3

Capstone (choose one):

- EDR 693 - Master's Project Credits: 3
- EDR 695 - Master's Thesis Credits: 3 (Two semesters of EDR 695 totaling 6 credits.)

Portfolio:

- Graduate candidates will maintain a portfolio and submit it to their advisor periodically throughout their program.

#### Requirements for Elementary Reading Teacher Endorsement, K-8

The elementary reading teacher endorsement is a 24-semester hour program leading to state certification in reading at the K-8 school level. It is designed for classroom teachers who wish to develop expertise in the teaching of reading. The elementary reading teacher endorsement may be added only to an elementary teaching certificate.

Requirements include the following:

- EDR 621 - Current Issues and Trends in Literacy Credits: 3
- EDR 622 - Developmental Literacy for Children Credits: 3
- EDR 624 - Literature for Children Credits: 3
- EDR 626 - Literacy Assessment and Instruction Credits: 3
- EDR 627 - Literacy Strategies for Content Areas Credits: 3

- EDR 628 - Curriculum and Materials for Language Arts Credits: 3
- EDR 631 - Teaching Writing Credits: 3
- EDR 685 - Practicum for Reading Teachers Credits: 3

Portfolio:

- Graduate candidates will also maintain a portfolio and submit it to their advisor periodically throughout the program. In addition, candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 G.P.A.

#### Requirements for Secondary Reading Teacher Endorsement, 6-12

The secondary reading teacher endorsement is a 24-semester hour program leading to state certification in reading at the secondary school level (6-12). It is designed for classroom teachers who wish to develop expertise in the teaching of reading. The secondary reading teacher endorsement may be added only to a secondary teaching certificate.

Requirements include the following courses:

- EDR 620 - English as a Second Language Methodologies Credits: 3
- OR** EDI 641 - Teaching for Talent Development Credits: 3
- OR** EDS 625 - Inclusive Practices Credits: 3
- EDR 621 - Current Issues and Trends in Literacy Credits: 3
- EDR 623 - Developmental Literacy for Adolescents Credits: 3
- EDR 625 - Literature for Adolescents Credits: 3
- EDR 626 - Literacy Assessment and Instruction Credits: 3
- EDR 628 - Curriculum and Materials for Language Arts Credits: 3
- EDR 631 - Teaching Writing Credits: 3
- EDR 685 - Practicum for Reading Teachers Credits: 3

Portfolio:

- Graduate candidates will also maintain a portfolio and submit it to their advisor periodically throughout the program. In addition, candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 GPA.

#### Requirements for the Reading Specialist Endorsement K-12

The reading specialist endorsement is a 36-semester hour program leading to state endorsement as a K-12 reading specialist. It is designed for persons who are interested in administration and supervision of school or district-wide reading/language arts programs and will enable the bearer to be employed as a school reading consultant/literacy coach, to teach in special remedial or developmental programs, and to teach reading as a special subject. The reading specialist endorsement may be added to either an elementary or secondary teaching certificate. The state requires a master's degree in reading for this endorsement.

#### M.Ed. Program Requirements

One social foundations course (choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

One research and evaluation course:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

One Capstone course selected from:

- EDR 693 - Master's Project Credits: 3
- EDR 695 - Master's Thesis Credits: 3 (Two semesters of EDR 695 totaling 6 credits.)

#### Reading Courses Required for Specialist Endorsement

- EDR 621 - Current Issues and Trends in Literacy Credits: 3
- EDR 622 - Developmental Literacy for Children Credits: 3
- EDR 623 - Developmental Literacy for Adolescents Credits: 3
- OR** EDR 627 - Literacy Strategies for Content Areas Credits: 3
- EDR 624 - Literature for Children Credits: 3
- OR** EDR 625 - Literature for Adolescents Credits: 3
- EDR 626 - Literacy Assessment and Instruction Credits: 3
- EDR 628 - Curriculum and Materials for Language Arts Credits: 3
- EDR 631 - Teaching Writing Credits: 3
- EDR 687 - Practicum for Reading Specialists Credits: 3
- EDR 689 - Program Development and Administration Credits: 3

## Graduate Programs in Education

### Portfolio:

- Graduate candidates will maintain a portfolio and submit it to their advisor periodically throughout their program. In addition, candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 grade point average.

## Master of Education in Literacy Studies: Teaching English to Speakers of Other Languages (TESOL) Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

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The program provides teachers with the theoretical, practical knowledge and skills necessary to teach nonnative speakers of English. The program focuses on language and cultural issues, methodologies and curriculum design. A major or minor in English, modern languages, bilingual education, or equivalents desired. Candidates from other disciplines must have an introductory course in linguistics, EDR 634 Linguistics for Teachers. Students are also encouraged to take EDR 602 (Teaching English Language Learners Across Content), which is a course for teachers in the content areas. This course addresses methods and strategies for teaching ESL students in content area classes.

### Minimum Number of Hours in Program

The M.Ed. degree with emphasis in TESOL, teaching English to speakers of other languages, requires a minimum of 33 semester hours. An endorsement in English as a second language (ESL), K-8 or 6-12, requires a minimum of 24 semester hours. All applicants to the TESOL program must demonstrate experience learning a second language.

### Program Location

DeVos Center, Pew Grand Rapids Campus,  
located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/grad/literacy](http://www.gvsu.edu/grad/literacy)

## Requirements for M.Ed. in Teaching English to Speakers of Other Languages (TESOL)

Each candidate for the M.Ed. degree must complete the following.

Social foundations of education course (choose one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

One research and evaluation course:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis courses (21 credits):

- EDR 620 - English as a Second Language Methodologies Credits: 3
- EDF 633 - Race, Class, and Language Credits: 3
- EDR 634 - Linguistics for Teachers Credits: 3
- EDR 635 - Sociolinguistics: Language, Society, and Schooling Credits: 3
- EDI 637 - Assessment: K-12 Models and Practices Credits: 3
- EDS 637 - Explicit Language Instruction Credits: 3

Take one:

- EDT 619 - Curricular Integration of Ed Technology Credits: 3
- EDT 627 - Technology Integration for Secondary Teachers Credits: 3

TESOL practicum:

- EDR 685 - Practicum for Reading Teachers Credits: 3 (B)

Capstone (choose one):

- EDR 693 - Master's Project Credits: 3
- EDR 695 - Master's Thesis Credits: 3 (Two semesters of EDR 695 totaling 6 credits)

## Requirements for ESL Endorsement

Candidates can receive K-12 endorsement by completing the 33 hour TESOL master's program, pass the Michigan Subject Area Test, and maintain a 3.0 GPA.

Candidates interested in the K-8 or 6-12 endorsement should take the following:

- EDR 620 - English as a Second Language Methodologies Credits: 3
- EDF 633 - Race, Class, and Language Credits: 3
- EDR 634 - Linguistics for Teachers Credits: 3
- EDR 635 - Sociolinguistics: Language, Society, and Schooling Credits: 3
- EDI 637 - Assessment: K-12 Models and Practices Credits: 3
- EDS 637 - Explicit Language Instruction Credits: 3
- EDT 619 - Curricular Integration of Ed Technology Credits: 3  
**OR** EDT 627 - Technology Integration for Secondary Teachers Credits: 3
- EDR 685 - Practicum for Reading Teachers Credits: 3 (B)
- Pass the Michigan Subject Area Test, and maintain a 3.0 G.P.A.

## Master of Education in School Counseling

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

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School counseling prepares students to work as school counselors in K-12 public and private school systems. It leads to a school counselor endorsement or a school counselor license in Michigan. Students accepted into the M.Ed. in school counseling must have completed coursework in their undergraduate degree in advanced child development, school learning, and classroom management or coursework in these areas will be required as part of their planned program.

### Accreditation

Michigan Department of Education Approval  
Specialty Program Standards: MED Counseling and Guidance Services Standards

### Minimum Number of Hours in Program

All degree-seeking students in the school counseling master's program are required to take a minimum of 36 semester hours.

### Program Location

DeVos Center, Pew Grand Rapids Campus,  
located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/grad/counseling](http://www.gvsu.edu/grad/counseling)

## Requirements for M.Ed. in School Counseling

The master's degree in school counseling prepares students to work as school counselors in K-12 public and private school systems. It leads to a school counselor endorsement or a school counselor license in Michigan. Students accepted into the M.Ed. in school counseling must have completed coursework in their undergraduate degree in learning theory and student learning and classroom management or coursework in these areas will be required as part of their planned program. No endorsement or school counseling license will be approved without completion of the Master of Education in school counseling degree. Students are required to complete a minimum of 36 credit hours. Students are also required to complete 100 practicum hours and 600 internship hours. The 100 practicum hours are dispersed through five emphasis area courses prior to the internship.

Each candidate for the M.Ed. degree in school counseling must complete the following.

Foundations courses (6 credits):

- EDF 660 - Educational Inquiry and Evaluation Credits: 3
- EDF 671 - Educational Policy and Practice Credits: 3

**OR** EDF 672 - Social/Cultural Foundations of Education Credits: 3

Program requirements (21 credits):

- EDC 621 - The Profession of School Counseling Credits: 3
- EDC 623 - Personal/Social Development Credits: 3
- EDC 625 - Academic Development Credits: 3
- EDC 649 - Career Development Credits: 3
- EDC 651 - School Counseling Curriculum and Techniques Credits: 3
- EDI 635 - Development and Needs of Students Credits: 3
- SW 600 - Cultural Competency for Social Work Credits: 3

Practicum/internship (6 credits):

- EDC 685 - Internship in School Counseling Credits: 3 to 6 (may be taken in two semesters 3/3 credits)

Capstone (choose one):

- EDC 693 - Master's Project Credits: 3
- EDC 695 - Master's Thesis Credits: 3 (Two semesters of EDC 695 totaling 6 credits.)

## Master of Education in Special Education - Cognitive Impairment Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

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### Accreditation

Nationally Recognized by Specialty Program Association: Council for Exceptional Children  
Michigan Department of Education Approved

### Minimum Number of Hours in Program

All degree-seeking students are required to take a minimum of 33 semester hours, including foundations, emphasis courses and Capstone.

### Admission Requirements, Retention, and Termination Standards

Students who are degree seeking and are working for special education endorsement are required to take additional courses beyond the normal

requirements for the master's degree. Students who want to enroll in a master's degree program and are not seeking special education endorsement should select a master's degree emphasis program and consult with a special education graduate advisor to develop a program consisting of foundations and emphasis coursework, including research applications.

### Program Location

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/grad/specialed](http://www.gvsu.edu/grad/specialed)

## Requirements for M.Ed. in Special Education: Cognitive Impairment:

Candidates for the M.Ed. must complete the following courses.

Research foundations coursework:

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Social foundations coursework (take one):

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Special education coursework: Required for CI candidates who

**DO NOT** hold a special education endorsement.

Take first:

- EDS 652 - Foundations of Special Education Credits: 3

Elective coursework: Required for CI candidates who **DO** hold a special education endorsement.

Take anytime (advisor approval required):

- Elective Credits: 3

Cognitive impairment coursework:

- EDS 618 - Studies in Cognitive Impairment Credits: 3
- EDS 619 - Programs for Mild Cognitive Impairment Credits: 3
- EDS 620 - Programs for Severe Cognitive Impairment Credits: 3
- EDS 621 - Assistive Technology in Education Credits: 3
- EDS 622 - Assessment Procedures for Placement and Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 629 - Transition Practices Credits: 3

Capstone coursework: Application required.

Take one:

- EDS 693 - Master's Project Credits: 3
- EDS 695 - Master's Thesis Credits: 3 (Two semesters of EDS 695 totaling 6 credits)

## Requirements for Cognitive Impairment K-12 (single endorsement):

Candidates for this program must possess a valid Michigan teaching certificate. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 G.P.A.

Special education coursework: Required for CI candidates who

**DO NOT** hold a special education endorsement.

Take first:

- EDS 652 - Foundations of Special Education Credits: 3

Preteaching coursework: Required for CI candidates who **DO NOT** hold a special education endorsement.

Application required.

- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6  
(Candidates with approved special education experiences may seek a waiver of the EDS 550 requirement.)

Elective coursework: Required for CI candidates who **DO** hold a special education endorsement.

Advisor approval required.

- Elective Credits: 3

Cognitive impairment coursework: Required for **ALL** CI candidates.

- EDS 618 - Studies in Cognitive Impairment Credits: 3
- EDS 619 - Programs for Mild Cognitive Impairment Credits: 3

## Graduate Programs in Education

- EDS 620 - Programs for Severe Cognitive Impairment Credits: 3
- EDS 621 - Assistive Technology in Education Credits: 3
- EDS 622 - Assessment Procedures for Placement and Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 629 - Transition Practices Credits: 3

Practicum coursework: Required for ALL CI candidates. Application required.

Take last:

- EDS 685B - Practicum/Graduate Field Experience Credits: 6

## Master of Education in Special Education: Emotional Impairment Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section of this catalog.

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### Accreditation

Nationally Recognized by Specialty Program Association: Council for Exceptional Children

Michigan Department of Education Approved

### Minimum Number of Hours in Program

All degree-seeking students are required to take a minimum of 33 semester hours, including foundations, emphasis courses, and Capstone.

### Admission Requirements, Retention, and Termination Standards

Students who are degree seeking and are working for special education endorsement are required to take additional courses beyond the normal requirements for the master's degree. Students who want to enroll in a master's degree program and are not seeking special education endorsement should select a master's degree emphasis program and consult with a special education graduate advisor to develop a program consisting of foundations and emphasis coursework, including research applications.

### Program Location

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/grad/specialed](http://www.gvsu.edu/grad/specialed)

### Requirements for M.Ed. in Special Education: Emotional Impairment:

Candidates for the M.Ed. degree must complete the following courses.

Research foundations coursework: Take early in program.

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Social foundations coursework: Take early in program.

Take one:

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Emotional impairment coursework: Take anytime.

- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 625 - Inclusive Practices Credits: 3

- EDS 627 - Instructional Practices: Technology Credits: 3
  - EDS 629 - Transition Practices Credits: 3
  - EDS 636 - Diagnostic and Interpretative Procedures Credits: 3 (Take before EDS 638)
  - EDS 638 - Instructional Practices: Learning Disabilities II Credits: 3
- Capstone coursework: Application required.

Take one:

- EDS 693 - Master's Project Credits: 3
- EDS 695 - Master's Thesis Credits: 3 (Two semesters of EDS 695 totaling 6 credits)

### Requirements for Emotional Impairment K-12 Endorsement (single endorsement):

Candidates for this program must possess a valid Michigan teaching certificate. Candidates adding a new endorsement must pass the Michigan Subject Area Tests and maintain a 3.0 GPA. Completion of both EDS 636 and EDS 638 satisfy the state reading requirements PA 118.

Special education coursework: Required for EI candidates who **DO NOT** hold a special education endorsement.

Take first:

- EDS 652 - Foundations of Special Education Credits: 3

Preteaching coursework: Required for EI candidates who **DO NOT** hold a special education endorsement. Application required.

- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

(Candidates with approved special education experiences may seek a waiver of the EDS 550 requirement).

Emotional impairment coursework: Required for all EI candidates.

Take anytime:

- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3
- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3 (Take before EDS 638)
- EDS 638 - Instructional Practices: Learning Disabilities II Credits: 3

Practicum coursework: Required for ALL EI candidates. Application required.

Take last:

- EDS 685A - Practicum/Graduate Field Experience Credits: 3 or 6

## Master of Education in Special Education: Learning Disabilities Emphasis

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

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### Accreditation

Nationally Recognized by Specialty Program Association: Council for Exceptional Children

Michigan Department of Education Approval

**Admission Requirements, Retention, and Termination Standards**

Students who are degree seeking and are working for special education endorsement are required to take additional courses beyond the normal requirements for the master's degree. Students who want to enroll in a master's degree program and are not seeking special education endorsement should select a master's degree emphasis program and consult with a special education graduate advisor to develop a program consisting of foundations and emphasis coursework, including research applications.

**Minimum Number of Hours in Program**

The M.Ed. degree in special education with an emphasis in learning disabilities requires a minimum of 33 semester hours.

**Program Location**

DeVos Center, Pew Grand Rapids Campus, located in downtown Grand Rapids, MI

**Website:** [www.gvsu.edu/grad/specialed](http://www.gvsu.edu/grad/specialed)

**Requirements for M.Ed. in Learning Disabilities:**

Candidates for the M.Ed. degree must complete the following courses.

Research foundations coursework: Take early.

- EDF 660 - Educational Inquiry and Evaluation Credits: 3

Social foundations coursework: Take early in program.

Take one:

- EDF 671 - Educational Policy and Practice Credits: 3
- EDF 672 - Social/Cultural Foundations of Education Credits: 3

Special education coursework: Required for LD candidates who

**DO NOT** hold a special education endorsement.

Take first:

- EDS 652 - Foundations of Special Education Credits: 3

Elective coursework: Required for LD candidates who **DO** hold a special education endorsement. Take anytime. Advisor approval required.

- Elective Credits: 3

Learning disabilities coursework:

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3 (Take before EDS 637)
- EDS 637 - Explicit Language Instruction Credits: 3 (Take before EDS 638)
- EDS 638 - Instructional Practices: Learning Disabilities II Credits: 3 (Take before EDS 640)
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3

Take anytime:

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Capstone coursework: Application required.

Take one:

- EDS 693 - Master's Project Credits: 3
- EDS 695 - Master's Thesis Credits: 3 (Two semesters of EDS 695 totaling 6 credits.)

**Requirement for Learning Disabilities K-12 Endorsement (single endorsement)**

Candidates for this program must possess a valid Michigan teaching certificate. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 G.P.A. Completion of both EDS 636 and 638 satisfy the state reading requirement PA 118.

Special education coursework: Required for LD candidates who **DO NOT** hold a special education endorsement. Take EDS 652 first, and EDS 609 anytime.

- EDS 652 - Foundations of Special Education
- EDS 609 - Emotional Impairments Credits: 3

Preteaching coursework: Required for LD candidates who **DO NOT** hold a special education endorsement. Application required.

- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6  
(Candidates with approved special education experiences may seek a waiver of the EDS 550 requirement).

Elective coursework: Required for LD candidates who **DO** hold a special education endorsement. Advisor approval required. Take anytime.

- Elective Credits: 3

Learning disabilities coursework: Required for **ALL** LD candidates.

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3 (Take before EDS 637.)
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3 (Take before EDS 638.)
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3 (Take before EDS 640.)
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3

Take anytime.

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Practicum coursework: Required for **ALL** LD candidates. Application required.

Take last:

- EDS 685C - Practicum/Graduate Fields Experience Credits: 6

**Educational Specialist Degree in Leadership**

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

**Mission** - Teaching, leading, and learning in a democratic society.

**Philosophy** - Believing that schools function as social and political entities as well as for the growth of individuals, the College of Education prepares teachers and leaders a) to enhance the academic and personal potential of their students, and b) to evaluate the social and ethical implications of educational policies and practices.

**Values** -The College of Education values expertise to guide our practice, equity to guide our interactions, liberal education to guide our perspectives, and social responsibility to guide our commitment to democratic education. We value these ideals in our preparation of candidates, our development of faculty, and our relationships with the larger community we serve.

The educational specialist degree in leadership, with a cognate in administration, builds on the master's degree and develops leadership practitioners for school and/or central office administrative positions. The program provides district leaders with meaningful clinical experiences, case methods of teaching, and pragmatic curriculum geared to the specific knowledge and skills required by district leaders and superintendents at different career stages. The program also integrates research designed to build a practical knowledge base for district leaders and policy makers. The primary goal of this degree is to prepare competent and effective leaders for K-12 districts whose management and administrative understandings, skills and dispositions foster quality educational experiences for children and youth.

The courses are listed in a logical sequence for developing greater depth and breadth of understanding. The ideal sequence puts the core courses before the cognate courses. The culminating experience is designed to apply the knowledge, skills and dispositions acquired throughout the program in an internship/practicum during which candidates do action research and prepare a portfolio.

**Accreditation**

The Higher Learning Commission and a member of the North Central Association (NCA)

**Minimum Number of Hours for Graduation: 30**

## Graduate Programs in Education

### Admission to Educational Specialist Degree in Leadership Program

- A master's degree with at least a 3.0 GPA on a 4.0 scale.
- Official GRE scores.
- Essay/personal statement.
- Three letters of recommendation. Two from a professional, addressing your leadership skills and success. One from an individual who can address your academic/scholarly capabilities.
- Current resume must include the following:
  - Title of master's project or thesis, degrees received with dates, institutions, majors and minors.
  - Listing of employment.
  - Description of leadership experience, dates, and location.
  - Presentations, publications, memberships, and professional development.

**Website:** [www.gvsu.edu/coe](http://www.gvsu.edu/coe)

### Graduate Outcomes

Student success is measured using the Educational Leadership Constituent Council (ELCC) standards. These standards are applied throughout the program and within the final culminating "Theory into Practice" experience. Students demonstrate their success in the education specialist program through practitioner research, internship, and development of a professional portfolio.

### Required Core Courses (18 credits)

- EDL 710 - Instructional Management and Supervision Credits: 3
- EDL 700 - Educational Leadership and Change Credits: 3
- EDL 705 - Organizational Behavior, Ethics and Decision-Making Credits: 3
- EDL 715 - Data-Based Decision-Making and Technology Credits: 3
- EDL 720 - Organizational and Community Relations Credits: 3
- EDL 725 - Educational Law, Policy, and Practice Credits: 3

### Required Educational Administration Cognate (9 credits)

- EDL 740 - The Superintendency Credits: 3
- EDL 742 - School Board Relations Credits: 3
- EDL 744 - Educational Finance and Economic Issues Credits: 3

### Educational Specialist in Leadership Culminating Experience

This three-credit-hour culminating experience is likely to take the form of a practicum that will result in a portfolio, containing documents that address the standards and provide evidence of the understanding and ability to apply leadership concepts to practice.

- EDL 770 - Leadership Theory into Practice Credits: 3

## Postbaccalaureate Teacher Certification

**Website:** [www.gvsu.edu/coe](http://www.gvsu.edu/coe)

### Requirements for a Certificate

Initial Certification for Postdegree Students: Candidates who already possess an approved baccalaureate degree may consider certification at either the undergraduate or graduate level. Because of the need for careful assessment in choosing the appropriate program, students should first contact the College of Education Student Information and Services Center to request background materials and register to attend one of the regularly scheduled information meetings. To set up an appointment to attend one of the information sessions, call (616) 331-6650.

## Graduate Teacher Certification

Candidates who already possess an approved baccalaureate degree may consider certification at either the undergraduate or graduate level. Because of the need for careful assessment in choosing the appropriate program, students should first contact the Student Information and Services Center to request background materials and register to attend one of the regularly scheduled information meetings. Candidates considering

the graduate program must be able to undertake full-time study for approximately one calendar year. This program is offered partially online or fully online. See program advisor for program details.

Minimum admission requirements for the graduate certification program include:

1. Applicants must submit an official copy of the reading, mathematics, and writing subscores from the ACT or SAT. Applicants may submit an official copy of the verbal reasoning, quantitative reasoning, and analytical writing from the GRE if ACT or SAT scores are not available.
2. Completion of the baccalaureate degree from a regionally accredited institution at least one year prior to application with a GPA of 3.0 or higher for the final 60 semester credits.
3. Possession of completion of a teachable major with a GPA of 3.0 or higher. Secondary candidates must also possess or complete a teachable minor before final certification.
4. Successful completion of Michigan Subject Area Test in teachable major.
5. Documentation of 25 hours age-appropriate experience with children or youth.
6. Signed statement regarding criminal activity.
7. Completion of EDT 619 Curricular Integration of Ed Technology (for elementary teachers only). Secondary take EDT 627 Technology Integration for Secondary Teachers.
8. Admission to graduate studies.
9. Completion of application materials for graduate teacher certification program.
10. Elementary candidates must complete PED 265 Teaching Health in Elementary Schools and PED 266 Move-Dance-Learn! PE and Dance for Elementary Education.

Note: Students seeking a major in world languages must pass the Oral Proficiency Interview (OPI) prior to their student teaching semester.

### Exit Requirements

Candidates will be eligible for Michigan Provisional Certification after completion of the following:

1. Successful completion of all coursework
2. G.P.A. of 3.0 in the major, minor and professional requirements
3. Passing scores on the Michigan Subject Area Tests (MTTC). Elementary candidates must pass the Elementary Test; if they also pass subject area tests in their approved major, these will also be added to their certificate. Secondary candidates must pass subject area tests in their major and minor.
4. Completion of CPR (adult/child) instruction and first aid (standard or basic)
5. Updated criminal background information if any changes since original application for admission to the College of Education, contact the GTC coordinator to confirm the change(s) are on file in the Student Information and Services Center.

### Program Requirements for Graduate Teacher Certification - Secondary

#### Summer

- EDI 635 - Development and Needs of Students Credits: 3
- EDS 652 - Foundations of Special Education Credits: 3

#### Fall

- EDI 638 - Facilitating School Environments Credits: 3
- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6
- EDR 623 - Developmental Literacy for Adolescents Credits: 3
- EDI 636 - Instruction in Middle and High Schools Credits: 3

#### Winter

- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6
- EDT 627 - Technology Integration for Secondary Teachers Credits: 3

## Program Requirements for Graduate Teacher Certification - Elementary

### Summer

- EDI 631 - Teaching Science: K-8 Credits: 3
- EDI 632 - Teaching Creative and Performing Arts Credits: 3
- EDI 635 - Development and Needs of Students Credits: 3
- EDI 633 - Teaching Social Studies and Diversity Credits: 3
- EDR 622 - Developmental Literacy for Children Credits: 3

### Fall

- EDI 638 - Facilitating School Environments Credits: 3
- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6
- EDI 630 - Teaching Mathematics: K-8 Credits: 3
- EDR 627 - Literacy Strategies for Content Areas Credits: 3

### Winter

- EDI 685 - Practicum/Graduate Field Experience Credits: 3 or 6
- EDS 652 - Foundations of Special Education Credits: 3

## Michigan Professional Certification

Candidates for Michigan Professional Certification must fulfill the following requirements:

1. Hold a Michigan Provisional Certificate
2. Teach successfully for three years after the issuance of the provisional certificate and according to its validity
3. Show evidence of coursework in reading methods: six semester credits for elementary, three for secondary. (In Michigan, if provisional certificate was issued after 1983, requirement is met in the initial provisional program).
4. Complete an approved state required course (reading diagnostic) in the diagnosis and remediation of reading disabilities and differentiated instruction, including field experiences, as part of the Professional Certificate requirement.
5. Complete requirements from the professional development/coursework requirement options. Candidates should contact the College of Education Certification Administrator or visit the College of Education Certification website: [www.gvsu.edu/coe/professional](http://www.gvsu.edu/coe/professional) for requirements.

If necessary, the provisional certificate may be renewed for a three-year period. Additional information is available at the College of Education website: [www.gvsu.edu/coe/renewals/](http://www.gvsu.edu/coe/renewals/).

### Renewal of Professional Certificate

The Michigan Professional Certificate (earned after June 30, 1992) must be renewed every five years. Additional information is available on the College of Education website: [www.gvsu.edu/coe/professional/](http://www.gvsu.edu/coe/professional/).

Students applying for professional certificate renewal, must have a MEIS account and **initiate the application process by self-registering online** in the Michigan Online Educator Certification System (MOECS). For instructions on how to create your MEIS account and apply for your renewal, go to [www.michigan.gov/moeecs](http://www.michigan.gov/moeecs).

### Applying for Certification and Endorsements

Candidates should apply for certificate and/or endorsement(s) at the beginning of the semester in which they expect to complete all requirements. They should also be certain that they have an approved planned program, have met all university requirements, and have transcripts and other documentation on file in the Registrar's Office. Upon completion of program requirements, candidates must have a MEIS account and **initiate the certification recommendation by self-registering online** through the Michigan Online Educator Certification System (MOECS). For instructions on how to create a MEIS account and apply for additional endorsements or licensure, go to [www.michigan.gov/moeecs](http://www.michigan.gov/moeecs).

## Planned Program Options for Professional Certification

It is recommended, for candidates who select credit hours for professional development, meet with an advisor in the College of Education to select appropriate course(s).

### Option 1. Master's Degree

Earning a master's degree from an approved teacher education institution, with quality graduate education programs, will enhance teacher skills at various levels. It is recommended you meet with an appropriate College of Education advisor to select a planned program that meets your needs.

### Option 2. Additional Major or Minor

The applicant may earn additional endorsements consisting of at least 20 hours within the College of Education or with approved subject area majors or minors: [www.gvsu.edu/clasadvising/](http://www.gvsu.edu/clasadvising/). For graduate endorsements, program advisors must approve all additional endorsements. Applicants adding additional subject area endorsements and endorsements at the graduate level must also pass Michigan Subject Area tests (MTTC).

### Option 3. Additional Certificate Level

This option is available for candidates who wish to become certified at a level other than that of their original certificate (example: a secondary teacher who wants to become elementary certified).

Candidates may select from:

- a. Early childhood endorsement
- b. Elementary endorsement
- c. Secondary endorsement

### Option 4. Professional Development

Candidates selecting credit hours for their professional certificate may select one of the previously listed options in an approved planned program with a College of Education advisor or choose courses in subject matter related to the applicant's teaching grade level and content endorsement.

## Reading Requirement

All candidates for provisional or professional certification must show evidence of coursework in **reading methods**, six credits for elementary, three for secondary. If a Michigan Provisional Certificate was granted after July 1983 from a Michigan accredited teacher preparation institution, the candidate has fulfilled the reading requirement. It is recommended that students have their College of Education advisor establish these courses when planning their official program of study **if they have not yet met the requirement within their initial teacher preparation program**.

In addition, effective July 1, 2009, an approved (reading diagnostic) course in the diagnosis and remediation of reading disabilities and differentiated instruction, including field experiences, is required before obtaining the Professional Certificate. To view approved reading courses, visit: [www.gvsu.edu/coe/grad/reading-requirement-for-professional-certification-27.htm](http://www.gvsu.edu/coe/grad/reading-requirement-for-professional-certification-27.htm)

Please note: All certification requirements are subject to change by the Michigan Department of Education.

## Graduate Certificate in Online/Blended Instruction and Assessment

A certificate in online/blended instruction is available to GVSU COE graduate-degree seeking students in good standing. The certificate consists of the following four course sequence (12 credits):

- EDT 629 - Online Instructional Design/Development Credits: 3
- EDT 635 - Instructional Systems Design Credits: 3
- EDT 636 - Assessment of Online/Blended Learning Credits: 3
- EDT 684 - Field Experience - Educational Technology Credits: 3

Interested students should contact their advisor or the graduate educational technology program director (email: [edtech@gvsu.edu](mailto:edtech@gvsu.edu)). This certificate is

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designed for K-12 classroom teachers who seek knowledge and expertise teaching in online or blended settings, faculty in higher education who seek knowledge and expertise teaching in online or hybrid settings, and corporate trainers or instructors interested in developing and implementing Web-based, online instruction. Students must maintain a minimum grade of C and the cumulative G.P.A. of 3.0 or higher for all four courses.

### Engineering - Program Description

For additional information about opportunities your college offers, please refer to the Seymour and Esther Padnos College of Engineering and Computing section in this catalog.

**Vision:** GVSU's School of Engineering aspires to be a premier education-oriented engineering school focused on applied engineering practice that is informed by research and scholarship.

**Mission:** Our mission is to prepare students to meet the challenges of the modern world as engineering professionals who have the potential to become innovative leaders.

We fulfill our mission with a curriculum that is firmly based in the theoretical foundation of science and mathematics in application to real-world problems. The curriculum also provides for experiences in engineering design, analysis, and professional practice. Students develop technical competency through course and laboratory work, project work, and the co-operative education experience in industry or in research.

Our mission is realized by a shared commitment to continual improvement, scholarship and research, and refinement through critical review. Such review requires both close contact with current engineering practice and a commitment to liberal education that enhances the practice of engineering in global societies through a deep understanding of the human condition and the relationship of engineering practice to the natural environment.

**Website:** [www.gvsu.edu/engineering](http://www.gvsu.edu/engineering)

#### Undergraduate Engineering Degree Programs

The School of Engineering offers four-year programs leading to the degree of Bachelor of Science in Engineering (B.S.E.) with majors in computer, electrical, interdisciplinary, mechanical, and product design and manufacturing engineering. During the first two years, students take fundamental courses in engineering in preparation for admission to the B.S.E. degree in their major area and cooperative education experience in industry. Integrated cooperative engineering education allows students the opportunity to gain industrial experience before graduation. During the last two years of the program, students alternate periods of cooperative education in industry with academic study. The interdisciplinary engineering program transcends traditional engineering and allows students to tailor their engineering education to their specific educational interests. All engineering majors are capped by a multidisciplinary two-semester senior design project requiring initiative, planning, and design to solve engineering problems for local companies.

#### B.S.E. Degree Goal and Objectives

The goal of the B.S.E. degree is to prepare students to assume engineering positions in industry with the potential to advance to leadership positions. In pursuing this goal, students may major in one or more engineering disciplines: computer, electrical, product design and manufacturing or mechanical engineering; or they may pursue an interdisciplinary major tailored to their specific interest.

The program educational objectives are that a student graduating from the B.S.E. program must:

- Demonstrate technical competency in their careers
- Function effectively in an industrial or academic environment
- Engage in professional development
- Shape their professions and societies

#### Engineering Design

Design is central to the practice of engineering. The curriculum has been developed to integrate design education throughout all four years of the program. The student's experience begins in the freshman year with instruction and practice in computer-aided design and product realization, the design of computer software, and engineering problem-solving using current computer software and hardware tools. Design instruction continues in the sophomore year through activities such as design projects, materials selection exercises, electronics design, and quality assurance methods. Building upon the fundamental engineering science and design knowledge developed in the first two years and the experience gained in the integrated cooperative education program, students are then prepared to tackle substantially more mature design experiences beginning in the junior year. The cooperative education program, which continues through the junior and senior years, also contributes substantially to student preparation for the two-semester Capstone senior design experience. The majority of the senior design projects each year are performed for companies in west Michigan. Exercises that address environmentally responsible design are integrated throughout the curriculum.

#### Industry Involvement

Grand Valley's B.S.E. degree programs have wide community and industrial support. Michigan residents and industries have contributed to the development of these programs by providing both financial support and opportunities for cooperative engineering education for students. Each program is served by an Industrial Advisory Board composed of engineering leaders and other professionals. Additional interaction between the engineering program and industry is effectively provided by Grand Valley's Career Center.

#### Student Preparation and Guidance

The B.S.E. degree programs are highly structured. Careful planning by students, in consultation with their engineering advisor, is essential. Students considering an engineering career should consult an engineering advisor at the earliest possible opportunity, preferably before registering for their first semester. A consultation meeting with an advisor can be arranged by contacting the Padnos College of Engineering and Computing student services office. A student who has declared an engineering major is assigned an academic advisor from the professional advising staff in student services for the first two years and then from the faculty of the School of Engineering after secondary admission.

High school students considering an engineering career are urged to take a college preparatory program consisting of at least three years of laboratory science, including one year of physics and one year of chemistry; four years of mathematics, including two years of algebra, one year of geometry, and one half year of trigonometry; one half year of computer programming; four years of English, including composition; two years of a single foreign language; and three years of social studies.

Properly prepared students can complete the B.S.E. degree in four calendar years. Students who are not prepared to begin the B.S.E. degree with Mathematics 201 (Calculus I), or who prefer to not carry the average course load of 16 credit hours per semester, will need a longer period of study to complete their engineering degree. Students who wish to pursue the B.S.E. degree after transferring from a two-year school should normally enroll in a pre-engineering program before transferring to Grand Valley and contact student services for advising as soon as possible.

#### Admission

Students with no previous college credit, or those who have not completed the 64-semester-hour engineering foundations course sequence, are pre-majors. The engineering foundations course sequence spans the freshman and sophomore years and develops the fundamental knowledge on which an engineering program is built.

Students who intend to pursue the B.S.E. degree are urged to declare an engineering major as soon as possible, preferably before they first

register for courses at Grand Valley. Students must formally declare an engineering major before the end of the drop-add period of the fall semester of the academic year in which they are seeking admission to major standing.

The School of Engineering admits students directly to major standing as freshmen. This honor is reserved for students who have both a 29 or higher composite score and a 32 or higher mathematics score on the ACT and a 3.6 or higher high school GPA. In order to continue direct-admit status, students must maintain an overall GPA of 2.7 and earn at least a C (2.0) in each course. Students whose GPA falls below 2.7 no longer have direct-admit status and will need to apply to the School of Engineering via the normal admission process to gain admission to major standing.

Admission to major standing in the B.S.E. program requires a secondary application. Applicants must meet at least the following: (1) a GPA of 2.7 or above in the engineering foundations course sequence, (2) completion of each course in the engineering foundations course sequence with a grade of C (2.0) or above with not more than one repeat in each foundation course, and (3) completion of EGR 289 in preparation for placement in cooperative engineering education. Transfer students must also complete at least eight semester hours of engineering courses at Grand Valley before they can be admitted to major standing.

Once admitted to major standing in the B.S.E. degree, students are expected to devote sufficient time to complete the work assigned in each course. Students are expected to maintain the highest ethical standards at all times. Students may be dismissed from the program for violations of ethical standards or unsatisfactory academic progress.

Students must apply directly to the School of Engineering before the last day of classes of the fall semester of the academic year in which they are seeking admission to major standing. Application forms are available on the School of Engineering website (within Forms under the Co-op Education link). Notification letters are promptly issued to students after the processing of their applications is complete.

#### Accreditation

The **computer engineering major** is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

The **electrical engineering major** is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

The **interdisciplinary engineering major** is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

The **mechanical engineering major** is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

The **product design and manufacturing engineering major** is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

#### Participating Programs

**Cooperative Education:** Cooperative education is a university and industry partnership program that provides a student with engineering work experience that complements and supplements engineering education at GVSU. Cooperative education is an integral component of the curriculum normally consisting of three semesters of work within an applied engineering environment. The program is designed to provide the student with depth of experience with one host/employer (optimally) for all three co-op semesters. The student will have the opportunity to apply the knowledge and skills learned in the academic environment and needed to be a successful practicing engineer, including technical hands-on engineering problem solving, professional self-management, interpersonal skills (verbal and written communication, working in teams, customer/client relations, etc.), and leadership.

Students must enroll in EGR 289 during the fall semester prior to their first cooperative education experience in the following spring/summer

semester. The Career Services office helps students find cooperative education positions in industry. Grand Valley will make a concerted effort to offer every student admitted to major standing a number of invitations for interviews for cooperative education positions with various potential employers. Students who either are not acceptable for employment through the prescribed cooperative education interview process, or do not obtain positive evaluations during their cooperative education experiences, or do not maintain satisfactory progress toward the B.S.E. degree cannot meet the graduation requirements of the program and must withdraw from the B.S.E. program. Such students do have numerous other options to complete a bachelor's degree in one of Grand Valley's other programs.

#### Honors Organization

Grand Valley State University hosts the Michigan Lambda Chapter of Tau Beta Pi, the National Engineering Honors Society.

#### Scholarships

For more information, visit: [www.gvsu.edu/engineering/](http://www.gvsu.edu/engineering/).

- Robert Bosch Fuel Systems Engineering Scholarship
- Scott M. Dykstra/Oliver Products Company Engineering Scholarship
- FIRST Robotics Engineering Scholarship
- General Dynamics Land Systems Engineering Scholarships
- Fred M. and Bernedine Keller Engineering Diversity Scholarship
- Kirkhof Engineering Scholarship
- Seymour and Esther Padnos Engineering Scholarship
- Lt. James W. Parmelee Memorial Scholarship
- Price-Heneveld Engineering Scholarship
- Progressive A & E Engineering Scholarship
- GVSU/Padnos/MSPE Engineering Scholarship
- GVSU/Padnos/SAE Engineering Scholarship
- The Joseph Spruit Engineering Scholarship
- Whitney Young Outreach Engineering Scholarship

## Bachelor of Science in Engineering

### Requirements for a Major in Engineering

In order to graduate with a B.S.E. degree, students must meet the following course requirements: general education and basic skills; engineering foundations courses; cooperative engineering education, engineering design Capstone; major specific courses, and engineering electives. These course requirements involve a minimum of 138-142 credit hours depending on the chosen engineering program. All required and elective courses in the engineering majors must be taken for a letter grade; students are not permitted to take these courses with the CR/NC option. The program requirements are listed with the information on the individual program. A minimum of 24 credit hours in engineering courses must be completed at Grand Valley State University at the 300 level or above. These courses must include EGR 485 and EGR 486.

### General Education and Basic Skills

As identified in the General Academic Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog, with the exception that the General Education Program for engineering students includes the following courses:

- ECO 210 - Introductory Macroeconomics Credits: 3  
OR ECO 211 - Introductory Microeconomics Credits: 3
- OR PHI 102 - Ethics Credits: 3 (Philosophy and Literature)
- OR one course from the following: BIO 328, BIO 338, COM 438, MGT 340, MGT 438, MKT 375, PHI 325, or PLS 338

### Engineering Foundation

The following courses (engineering, science, mathematics, and communications) prepare students for further work in engineering. Students must complete the following courses with a minimum grade of C (2.0) with not more than one repeat in each course:

- CHM 115 - Principles of Chemistry I Credits: 4
- EGR 106 - Introduction to Engineering Design I Credits: 3
- EGR 107 - Introduction to Engineering Design II Credits: 3

## Engineering

- EGR 209 - Mechanics and Machines Credits: 4 (electrical, mechanical or product design and manufacturing engineering program)  
**OR** CIS 162 Computer Science I Credits: 4 (computer engineering program)
- EGR 214 - Circuit Analysis I Credits: 4
- EGR 220 - Engineering Measurement and Data Analysis Credits: 1
- EGR 226 - Introduction to Digital Systems Credits: 4
- EGR 250 - Materials Science and Engineering Credits: 4 (product design and manufacturing engineering program)  
**OR** EGR 257 - Electronic Materials and Devices Credits: 4 (electrical engineering program)  
**OR** EGR 312 - Dynamics Credits: 3 (mechanical engineering program)  
**OR** CIS 163 Computer Science II Credits: 4 (computer engineering program)
- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 203 - Calculus III Credits: 4
- MTH 302 - Linear Algebra and Differential Equations Credits: 4
- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5  
**OR** PHY 234 - Engineering Physics Credits: 4
- EGR 223 - Probability and Signal Analysis Credits: 3 (computer or electrical engineering programs)  
**OR** EGR 309 Machine Design I Credits: 4 (mechanical or product design and manufacturing engineering programs)
- STA 220 - Statistical Modeling for Engineers Credits: 2
- WRT 150 - Strategies in Writing Credits: 4

### Admission to Major Standing

Admission to major standing in the B.S.E. program requires a secondary application. Applicants must meet at least the following:

- A GPA of 2.7 or above in the engineering foundation courses
- Completion of each course in the engineering foundation with a grade of C (2.0) or above with not more than one repeat in each foundation course
- Completion of preparation for placement in cooperative engineering education, EGR 289
- Transfer students must also complete at least eight credit hours in engineering courses taken at Grand Valley State University before they can be admitted to major standing.

### Completion of Cooperative Engineering Education

The cooperative education program begins with EGR 289 - Engineering Co-op Preparation, a course designed to prepare students to enter the culture of professional work as an engineer. This is followed by a minimum of 1,500 to 2,000 hours of co-op work, consisting of three semester-long work experiences, preferably with the same host company/organization. Students must enroll in the courses EGR 290, EGR 390, and EGR 490 during the co-op work semesters. This is the expected path to be followed by all students and, after secondary admission, is the only path that does not require prior approval from the faculty. Students with a GPA of at least 2.7 may be considered for an international co-op experience.

#### Option 1 - Study Abroad

The student must complete two semesters of co-op work (typically EGR 290 and EGR 390) **AND** one study abroad semester approved and supervised by the Padnos International Center.

In this case one of the three co-op semesters will be replaced by a study abroad experience. The student will be expected to take at least one engineering course during the study abroad semester - preferably a course that is not available at GVSU. In addition, courses that will enhance cross-cultural understanding will be strongly encouraged. The student will also be required to keep a journal during this experience and to orally present a summary of their experience to the faculty and students of the School of Engineering during the next academic semester.

#### Option 2 - Undergraduate Research

The student must complete two semesters of co-op work (typically EGR 290 and EGR 390) **AND** one undergraduate research experience at a college or university other than GVSU as part of a recognized, structured research program (e.g. the NSF REU program).

In this case one of the three co-op semesters will be replaced by an undergraduate research experience. The student selecting this option will be expected to work closely with a research mentor in a research environment. The student will also be required to keep a journal during this experience and to orally present a summary of their experience to the faculty and the students of the School of Engineering during the next academic semester.

#### Option 3 - Technical Elective

The student must complete two semesters of co-op work (typically EGR 290 and EGR 390) **AND** one 300 level, or above, engineering technical elective course in the student's major that is in addition to existing program requirements for technical electives.

#### Option 4 - Engineering Minor/Dual Major

The student must complete two semesters of co-op work (typically EGR 290 and EGR 390) **AND** successfully complete either a) one or more engineering minors at GVSU **OR** b) two or more engineering majors at GVSU. Both options (a) and (b) must include the completion of **at least three additional** courses in the program than are needed for the completion of any one major.

### Senior Engineering Design Capstone

Students must complete the required senior design project course sequence with a minimum grade of C (2.0) in each course:

- EGR 485 - Senior Engineering Project I (Capstone) Credits: 1
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2
- The prerequisites for EGR 485 are acceptance into the B.S.E. degree program and completion of the prerequisite courses listed under the student's engineering major. These courses are listed for each major in the corresponding section of this catalog.

### Engineering Program

In addition to the required courses, a student must select engineering electives in his/her chosen program to form a coherent plan of study. The approval of the student's academic advisor is required to ensure the course choices meet the requirements of the program. No more than two courses with a grade of less than C (2.0) may be counted toward the major.

A sample curriculum for the foundations of engineering course sequence that is completed during the freshman and sophomore years is presented as follows. A sample curriculum for the junior and senior years in each program is presented in the section addressing that program.

### Suggested Order of Fundamentals Coursework for a Major in Engineering

The following course sequence assumes an appropriate mathematics background for the entering student.

#### First Semester: Fall

- CHM 115 - Principles of Chemistry I Credits: 4
- EGR 106 - Introduction to Engineering Design I Credits: 3
- MTH 201 - Calculus I Credits: 4
- WRT 150 - Strategies in Writing Credits: 4

#### Second Semester: Winter

- EGR 107 - Introduction to Engineering Design II Credits: 3
- EGR 220 - Engineering Measurement and Data Analysis Credits: 1
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5
- STA 220 - Statistical Modeling for Engineers Credits: 2

#### Third Semester: Fall

- CIS 162 - Computer Science I Credits: 4  
**OR** EGR 209 - Mechanics and Machines Credits: 4

- EGR 226 - Introduction to Digital Systems Credits: 4
- EGR 289 - Engineering Co-op Preparation Credits: 1
- MTH 203 - Calculus III Credits: 4
- PHY 231 - Principles of Physics II Credits: 5
- **OR** PHY 234 - Engineering Physics Credits: 4

#### Fourth Semester: Winter

Admission to major standing in the B.S.E. program at this time.

- EGR 214 - Circuit Analysis I Credits: 4
- MTH 302 - Linear Algebra and Differential Equations Credits: 4
- Computer engineering major:
  - CIS 163 - Computer Science II Credits: 4
  - EGR 223 - Probability and Signal Analysis Credits: 3
- Electrical engineering major:
  - EGR 223 - Probability and Signal Analysis Credits: 3
  - EGR 257 - Electronic Materials and Devices Credits: 4
- Mechanical engineering major:
  - EGR 309 - Machine Design I Credits: 4
  - EGR 312 - Dynamics Credits: 3
- Product design and mechanical engineering major:
  - EGR 250 - Materials Science and Engineering Credits: 4
  - EGR 309 - Machine Design I Credits: 4

## Bachelor of Science in Engineering, Computer Engineering Major

Computer engineers are innovators whose designs enhance people's lives. They integrate electrical engineering with computer science to analyze and solve problems involving computers. Thereby, they can design, build, and test versatile computer equipment such as computer chips, the next smart phone, tablet, and embedded systems to control myriad machines, from sophisticated vehicles to jet aircraft.

Integral to all four years of the program is a "design and build" educational philosophy incorporated through extensive laboratory and project activities as preparation for professional practice. Students engage in design at all levels of the curriculum. At each level, they must realize their designs and proceed with testing, validation, and redesign. This approach allows students to experience many real-world constraints such as project economics, project planning and scheduling, environmental considerations, manufacturability/producibility of the designs, laboratory and product safety, and product reliability.

The junior and senior years of the computer engineering program build upon the foundation courses to provide greater depth in engineering science, engineering design, and the program areas of computer engineering. Students complete seven required courses and three computer engineering elective courses distributed in electric circuits, embedded systems, algorithms and software engineering. Computer engineering students also fulfill the educational requirements for taking the Fundamentals of Engineering professional examinations before graduation.

#### Accreditation

The computer engineering major is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

#### Program Educational Objectives

Graduates of the computer engineering program are expected within a few years of graduation to

- demonstrate technical competency in their careers;
- function effectively in an industrial or academic environment;
- engage in professional development; and
- shape their professions and societies.

#### Student Outcomes and Assessment

The graduate will demonstrate

- a. an ability to apply knowledge of mathematics, science, and engineering;

- b. an ability to design and conduct experiments, as well as to analyze and interpret data;
- c. an ability to design a system, component, or process to meet desired needs;
- d. an ability to function on multidisciplinary teams;
- e. an ability to identify, formulate, and solve engineering problems;
- f. an understanding of professional and ethical responsibility;
- g. an ability to communicate effectively;
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context;
- i. a recognition of the need for, and an ability to engage in lifelong learning;
- j. a knowledge of contemporary issues;
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
- l. a knowledge of probability and statistics;
- m. a knowledge of mathematics through differential and integral calculus, basic sciences, and engineering topics necessary to analyze and design complex systems containing hardware and software components; and
- n. a knowledge of discrete mathematics.

#### Degree Requirements

Computer engineering students must complete all requirements for the B.S.E. degree including the general education and basic skills requirements, foundations of engineering courses, cooperative education, engineering design Capstone and the following computer and electrical engineering courses.

#### Required Courses

- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 350 - Introduction to Software Engineering Credits: 3
- CIS 241 - System-level Programming and Utilities Credits: 3
- CIS 452 - Operating Systems Concepts Credits: 4
- EGR 314 - Circuit Analysis II Credits: 4
- EGR 315 - Electronic Circuits I Credits: 4
- EGR 326 - Embedded System Design Credits: 4

#### Elective Courses (three courses from the following)

- CIS 451 - Computer Architecture Credits: 3
- CIS 457 - Data Communications Credits: 4
- EGR 323 - Signals and Systems Analysis Credits: 3
- EGR 423 - Digital Signal Processing Systems Credits: 4
- EGR 424 - Design of Microcontroller Applications Credits: 4
- EGR 426 - Integrated Circuit Systems Design Credits: 4
- EGR 432 - Biomedical Imaging and Image Processing Credits: 3
- EGR 436 - Embedded Systems Interface Credits: 4

#### Sample Curriculum for the Junior and Senior years of the Computer Engineering Major

##### First Co-op Semester: Spring/Summer

- General education (Social and Behavioral Sciences)
- EGR 290 - Engineering Co-op 1 Credits: 3

##### Fifth Academic Semester: Fall

- EGR 314 - Circuit Analysis II Credits: 4
- EGR 315 - Electronic Circuits I Credits: 4
- EGR 326 - Embedded System Design Credits: 4
- General education (World Perspectives)

##### Second Co-op Semester: Winter

- General education (Issues)
- EGR 390 - Engineering Co-op 2 Credits: 3

##### Sixth Academic Semester: Spring/Summer

- CIS 350 - Introduction to Software Engineering Credits: 3
- CIS 241 - System-level Programming and Utilities Credits: 3
- CIS 263 - Data Structures and Algorithms Credits: 3
- General education (Arts)
- ECO 210 - Introductory Macroeconomics Credits: 3
- **OR** ECO 211 - Introductory Microeconomics Credits: 3

## Engineering

### Third Co-op Semester: Fall

- EGR 490 - Engineering Co-op 3 Credits: 3
- General education (Issues)

### Seventh Academic Semester: Winter

- Computer engineering elective
- Computer engineering elective
- CIS 452 - Operating Systems Concepts Credits: 4
- EGR 485 - Senior Engineering Project I (Capstone) Credits: 1
- General education (Philosophy and Literature) PHI 102 - Ethics Credits: 3

The prerequisites for EGR 485 are acceptance into the B.S.E. degree program and completion of the prerequisite courses listed under the student's engineering major. For the computer engineering major, these prerequisite courses are: EGR 315 and EGR 326 and CIS 350 and CIS 241 and EGR 390.

### Eighth Academic Semester: Spring/Summer

- Computer engineering elective
- General education (Life Sciences)
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2
- General education (Historical Perspectives)

## Bachelor of Science in Engineering, Electrical Engineering Major

Electrical engineering encompasses the development, design, and testing of a wide range of electrical and electronic technologies. Applications of these designs include consumer electronics, power generation and delivery, telecommunications, aviation and aerospace systems, and electric vehicles. Students who elect the electrical engineering program may prepare themselves for a variety of electrical engineering careers and fulfill the educational requirements for taking the Fundamentals of Engineering professional examination before graduation.

The junior and senior years of the electrical engineering program build upon the foundations courses to provide greater depth in engineering science, engineering design, and the program areas of electrical engineering. Students complete six required courses and four electrical engineering elective courses distributed in electrical and electronic circuits, digital and embedded systems, applied electromagnetics, power systems, solid state devices and nanotechnology, and signals and systems.

Integral to all four years of the program is a "design and build" educational philosophy incorporated through extensive laboratory and project activities as preparation for professional practice. Students engage in design at all levels of the curriculum. At each level, they must realize their designs and proceed with testing, validation, and redesign. This approach allows students to experience many real-world constraints such as project economics, project planning and scheduling, environmental considerations, manufacturability/producibility of the designs, laboratory and product safety, and product reliability.

### Accreditation

The electrical engineering major is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

### Program Educational Objectives

Graduates of the electrical engineering program are expected within a few years of graduation to

- demonstrate technical competency in their careers;
- function effectively in an industrial or academic environment;
- engage in professional development; and
- shape their professions and societies.

### Student Outcomes and Assessment

The graduate will demonstrate

- a. an ability to apply knowledge of mathematics, science, and engineering;
- b. an ability to design and conduct experiments, as well as to analyze and interpret data;

- c. an ability to design a system, component, or process to meet desired needs;
- d. an ability to function on multidisciplinary teams;
- e. an ability to identify, formulate, and solve engineering problems;
- f. an understanding of professional and ethical responsibility;
- g. an ability to communicate effectively;
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context;
- i. a recognition of the need for, and an ability to engage in lifelong learning;
- j. a knowledge of contemporary issues;
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
- l. a knowledge of probability and statistics;
- m. a knowledge of mathematics through differential and integral calculus, basic sciences, and engineering topics necessary to analyze and design complex systems containing hardware and software components; and
- n. a knowledge of advanced mathematics, including differential equations, linear algebra, complex variables, and discrete mathematics.

### Degree Requirements

Electrical engineering students must complete all requirements for the B.S.E. degree including the general education and basic skills requirements, the foundations of engineering courses, cooperative education, the engineering design Capstone and the following electrical engineering courses:

### Required Courses

- EGR 314 - Circuit Analysis II Credits: 4
- EGR 315 - Electronic Circuits I Credits: 4
- EGR 323 - Signals and Systems Analysis Credits: 3
- EGR 326 - Embedded System Design Credits: 4
- EGR 330 - Power Systems Analysis Credits: 4
- EGR 343 - Applied Electromagnetics Credits: 4

### Elective Courses (four courses from the following)

- EGR 360 - Thermodynamics Credits: 4
- EGR 415 - Communication Systems Credits: 4
- EGR 418 - Radio Frequency Systems Credits: 4
- EGR 423 - Digital Signal Processing Systems Credits: 4
- EGR 424 - Design of Microcontroller Applications Credits: 4
- EGR 426 - Integrated Circuit Systems Design Credits: 4
- EGR 430 - Electromechanics Credits: 4
- EGR 432 - Biomedical Imaging and Image Processing Credits: 3
- EGR 433 - Electronic Instrumentation for Biomedical Applications Credits: 3
- EGR 434 - Bioelectric Potentials Credits: 3
- EGR 436 - Embedded Systems Interface Credits: 4
- EGR 443 - Electromagnetic Compatibility Credits: 3
- EGR 455 - Automatic Control Credits: 4
- EGR 457 - Fundamentals of Nanotechnology Credits: 4
- EGR 458 - Introduction to Fiber Optics Credits: 4
- EGR 459 - Micro/Nanosystem Engineering Credits: 4
- EGR 477 - Hybrid Electric Battery Systems Credits: 3

### Sample Curriculum for the Junior and Senior years of the Electrical Engineering Major

#### First Co-op Semester: Spring/Summer

- General education (World Perspectives) Credits: 3
- EGR 290 - Engineering Co-op 1 Credits: 3

#### Fifth Academic Semester: Fall

- EGR 314 - Circuit Analysis II Credits: 4
- EGR 315 - Electronic Circuits I Credits: 4
- EGR 326 - Embedded System Design Credits: 4
- General education (Social Sciences) Credits: 3

**Second Co-op Semester: Winter**

- General education (Issues) Credits: 3
- EGR 390 - Engineering Co-op 2 Credits: 3

**Sixth Academic Semester: Spring/Summer**

- General education (Arts) Credits: 3
- ECO 210 - Introductory Macroeconomics Credits: 3  
**OR** ECO 211 - Introductory Microeconomics Credits: 3
- EGR 323 - Signals and Systems Analysis Credits: 3
- EGR 330 - Power Systems Analysis Credits: 4
- EGR 343 - Applied Electromagnetics Credits: 4

**Third Co-op Semester: Fall**

- General education (Issues) Credits: 3
- EGR 490 - Engineering Co-op 3 Credits: 3

**Seventh Academic Semester: Winter**

- Electrical engineering elective
- Electrical engineering elective
- Electrical engineering elective
- EGR 485 - Senior Engineering Project I (Capstone) Credits: 1

The prerequisites for EGR 485 are acceptance into the B.S.E. degree program and completion of the prerequisite courses listed under the student's engineering major. For the electrical engineering major, these prerequisite courses are: EGR 315 and EGR 323 and EGR 326 and EGR 330 and EGR 343 and EGR 390.

**Eighth Academic Semester: Spring/Summer**

- Electrical engineering elective
- General education (Historical Perspectives) Credits: 3
- General education (Life Sciences) Credits: 3
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2

## Bachelor of Science in Engineering, Interdisciplinary Engineering Major

The interdisciplinary engineering program allows the student to focus his/her studies in a disciplinary area that may transcend traditional disciplines. The interdisciplinary engineering areas often encompass emerging technologies. Plans of study for such students often include coursework outside of engineering.

The interdisciplinary program maintains the educational philosophy of all B.S.E. degree programs at Grand Valley to provide the student with a broad engineering background first and then an area of specialization later in the program. This provides students with the diversity of preparation to work in the interdisciplinary environment that is prevalent today.

Integral to all four years of the program is a “design and build” educational philosophy incorporated through extensive laboratory and project activities as preparation for professional practice. Students engage in design at all levels of the curriculum. At each level, they must realize their designs and proceed with testing, validation, and redesign. This approach allows students to experience many real-world constraints such as project economics, project planning and scheduling, environmental considerations, manufacturability/producibility of the designs, laboratory and product safety, and product reliability.

The interdisciplinary program provides the student with the broad foundation common to all of the engineering programs at Grand Valley, followed in the junior and senior years by required courses that can provide preparation in each of the following areas:

- Energy
- Engineering design
- Engineering materials
- Systems and control

This core is then complemented by a custom program of seven elective courses selected by the student and appropriate program chair to provide focus and a cohesive experience. The proposed electives must ensure that the entire program includes:

- 32 credits of engineering science content
- 16 credits of engineering design content

Some of the electives may be taken from other units at the university. Together, the student and a faculty advisor develop a proposed plan of study meeting the requirements of the interdisciplinary engineering program. If the plan includes coursework to be taken from outside the School of Engineering, then the chair of the appropriate unit is consulted. The plan must be approved by the program chairs of the undergraduate programs in the School of Engineering.

**Accreditation**

The interdisciplinary engineering major is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

**Program Educational Objectives**

Graduates of the interdisciplinary engineering program are expected within a few years of graduation to

- demonstrate technical competency in their careers;
- function effectively in an industrial or academic environment;
- engage in professional development; and
- shape their professions and societies.

**Student Outcomes and Assessment**

The graduate will demonstrate

- an ability to apply knowledge of mathematics, science, and engineering;
- an ability to design and conduct experiments, as well as to analyze and interpret data;
- an ability to design a system, component, or process to meet desired needs;
- an ability to function on multidisciplinary teams;
- an ability to identify, formulate, and solve engineering problems;
- an understanding of professional and ethical responsibility;
- an ability to communicate effectively;
- the broad education necessary to understand the impact of engineering solutions in a global and societal context;
- a recognition of the need for, and an ability to engage in lifelong learning;
- a knowledge of contemporary issue; and
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**Degree Requirements**

Interdisciplinary engineering students must complete all requirements for the B.S.E. degree including the general education and basic skills requirements, the foundations of engineering courses, cooperative education, the engineering design Capstone and the following engineering courses:

**Required Courses**

- EGR 314 - Circuit Analysis II Credits: 4  
**OR** EGR 345 - Dynamic System Modeling and Control Credits: 4
- EGR 360 - Thermodynamics Credits: 4
- EGR 450 - Manufacturing Control Systems Credits: 4  
**OR** EGR 455 - Automatic Control Credits: 4

**Elective Courses (25-28 credits required, seven courses)**

The student and his or her faculty advisor are required to develop a cohesive plan of electives that addresses the intent of the interdisciplinary field of interest. This plan must

- be approved by the program chairs of the undergraduate programs in the School of Engineering;
- ensure that the program includes not less than 16 credits of engineering design; and
- ensure that the program includes not less than 32 credits of engineering science.

## Engineering

### Sample Curriculum for the Junior and Senior Years of the Interdisciplinary Engineering Major

#### First Co-op Semester: Spring/Summer

- General education (World Perspectives)
- EGR 290 - Engineering Co-op 1 Credits: 3

#### Fifth Academic Semester: Fall

- Interdisciplinary engineering elective
- ECO 210 - Introductory Macroeconomics Credits: 3  
OR ECO 211 - Introductory Microeconomics Credits: 3
- EGR 314 - Circuit Analysis II Credits: 4  
OR EGR 345 - Dynamic System Modeling and Control Credits: 4
- EGR 360 - Thermodynamics Credits: 4
- SOC 105 - Social Problems Credits: 3
- General education (Social Sciences)

#### Second Co-op Semester: Winter

- General education (Issues)
- EGR 390 - Engineering Co-op 2 Credits: 3

#### Sixth Academic Semester: Spring/Summer

- General education (Arts)
- Interdisciplinary engineering elective
- Interdisciplinary engineering elective
- Interdisciplinary engineering elective

#### Third Co-op Semester: Fall

- General education (Issues)
- EGR 490 - Engineering Co-op 3 Credits: 3

#### Seventh Academic Semester: Winter

- Interdisciplinary engineering elective
  - Interdisciplinary engineering elective
  - EGR 450 - Manufacturing Control Systems Credits: 4  
OR EGR 455 - Automatic Control Credits: 4
  - EGR 485 - Senior Engineering Project I (Capstone) Credits: 1
- The prerequisites for EGR 485 are acceptance into the B.S.E. degree program and completion of the prerequisite courses listed under the student's engineering major. For the interdisciplinary engineering major, these prerequisite courses are: EGR 360 and EGR 390.

#### Eighth Academic Semester: Spring/Summer

- Interdisciplinary engineering elective
- General education (Historical Perspectives)
- BIO 105 - Environmental Science Credits: 3 (Life Sciences)
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2

## Bachelor of Science in Engineering, Mechanical Engineering Major

Mechanical engineering encompasses the analysis, development, design, and testing of a wide range of mechanical systems including machines that involve mechanics, motion, and energy: alternative energy systems, biomedical devices, robotic systems, vehicles, aircraft, engines, HVAC systems, and industrial equipment.

Integral to all four years of the program is a "design and build" educational philosophy incorporated through extensive laboratory and project activities as preparation for professional practice. Students engage in design at all levels of the curriculum. At each level, they must realize their designs and proceed with testing, validation, and redesign. This approach allows students to experience many real-world constraints such as project economics, project planning and scheduling, environmental considerations, manufacturability/producibility of the designs, laboratory and product safety, and product reliability.

The junior and senior years of the mechanical engineering program build upon the freshman and sophomore courses to provide greater depth in thermal-fluid science and engineering, mechanical design, and dynamic systems. Students complete required courses in these areas and select from electives in the same areas, manufacturing, and emerging fields including biomedical engineering, energy systems, and nanotechnology.

Students who elect the mechanical engineering program may prepare themselves for a wide range of engineering careers and fulfill the educational requirements for taking the Fundamentals of Engineering examination before graduation.

### Accreditation

The mechanical engineering major is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org/](http://www.abet.org/).

### Program Educational Objectives

Graduates of the mechanical engineering program are expected within a few years of graduation to:

- Demonstrate technical competency in their careers
- Function effectively in an industrial or academic environment
- Engage in professional development
- Shape their professions and societies

### Student Outcomes and Assessment

The graduate will demonstrate

- a. an ability to apply knowledge of mathematics, science, and engineering;
- b. an ability to design and conduct experiments, as well as to analyze and interpret data;
- c. an ability to design a system, component, or process to meet desired needs;
- d. an ability to function on multidisciplinary teams;
- e. an ability to identify, formulate, and solve engineering problems;
- f. an understanding of professional and ethical responsibility;
- g. an ability to communicate effectively;
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context;
- i. a recognition of the need for, and an ability to engage in life-long learning;
- j. a knowledge of contemporary issues;
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
- l. an ability to apply principles of engineering, basic science, and mathematics (including multivariate calculus and differential equations); to model, analyze, design, and realize physical systems, components or processes;
- m. an ability to work professionally in thermal systems; and
- n. an ability to work professionally in mechanical systems.

### Degree Requirements

Mechanical engineering students must complete all requirements for the B.S.E. degree including the general education and basic skills requirements, the foundations of engineering courses, cooperative education, the engineering design Capstone and the following mechanical engineering courses:

### Required Courses

- EGR 250 - Materials Science and Engineering Credits: 4
- EGR 329 - Introduction to Finite Element Analysis Credits: 3
- EGR 346 - Mechatronic Systems Dynamics and Control Credits: 4
- EGR 360 - Thermodynamics Credits: 4
- EGR 365 - Fluid Mechanics Credits: 4
- EGR 409 - Machine Design II Credits: 4
- EGR 468 - Heat Transfer Credits: 4

### Elective Courses (11-12 credits, three courses )

#### Core ME electives

- EGR 350 - Vibration Credits: 4
- EGR 352 - Kinematics and Dynamics of Machinery Credits: 4
- EGR 445 - Robotic Systems Engineering Credits: 4
- EGR 463 - Alternative Energy Systems and Applications Credits: 4
- EGR 465 - Computational Fluid Dynamics (CFD) Credits: 4
- EGR 475 - Design of HVAC Systems Credits: 4
- EGR 311 - Intermediate Computer Aided Design and Manufacturing Credits: 3

**Manufacturing engineering electives**

No more than two of the following courses may be applied toward fulfilling the elective requirements of the ME major.

- EGR 367 - Manufacturing Processes Credits: 4
- EGR 405 - Materials Failure Analysis and Selection Credits: 3
- EGR 450 - Manufacturing Control Systems Credits: 4

**Biomedical engineering electives**

- EGR 447 - Engineering Mechanics of Human Motion Credits: 3

**Sample Curriculum for the Junior and Senior Years of the Mechanical Engineering Major****First Co-op Semester: Spring/Summer**

- General education (World Perspectives)
- EGR 290 - Engineering Co-op 1 Credits: 3

**Fifth Academic Semester: Fall**

- ECO 211 - Introductory Microeconomics Credits: 3
- EGR 250 - Materials Science and Engineering Credits: 4
- EGR 346 - Mechatronic Systems Dynamics and Control Credits: 4
- EGR 360 - Thermodynamics Credits: 4

**Second Co-op Semester: Winter**

- General education (Issues)
- EGR 390 - Engineering Co-op 2 Credits: 3

**Sixth Academic Semester: Spring/Summer**

- General education course (Arts)
- EGR 329 - Introduction to Finite Element Analysis Credits: 3
- EGR 365 - Fluid Mechanics Credits: 4
- EGR 409 - Machine Design II Credits: 4

**Third Co-op Semester: Fall**

- General education (Issues)
- EGR 490 - Engineering Co-op 3 Credits: 3

**Seventh Academic Semester: Winter**

- Mechanical engineering elective
  - Mechanical engineering elective
  - EGR 468 - Heat Transfer Credits: 4
  - EGR 485 - Senior Engineering Project I (Capstone) Credits: 1
- The prerequisites for EGR 485 are acceptance into the B.S.E. degree program and completion of the prerequisite courses listed under the student's engineering major. For the mechanical engineering major, these prerequisite courses are: EGR 250 and EGR 329 and EGR 346 and EGR 409 and EGR 468 and (EGR 350 OR EGR 352 OR EGR 445 OR EGR 447 OR EGR 463 OR EGR 465 and EGR 475); EGR 468 and (EGR 350 OR EGR 352 OR EGR 445 OR EGR 447 OR EGR 463 OR EGR 465 OR EGR 475) may be taken concurrently.

**Eighth Academic Semester: Spring/Summer**

- Mechanical engineering elective
- General education (Historical Perspectives)
- BIO 105 - Environmental Science Credits: 3 (Life Sciences)
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2

**Bachelor of Science in Engineering, Product Design and Manufacturing Engineering Major**

Product design and manufacturing engineering focuses on all the processes needed to develop products, from design and planning to production and delivery of finished products. To this end, this branch of engineering involves a wide range of topics, such as ergonomics, needs identification, manufacturing processes, robotic systems, materials selection, programmable controllers, industrial engineering, and vision systems.

Students who select the product design and manufacturing engineering major prepare themselves for a variety of engineering careers and fulfill the educational requirements for taking the Fundamentals of Engineering professional examination before graduation.

The junior and senior years of the product design and manufacturing engineering program build upon the foundation courses to provide greater depth in engineering science, engineering design, and the focused areas of product design and manufacturing engineering. Students complete required and elective courses distributed in product design materials and manufacturing processes; process, assembly, and product engineering; manufacturing competitiveness and manufacturing systems design.

Integral to all four years of the program is a “design and build” educational philosophy incorporated through extensive laboratory and project activities as preparation for professional practice. Students engage in design at all levels of the curriculum. At each level, they must realize their designs and proceed with testing, validation, and redesign. This approach allows students to experience many real-world constraints such as project economics, project planning and scheduling, environmental considerations, manufacturability/producibility of the designs, laboratory and product safety, and product reliability.

**Accreditation**

The product design and manufacturing engineering major is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

**Program Educational Objectives**

Graduates of the product design and manufacturing engineering program are expected within a few years of graduation to:

- Demonstrate technical competency in their careers
- Function effectively in an industrial or academic environment
- Engage in professional development
- Shape their professions and societies

**Student Outcomes and Assessment**

The graduate will demonstrate

- an ability to apply knowledge of mathematics, science, and engineering;
- an ability to design and conduct experiments, as well as to analyze and interpret data;
- an ability to design a system, component, or process to meet desired needs;
- an ability to function on multidisciplinary teams;
- an ability to identify, formulate, and solve engineering problems;
- an understanding of professional and ethical responsibility;
- an ability to communicate effectively;
- the broad education necessary to understand the impact of engineering solutions in a global and societal context;
- a recognition of the need for, and an ability to engage in life-long learning;
- a knowledge of contemporary issues;
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
- an ability to design manufacturing processes that result in products that meet specific material and other requirements;
- an ability to design products and the equipment, tooling, and environment necessary for their manufacture;
- an ability to create competitive advantage through manufacturing planning, strategy, quality, and control;
- an ability to design manufacturing systems including the ability to analyze, synthesize, and control manufacturing operations using statistical methods; and
- experience in manufacturing laboratory or facility environments including an ability to measure manufacturing process variables and develop technical inferences about the process.

**Degree Requirements**

Product design and manufacturing engineering program students must complete all requirements for the B.S.E. degree including the general education and basic skills requirements, the foundations of engineering courses, cooperative education, the engineering design Capstone and the following manufacturing engineering courses:

## Engineering

### Required Courses

- EGR 301 - Analytical Tools for Product Design Credits: 4
- EGR 345 - Dynamic System Modeling and Control Credits: 4
- EGR 362 - Thermal and Fluid Systems Credits: 4
- EGR 367 - Manufacturing Processes Credits: 4
- EGR 401 - Advanced Product Design Credits: 4
- EGR 440 - Production Models Credits: 3
- EGR 450 - Manufacturing Control Systems Credits: 4

### Elective Courses (three courses from the following)

- EGR 403 - Medical Device Design Credits: 3
- EGR 405 - Materials Failure Analysis and Selection Credits: 3
- EGR 409 - Machine Design II Credits: 4
- EGR 413 - Materials for Energy Storage Credits: 3
- EGR 441 - Engineering Economics, Quality Control, and Manufacturing Operations Credits: 4
- EGR 445 - Robotic Systems Engineering Credits: 4
- EGR 447 - Engineering Mechanics of Human Motion Credits: 3
- EGR 453 - Biomedical Materials Credits: 3
- EGR 463 - Alternative Energy Systems and Applications Credits: 4
- STA 315 - Design of Experiments Credits: 3

### Sample Curriculum for the Junior and Senior Years

#### First Co-op Semester: Spring/Summer

- General education (World Perspectives)
- EGR 290 - Engineering Co-op 1 Credits: 3

#### Fifth Academic Semester: Fall

- EGR 301 - Analytical Tools for Product Design Credits: 4
- EGR 345 - Dynamic System Modeling and Control Credits: 4
- EGR 367 - Manufacturing Processes Credits: 4
- General education (Social Sciences)

#### Second Co-op Semester: Winter

- General education (Issues)
- EGR 390 - Engineering Co-op 2 Credits: 3

#### Sixth Academic Semester: Spring/Summer

- General education (Arts)
- ECO 210 - Introductory Macroeconomics Credits: 3
- **OR** ECO 211 - Introductory Microeconomics Credits: 3
- EGR 362 - Thermal and Fluid Systems Credits: 4
- EGR 440 - Production Models Credits: 3
- Product design and manufacturing engineering elective

#### Third Co-op Semester: Fall

- General education (Issues)
- EGR 490 - Engineering Co-op 3 Engineering Co-op 3 Credits: 3

#### Seventh Academic Semester: Winter

- Product design and manufacturing engineering elective
  - EGR 401 - Advanced Product Design Credits: 4
  - EGR 450 - Manufacturing Control Systems Credits: 4
  - EGR 485 - Senior Engineering Project I (Capstone) Credits: 1
- The prerequisites for EGR 485 are acceptance into the B.S.E. degree program and completion of the prerequisite courses listed under the student's engineering major. For the product design and manufacturing engineering major, these prerequisite courses are: EGR 301 and EGR 345 and EGR 367.

#### Eighth Academic Semester: Spring/Summer

- Product design and manufacturing engineering elective
- General education (Historical Perspectives)
- General education (Life Sciences)
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2

## Combined Bachelor of Science and Master of Science in Engineering

The School of Engineering offers a combined B.S.E. and M.S.E. degree program for high achieving students, allowing students to efficiently complete both the B.S.E. and M.S.E. in a timely manner.

The combined program allows the use of two courses from the graduate program to fulfill the requirements for two undergraduate electives, while also applying these courses to the graduate program. Similarly, the combined program utilizes an integrated Culminating experience that fulfills the requirements of both the B.S.E. and M.S.E. programs. Through this articulation, the student completes both programs through a reduction of 9-11 credit hours.

The study plans for the combined B.S.E./M.S.E. program are very aggressive and academically demanding. Undergraduate students maintaining a GPA of 3.3 through their junior year are encouraged to apply for the program. For more information, please contact the graduate program director.

## Master of Science in Engineering

The Master of Science in Engineering (M.S.E.) degree program produces engineers with the sophisticated education needed to design complex engineered systems. These engineers can drive innovations, explain the value of high technology systems, and sustain their employer's global competitiveness. This degree program is available with the following emphases:

1. Biomedical engineering
2. Electrical and computer engineering
3. Manufacturing operations
4. Mechanical engineering
5. Product design and manufacturing

Offered by the School of Engineering in the Seymour and Esther Padnos College of Engineering and Computing, this M.S.E. program is designed to meet the technical and professional development needs of practicing engineers as well as of students interested in applied research and in preparation for advanced study. The program focuses on engineering design, development, manufacture as well as, production and capitalizes on the industrial experiences of the students. Plans of study as well as course and culminating projects can be tailored to the needs of each student to provide a richer, personalized educational experience.

Many courses are offered in a one night per week format during the fall, winter, and spring/summer semesters; some courses are offered on Saturday or in the late afternoon. Students completing two courses per semester can complete the degree in two calendar years of part time study. Full time students can complete the M.S.E. degree in as little as four semesters. For additional information about opportunities your college offers, please refer to the Seymour and Esther Padnos College of Engineering and Computing in this catalog.

**Website:** [www.gvsu.edu/engineer-graduate](http://www.gvsu.edu/engineer-graduate)

### M.S.E. Location

Pew Grand Rapids Campus, John C. Kennedy Hall of Engineering

### Admission to the Master of Science in Engineering Program

The School of Engineering seeks motivated and intellectually inquisitive graduate students who desire to deepen their professional education in engineering. The School of Engineering expects candidates to make effective use of opportunities to obtain academic and program advice from the faculty and to make maximum use of program flexibility in selecting options that further their professional objectives. Candidates can be admitted to the program in any semester; no application deadline is imposed, but, rather, applications are reviewed just as soon as they are complete. The application requirements and admission standards are:

- A Bachelor of Science degree from a four-year undergraduate program in engineering or closely related field. For students graduating from a program in the United States the program must be accredited by the EAC of ABET Inc. Applications must include official, original academic transcripts and degree certificates from all secondary schools or universities previously attended.
- U.S. students must have a cumulative grade point average of at least 3.0 on a 4.0 scale in all undergraduate coursework. At their

discretion, they may elect to present additional evidence of academic achievement through high GRE scores.

- International students must have a cumulative grade point average (GPA) that is equivalent to at least 3.0, when linearly scaled on a 0.0 - 4.0 scale, in all undergraduate coursework. They must also submit GRE scores, which must be satisfactory, independent of their cumulative undergraduate GPA.
- International students must also show evidence of proficiency in the English language. GVSU recognizes the following English proficiency tests:
  - TOEFL:
    - 80 or better
  - International English Language Test System (IELTS):
    - 6.5 or better
- Three confidential letters of recommendation from informed sources such as current and/or former professors and employers. These letters should address the applicant's academic skills, analytical and problem solving abilities, professionalism, maturity, integrity, and potential for success in graduate studies.
- An essay, not exceeding two pages in length, detailing an applicant's career plans and academic goals. International applicants are requested to add an essay, not exceeding two pages in length, on the following topic: "What will I do to bring cultural and international perspectives to Grand Valley that will enhance the learning environment for the entire GVSU community?"

Candidates should have a base of underlying knowledge relevant to graduate study in the chosen area. This can be demonstrated by previous academic records or relevant work experience. Consultation with the Graduate Program Director may be necessary to verify the appropriateness of technical work training as a substitute for academic preparation.

Once admitted to the M.S.E. program, students are expected to demonstrate initiative as well as effective teamwork, and to devote sufficient time to complete the work assigned in each course. They must be willing to imaginatively and creatively engage academic challenges. Although the demands are rigorous, the results can be exciting and rewarding. Students are expected to maintain the highest ethical standards at all times.

#### Academic Advising

Candidates seeking the M.S.E. degree can meet with the graduate program director to discuss career interests, professional objectives, and program plans.

#### Transfer Credit

A maximum of nine semester hours of transfer credit may be given for appropriate graduate courses completed with a grade of B (3.0) or above at another college or university.

#### Good Standing

A cumulative grade point average of 3.0 or higher is required in all graduate-level courses. A candidate must receive a grade of C or better in all courses used to fulfill graduation requirements for the M.S.E. degree. If a student earns a grade lower than a C in any such course, the student must take a remedial action depending on whether the course is required or elective. If the course is required, the student must repeat that course until an acceptable grade is earned. If the course is an elective, the student may repeat that course or take another approved graduate elective and earn a grade of at least C in the course.

#### Graduate Assistantships

Graduate assistantships are available. In return for their assistantships graduate assistants work with the School of Engineering faculty and staff to provide quality education, research, and service. Qualified full-time candidates are selected for the available graduate assistantships on the basis of aptitude, interest, and background.

## Requirements for the M.S.E. Master of Science in Engineering

The M.S.E. program requires a minimum of 33 semester hours of graduate coursework for each of the available M.S.E. emphases. Every semester an appropriate set of courses is scheduled to allow students to complete their M.S.E degree programs in the stated number of semesters or calendar years. In each emphasis, this coursework is distributed in the following clusters:

### 1. Professional Practice

The courses in this cluster transcend specific majors.

### 2. Emphasis Specific Courses

Students select five graduate courses from a list of emphasis specific courses. Within these courses in the M.S.E. emphases on electrical and computer engineering, manufacturing operations, mechanical engineering, product design and manufacturing engineering, students may also select special-topics courses with approval of the graduate program director. The emphasis specific courses are chosen by students in consultation with their respective advisors in order to achieve a coherent selection.

### 3. Elective Graduate Courses

The elective graduate courses may be chosen from any of the available graduate engineering courses, including the emphasis specific courses, or other graduate courses from different disciplines. The graduate electives from disciplines other than Engineering must be pre-approved by the graduate program director of the School of Engineering.

### 4. Culminating Experience

The culminating experience requires one of three routes: either a culminating design project, EGR 690, for three academic credits, or a culminating M.S.E. project, for six academic credits, or a culminating M.S.E. thesis, for six academic credits. The culminating experience route for each student must be approved by the graduate program director. From among these three routes, students normally select either the culminating M.S.E. project or the culminating M.S.E. thesis, which are equivalent culminating experiences. Students will select the Master's Project route, if they work on proprietary industry projects; they will instead select the Master's Thesis route, if they work on non-proprietary projects. Students continuously register for either EGR 693 - Master's Project, or EGR 695 - Master's Thesis, in either case for a total of six credits. If after completing these six credits, students need additional time to finish their culminating work, they must continuously register for a continuation course, either EGR 694 or EGR 696, of which the credits, following university policies, do not count towards the required minimum of 33 M.S.E. credits.

The courses in these clusters are at the 500 and 600 level and depend on the specific M.S.E. emphasis. In any M.S.E. emphasis, students may take only up to three 500-level courses and no more than nine credits from dual listed courses may be applied towards the M.S.E. degree, in consonance with university standards. Students should follow the sequence of courses recommended for each emphasis, yet substitutions are possible depending on students' backgrounds and specific interests. Students may apply for such substitutions with the graduate program director. Students select one of the following emphases for their M.S.E. program.

#### A. Biomedical Engineering Emphasis

In this emphasis, students should complete the following courses.

##### a. Professional Practice (6 credits)

- EGR 604 - Implementation and Measurement Credits: 3
- PSM 650 - Ethics and Professionalism in Applied Science Credits: 3  
OR EGR 602 - Professional Aspects of Engineering Credits: 3

##### b. Emphasis Specific Courses (21 credits)

In the biomedical engineering emphasis, students take the focus courses specified as follows, which consist of five required courses and two elective courses.

## Engineering

The required courses:

- EGR 503 - Medical Device Design Credits: 3
- EGR 614 - Opportunity Identification for Medical Devices Credits: 3
- EGR 635 - Biomedical Signal Modeling Credits: 3
- EGR 670 - Systems Physiology for Engineers Credits: 3
- EGR 615 - Applied Finite Element Analysis Credits: 3

The elective courses in the biomechanical stream (choose two):

- EGR 547 - Engineering Mechanics of Human Motion Credits: 3
- EGR 553 - Biomedical Materials Credits: 3
- EGR 565 - Computational Fluid Dynamics (CFD) Credits: 4

The elective courses in the bioelectrical stream (choose two):

- EGR 532 - Biomedical Imaging and Image Processing Credits: 3
- EGR 534 - Bioelectric Potentials Credits: 3
- EGR 533 - Electronic Instrumentation for Biomedical Applications Credits: 3

### c. Culminating Experience (6 credits)

The culminating experience route for each student must be approved by the graduate program director. The Culminating Design Project, EGR 690, is not an option in the biomedical engineering emphasis. Students select either the culminating M.S.E. project, for six credits, or the culminating M.S.E. thesis, for six credits. The project and thesis routes are equivalent: the Master's Project is reserved for proprietary work, whereas the Master's Thesis is reserved for non-proprietary work. The culminating experience requires the following courses:

- EGR 693 - Master's Project Credits: 1 to 6; maximum of 6.  
Students may register for EGR 693 more than once, for a combined total of six credits.  
Students who need to complete their culminating project after finishing the six credits of EGR 693 must continuously register for EGR 694 - Continuation of Master's Project Credits: 1  
The credit for this course does not count toward the minimum of 33 credits of the M.S.E. program.
- **OR** EGR 695 - Master's Thesis Credits: 1 to 6 (maximum of 6 credits) Students may register for EGR 695 more than once, for a combined total of six credits. Students who need to complete their thesis after finishing the six credits of EGR 695 must continuously register for EGR 696 - Continuation of Master's Project or Thesis Research Credits: 1

## B. Electrical and Computer Engineering Emphasis:

In this emphasis, students should complete the following courses.

### a. Professional Practice (9 credits)

- EGR 600 - Advanced Engineering Analysis Credits: 3
- EGR 602 - Professional Aspects of Engineering Credits: 3
- EGR 604 - Implementation and Measurement Credits: 3

### b. Emphasis Area Courses (5 courses)

Students select five required emphasis-specific courses the list given as follows in any coherent combination. These courses are normally offered in a two-year rotation, in order to allow students to complete their M.S.E. program in the stated number of semesters or calendar years.

- EGR 518 - Wireless Communication Systems Credits: 4
- EGR 523 - Digital Signal Processing Systems Credits: 4
- EGR 526 - Integrated Circuit Design Credits: 4
- EGR 530 - Electromechanics Credits: 4
- EGR 536 - Embedded Systems Interface Credits: 4
- EGR 543 - Electromagnetic Compatibility Credits: 3
- EGR 557 - Fundamentals of Nanotechnology Credits: 4
- EGR 558 - Introduction to Fiber Optics Credits: 4
- EGR 559 - Micro/Nanosystem Engineering Credits: 4
- EGR 577 - Hybrid Electric Battery Systems Credits: 3
- EGR 627 - Advanced FPGA Implementation Credits: 3
- EGR 643 - PCB Design and EMC Credits: 3
- EGR 653 - Digital and Adaptive Systems Credits: 3
- EGR 655 - Power Electronics Credits: 3
- EGR 657 - Photovoltaic Systems Credits: 3
- EGR 677 - Hybrid Electric Vehicles Credits: 3

- EGR 580 - Special Topics in Engineering Credits: 1 to 4
- EGR 680 - Special Topics in Engineering Credits: 1 to 4
- EGR 699 - Independent Study in Engineering Credits: 1 to 3

### c. Elective Graduate Courses

The elective graduate courses may be chosen from any of the available graduate engineering courses, including the emphasis-specific courses, or other graduate courses from different disciplines. The graduate electives from disciplines other than Engineering must be pre-approved by the graduate program director of the School of Engineering.

### d. Culminating Experience (3 to 6 credits)

The culminating experience route for each student must be approved by the Graduate Program Director. From among the three culminating experience routes, students normally select either the Capstone M.S.E. project route for six credits, or the culminating M.S.E. thesis route for six credits. The project and thesis routes are equivalent: the master's project is reserved for proprietary work, whereas the master's thesis is reserved for nonproprietary work. The culminating experience requires the following courses:

- EGR 690 - Capstone Design Project Credits: 3
- **OR** EGR 693 - Master's Project Credits: 1 to 6 (maximum of 6)  
Students may register for EGR 693 more than once, for a combined total of six credits.  
Students who need to complete their culminating project after finishing the six credits of EGR 693 must continuously register for EGR 694 - Continuation of Master's Project Credits: 1  
The credit for this course does not count toward the minimum of 33 credits of the M.S.E. program.
- **OR** EGR 695 - Master's Thesis Credits: 1 to 6 (maximum of 6)  
Students may register for EGR 695 more than once, for a combined total of six credits. Students who need to complete their thesis after finishing the six credits of EGR 695 must continuously register for EGR 696 - Continuation of Master's Project or Thesis Research Credits: 1

## C. Manufacturing Operations Emphasis

In this emphasis, students should complete the following courses.

### a. Professional Practice (9 credits)

- EGR 600 - Advanced Engineering Analysis Credits: 3
- EGR 602 - Professional Aspects of Engineering Credits: 3
- EGR 604 - Implementation and Measurement Credits: 3

### b. Emphasis Area Courses (5 courses)

Students select five required emphasis-specific courses from the list given in any coherent combination. These courses are normally offered in a two-year rotation, in order to allow students to complete their M.S.E. program in the stated number of semesters or calendar years.

- EGR 541 - Engineering Economics, Quality Control, and Manufacturing Operations Credits: 4
- EGR 640 - Production Operation Models Credits: 3
- EGR 641 - Applied Optimization Credits: 3
- EGR 642 - Materials Handling and Plant Layout Credits: 3
- STA 615 - Design of Experiments for Engineers Credits: 3
- EGR 580 - Special Topics in Engineering Credits: 1 to 4
- EGR 680 - Special Topics in Engineering Credits: 1 to 4
- EGR 699 - Independent Study in Engineering Credits: 1 to 3

### c. Elective Graduate Courses

The elective graduate courses may be chosen from any of the available graduate engineering courses, including the emphasis-specific courses, or other graduate courses from different disciplines. The graduate electives from disciplines other than Engineering must be pre-approved by the graduate program director of the School of Engineering.

### d. Culminating Experience (3 to 6 credits)

The culminating experience route for each student must be approved by the graduate program director. From among the three culminating experience routes, students normally select either the Capstone M.S.E. project route for six credits, or the Capstone M.S.E. thesis route for six

credits. The project and thesis routes are equivalent: the master's project is reserved for proprietary work, whereas the master's thesis is reserved for nonproprietary work. The culminating experience requires the following courses:

- EGR 690 - Capstone Design Project Credits: 3
- OR** EGR 693 - Master's Project Credits: 1 to 6 (maximum of 6)  
Students may register for EGR 693 more than once, for a combined total of six credits.  
Students who need to complete their culminating project after finishing the six credits of EGR 693 must continuously register for EGR 694 - Continuation of Master's Project Credits: 1  
The credit for this course does not count towards the minimum of 33 credits of the M.S.E. program.
- OR** EGR 695 - Master's Thesis Credits: 1 to 6 (maximum of 6)  
Students may register for EGR 695 more than once, for a combined total of six credits. Students who need to complete their thesis after finishing the six credits of EGR 695 must continuously register for EGR 696 - Continuation of Master's Project or Thesis Research Credits: 1

#### D. Mechanical Engineering Emphasis

In this emphasis, students should complete the following courses.

##### a. Professional Practice (9 credits)

- EGR 600 - Advanced Engineering Analysis Credits: 3
- EGR 602 - Professional Aspects of Engineering Credits: 3
- EGR 604 - Implementation and Measurement Credits: 3

##### b. Emphasis Area Courses (5 courses)

Students select five required emphasis-specific courses from list given in any coherent combination. These courses are normally offered in a two-year rotation, in order to allow students to complete their M.S.E. program in the stated number of semesters or calendar years.

- EGR 547 - Engineering Mechanics of Human Motion Credits: 3
- EGR 550 - Manufacturing Control Systems Credits: 4
- EGR 559 - Micro/Nanosystem Engineering Credits: 4
- EGR 610 - Engineering Design Credits: 3
- EGR 611 - Computer-Aided Design and Engineering Credits: 3
- EGR 612 - Analytical Dynamics Credits: 3
- EGR 615 - Applied Finite Element Analysis Credits: 3
- EGR 620 - Material and Process Selection Credits: 3
- EGR 580 - Special Topics in Engineering Credits: 1 to 4
- EGR 680 - Special Topics in Engineering Credits: 1 to 4
- EGR 699 - Independent Study in Engineering Credits: 1 to 3

##### c. Elective Graduate Courses

The elective graduate courses may be chosen from any of the available graduate engineering courses, including the emphasis-specific courses, or other graduate courses from different disciplines. The graduate electives from disciplines other than engineering must be pre-approved by the graduate program director of the School of Engineering.

##### d. Culminating Experience (3 to 6 credits)

The culminating experience route for each student must be approved by the graduate program director. From among the three culminating experience routes, students normally select either the Capstone M.S.E. project route for six credits, or the Capstone M.S.E. thesis route for six credits. The project and thesis routes are equivalent: the master's project is reserved for proprietary work, whereas the master's thesis is reserved for nonproprietary work. The culminating experience requires the following courses:

- EGR 690 - Capstone Design Project Credits: 3
- OR** EGR 693 - Master's Project Credits: 1 to 6; maximum of 6.  
Students may register for EGR 693 more than once, for a combined total of six credits.  
Students who need to complete their Capstone project after finishing the six credits of EGR 693 must continuously register for EGR 694 - Continuation of Master's Project Credits: 1  
The credit for this course does not count toward the minimum of 33 credits of the M.S.E. program.

**OR** EGR 695 - Master's Thesis Credits: 1 to 6; maximum of 6.  
Students may register for EGR 695 more than once, for a combined total of six credits. Students who need to complete their thesis after finishing the six credits of EGR 695 must continuously register for EGR 696 - Continuation of Master's Project or Thesis Research Credits: 1

#### E. Product Design and Manufacturing Engineering Emphasis

In this emphasis, students should complete the following courses.

##### a. Professional Practice (9 credits)

- EGR 600 - Advanced Engineering Analysis Credits: 3
- EGR 602 - Professional Aspects of Engineering Credits: 3
- EGR 604 - Implementation and Measurement Credits: 3

##### b. Emphasis Area Courses (5 courses)

- EGR 503 - Medical Device Design Credits: 3
- EGR 513 - Materials for Energy Storage Credits: 3
- EGR 541 - Engineering Economics, Quality Control, and Manufacturing Operations Credits: 4
- EGR 547 - Engineering Mechanics of Human Motion Credits: 3
- EGR 550 - Manufacturing Control Systems Credits: 4
- EGR 553 - Biomedical Materials Credits: 3
- EGR 610 - Engineering Design Credits: 3
- EGR 611 - Computer-Aided Design and Engineering Credits: 3
- EGR 620 - Material and Process Selection Credits: 3
- EGR 641 - Applied Optimization Credits: 3
- EGR 642 - Materials Handling and Plant Layout Credits: 3
- STA 615 - Design of Experiments for Engineers Credits: 3
- EGR 580 - Special Topics in Engineering Credits: 1 to 4
- EGR 680 - Special Topics in Engineering Credits: 1 to 4
- EGR 699 - Independent Study in Engineering Credits: 1 to 3

##### c. Elective Graduate Courses

The elective graduate courses may be chosen from any of the available graduate engineering courses, including the emphasis-specific courses, or other graduate courses from different disciplines. The graduate electives from disciplines other than Engineering must be pre-approved by the graduate program director of the School of Engineering.

##### d. Capstone Experience (3 to 6 credits)

The culminating experience route for each student must be approved by the graduate program director. From among the three culminating experience routes, students normally select either the Capstone M.S.E. project route for six credits, or the Capstone M.S.E. thesis route for six credits. The project and thesis routes are equivalent: the master's project is reserved for proprietary work, whereas the master's thesis is reserved for nonproprietary work. The culminating experience requires the following courses:

- EGR 690 - Capstone Design Project Credits: 3
- OR** EGR 693 - Master's Project Credits: 1 to 6; maximum of 6.  
Students may register for EGR 693 more than once, for a combined total of six credits.  
Students who need to complete their culminating project after finishing the six credits of EGR 693 must continuously register for EGR 694 - Continuation of Master's Project Credits: 1  
The credit for this course does not count towards the minimum of 33 credits of the M.S.E. program.
- OR** EGR 695 - Master's Thesis Credits: 1 to 6; maximum of 6.  
Students may register for EGR 695 more than once, for a combined total of six credits. Students who need to complete their thesis after finishing the six credits of EGR 695 must continuously register for EGR 696 - Continuation of Master's Project or Thesis Research Credits: 1

#### Biomedical Engineering Minor

A biomedical engineer applies the design, analytical, and problem-solving skills acquired in engineering training to improve health and quality of human life. Biomedical engineers are able to collaborate with health care professionals such as physicians and nurses, and to apply

## English

advanced technological solutions to clinical problems. Their ability to apply mathematical models and computational simulation to the study of complex physiologic systems are invaluable to the medical science and research community.

The areas of specialization in biomedical engineering include bioelectrical and bioinstrumentation, biomechanics, biomaterials and biocomputing. Bioelectrical and bioinstrumentation involve the application of fundamental electrical engineering and measurement principles to develop better measurement and diagnostic devices. Biomechanical engineering applies fundamental engineering mechanics to understanding musculoskeletal systems, blood rheology, and transport phenomena for drug delivery. Biomaterial engineering involves the study of synthetic and natural materials that are used to replace, augment, or restore function to body tissues. These materials need to be in constant intimate contact with living tissues without adversely affecting the living organism and its components. These include materials used in implants, heart valves, and prosthetic applications.

### Requirements for a Minor in Biomedical Engineering

The requirements for the minor in biomedical engineering are fulfilled as follows.

#### Required Courses

- BMS 202 - Anatomy and Physiology Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- EGR 435 - Mathematical Modeling of Physiologic Systems Credits: 3

#### Elective Courses

Choose any two of the following:

- EGR 403 - Medical Device Design Credits: 3
- EGR 432 - Biomedical Imaging and Image Processing Credits: 3
- EGR 433 - Electronic Instrumentation for Biomedical Applications Credits: 3
- EGR 434 - Bioelectric Potentials Credits: 3
- EGR 447 - Engineering Mechanics of Human Motion Credits: 3
- EGR 453 - Biomedical Materials Credits: 3

## Computer Engineering Minor

### Requirements for a Minor in Computer Engineering

Minimum GPA of 2.0 in the following seven courses with all required (25 hours):

- CIS 162 - Computer Science I Credits: 4
- CIS 163 - Computer Science II Credits: 4
- CIS 351 - Computer Organization and Assembly Language Credits: 4
- EGR 106 - Introduction to Engineering Design I Credits: 3
- EGR 107 - Introduction to Engineering Design II Credits: 3
- EGR 214 - Circuit Analysis I Credits: 4
- EGR 226 - Introduction to Digital Systems Credits: 4

Select two of the following electives:

- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 451 - Computer Architecture Credits: 3
- CIS 452 - Operating Systems Concepts Credits: 4
- CIS 457 - Data Communications Credits: 4
- CIS 459 - Embedded Computer Systems Credits: 3
- EGR 326 - Embedded System Design Credits: 4
- EGR 424 - Design of Microcontroller Applications Credits: 4
- EGR 426 - Integrated Circuit Systems Design Credits: 4

## Engineering Science Minor

### Requirements for a Minor in Engineering Science

The minor in engineering science requires a minimum GPA of 2.0 in seven courses (24 credit hours) as follows.

#### Required Courses

- EGR 106 - Introduction to Engineering Design I Credits: 3
- EGR 107 - Introduction to Engineering Design II Credits: 3

- EGR 209 - Mechanics and Machines Credits: 4
- EGR 214 - Circuit Analysis I Credits: 4
- EGR 220 - Engineering Measurement and Data Analysis Credits: 1
- EGR 226 - Introduction to Digital Systems Credits: 4
- STA 220 - Statistical Modeling for Engineers Credits: 2

#### Elective Courses (choose one of the following)

- EGR 223 - Probability and Signal Analysis Credits: 3
- EGR 250 - Materials Science and Engineering Credits: 4
- EGR 257 - Electronic Materials and Devices Credits: 4
- EGR 309 - Machine Design I Credits: 4

## English - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences in this catalog.

**Website:** [www.gvsu.edu/english](http://www.gvsu.edu/english)

The primary aim of the English program is to contribute directly to the liberal education of our majors by developing an awareness of the richness of literature, past and present; of the power and complexity of language; and of the value of critical reading, informed interpretation, and effective writing. Thus, English majors learn to read and interpret literature from different historical periods and from different parts of the world, to write clearly, persuasively and analytically, and to study a variety of critical approaches to literature and language. Many of our majors also study English education, learning how to teach the skills of reading, writing, and interpretation to the next generation of English and language arts students.

The study of English at Grand Valley extends beyond the classroom, as well. Among other extracurricular activities, the department sponsors visits to campus by writers and critics and organizes faculty-led play-readings. Students who achieve a GPA of 3.0 or better and rank in the top thirty-five percent of their class are invited to join Grand Valley's Chapter of Sigma Tau Delta, the National English Honor Society, which fosters interest in literature and language scholarship and in creative writing. The department also organizes an annual writing contest and holds a ceremony at which students are awarded prizes for excellent writing and other academic accomplishments. In addition, the department grants scholarships to English majors who demonstrate scholastic achievement and writing excellence.

Students who graduate from our department with a major or minor in English pursue careers in a variety of fields, including library science, law, teaching, writing, and publishing.

The English Department offers three emphasis areas: literature and language, elementary language arts education, and secondary English education. All majors choose one of the three areas.

### Literature and Language

Students in the literature and language emphasis area study American, British, and international literature including literature in translation. They study the development of the English language, as well as critical approaches to literature and language, including modern literary, linguistic, and critical theories. In addition, literature and language students learn how to write analytic interpretations of literary texts and of linguistic phenomena.

### Elementary Language Arts Education

The elementary language arts education emphasis area, in conjunction with the College of Education, certifies students to teach English in Michigan elementary and middle level schools (grades K-8). English majors in the elementary language arts education emphasis area learn current best practices in the teaching of the language arts. Students learn to integrate the language arts—reading, writing, speaking, listening, and viewing (visual literacy) within a curriculum designed to teach elementary teacher candidates to engage a diverse student body. Students also examine educational theory as it relates to the language arts and learn to apply literacy theory to their practice.

Note: Students seeking certification in elementary language arts education must have a 3.0 minimum GPA in English in order to be eligible to enter the College of Education for teacher assisting and student teaching.

### Secondary English Education

The secondary English education emphasis area, in conjunction with the College of Education, certifies students to teach English in Michigan secondary schools (grades 6-12). Courses in the secondary English education emphasis area emphasize the teaching of literature and the teaching of writing and are rooted in the theory, research, and best practices of the English education field. Students learn how to engage adolescents in reading and responding to texts ranging from classics to contemporary and young adult works. Students also assimilate strategies for teaching the writing process to adolescents, learning how to design and assess meaningful writing assignments. Finally, the secondary English education program equips students to teach in today's schools by focusing on current issues such as standardized testing, urban education, English as a second language, censorship, technology, and more.

Note: Students seeking certification in secondary English education must have a 3.0 minimum GPA in English in order to be eligible to enter the College of Education for teacher assisting and student teaching.

### Lake Michigan Writing Project (LMWP)

This National Writing Project site offers practicing teachers the opportunity to study the teaching of writing and hone their own writing skills during a Summer Invitational Institute, held annually. The LMWP Institute is listed as ENG 632, and will substitute for ENG 631 or EDR 631 in MA Degree programs. Prospective students should apply online at [www.lmwritingproject.org](http://www.lmwritingproject.org). Those accepted will receive fellowships to cover the cost of tuition for ENG 632 and ENG 633.

## Bachelor of Arts in English

### Requirements for a Major in English

All English majors will earn the B.A. degree, which in addition to basic skills and general education course requirements mandates third-semester proficiency in a foreign language of the student's choice. (A placement test is available to students who desire advanced placement or waiver of the foreign language requirement.) All English majors must choose an emphasis within the major and complete the three English foundation courses and the Capstone course, ENG 495 Language and Literature.

Foundation Courses: 200 level (9 credits)

- ENG 215 - Foundations of Literary Study: Genre Credits: 3
- ENG 216 - Foundations of Literary Study: Critical Approaches Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3

### Requirements for the Emphases

All English majors will choose one of the following emphases: language and literature, elementary language arts education, or secondary English education. Each emphasis requires different options from the six course categories as follows:

#### Course Categories

Note: ENG 215 Foundations of Literary Study: Genre and ENG 216 Foundations of Literary Study: Critical Approaches serve as prerequisites for all 300- and 400-level literature courses not offered in the General Education Program. ENG 261 Foundations of Language Study serves as a prerequisite for all 300- and 400-level linguistics courses not offered in the General Education Program. **\*Courses marked with an asterisk are courses that belong to general education issues.**

#### A. American Literature

The courses in this category focus on important periods, themes, and fields in American literary history. They seek to define, explore, and broaden our understanding of literature in the context of its historical moment.

- ENG 225 - American Literature I: to 1860 Credits: 3
- ENG 226 - American Literature II: from 1860 Credits: 3

- ENG 231 - Early African American Literature Credits: 3
- ENG 232 - Modern African American Literature Credits: 3
- ENG 325 - American Literature to 1800 Credits: 3
- ENG 326 - Nineteenth-Century American Literature Credits: 3
- ENG 327 - Modern American Literature Credits: 3
- ENG 328 - Contemporary American Literature Credits: 3
- ENG 334 - American Multicultural Literature for Children and Young Adults Credits: 3
- \*ENG 335 - Literature of American Minorities Credits: 3
- \*ENG 381 - Regional Discourses in US Civil Rights Credits: 3

#### B. British Literature

The courses in this category focus on important periods, themes, and fields in British literary history. They seek to define, explore, and broaden our understanding of literature in the context of its historical moment.

- ENG 220 - British Literature I Credits: 3
- ENG 221 - British Literature II Credits: 3
- ENG 313 - British Literature: Shakespeare Credits: 3
- ENG 321 - British Literature: Medieval Credits: 3
- ENG 322 - British Literature: Renaissance Credits: 3
- ENG 323 - British Literature: 18th-Romantic Credits: 3
- ENG 324 - British Literature: Victorian-Present Credits: 3

#### C. International Literature

The courses in this category focus on a variety of international literatures in translation as well as on global literatures written in English. They seek to define, explore, and broaden our understanding of literature in the context of its historical moment.

- ENG 303 - Studies in World Literature Credits: 3
- ENG 304 - International Literature for Children and Young Adults Credits: 3
- ENG 378 - Contemporary Latin American Literature Credits: 3
- \*ENG 388 - Emigration and Immigration in Contemporary World Literature Credits: 3

#### D. Approaches to Literature

The courses in this category focus on different genres, methods, topics, and concepts through which to approach, analyze, and interpret literature.

- ENG 320 - Studies in Poetry Credits: 3
- ENG 330 - Studies in Fiction Credits: 3
- ENG 340 - Studies in Drama Credits: 3
- ENG 360 - Studies in Nonfiction Credits: 3
- ENG 380 - Special Topics in English Credits: 1 to 3
- \*ENG 382 - Literature and the Environment Credits: 3
- \*ENG 383 - "Make It New": Literary Modernism Credits: 3
- \*ENG 384 - Literature of War Credits: 3
- \*ENG 386 - Literary Responses to Death and Dying Credits: 3
- ENG 436 - Women and Literature Credits: 3
- ENG 440 - Studies in Major Author(s) Credits: 3
- ENG 445 - Studies in Literary Criticism and Theory Credits: 3

#### E. Approaches to Language

The courses in this category focus on major topics in linguistics and introduce students to fundamental principles of linguistic theory and research. ENG 261 serves as a prerequisite for 300- and 400-level language courses.

- ENG 362 - History of the English Language Credits: 3
- ENG 363 - Applied Linguistics Credits: 3
- ENG 364 - Sociolinguistics Credits: 3
- ENG 365 - Teaching English as a Second Language Credits: 3
- ENG 366 - English Grammar and Usage Credits: 3
- ENG 390 - Topics in Language and Rhetoric Credits: 3
- \*ENG 392 - Language and Power Credits: 3
- ENG 461 - Language and Gender Credits: 3
- ENG 465 - Teaching Second Language Reading and Writing Credits: 3
- ENG 467 - Language Disorders and English Literacy Credits: 3
- ENG 469 - ESL Teaching Practicum Credits: 3

## English

### F. Approaches to Pedagogy

The courses in this category focus on the teaching of the language arts in English in elementary and secondary schools. The courses introduce students to literatures, concepts, theories, and practices of relevance to the elementary and secondary classrooms.

- ENG 307 - Teaching Writing: Elementary Credits: 3
- ENG 309 - Teaching Literature to Children Credits: 3
- ENG 310 - Teaching Writing: Secondary Credits: 3
- ENG 311 - Teaching Literature to Adolescents Credits: 3
- ENG 400 - Critical Issues in K-12 Literacy Credits: 3

### Language and Literature Emphasis Requirements

#### Foundation Courses (9 credits)

- ENG 215 - Foundations of Literary Study: Genre Credits: 3
- ENG 216 - Foundations of Literary Study: Critical Approaches Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3

#### Elective Requirements (27 credits)

Category requirements:

- One course each from course categories A-E

Historical requirements:

- At least one course on literature before 1700
- At least one course in 18th and 19th century literature
- At least one course in 20th and 21st century literature

300-level+ courses:

- At least 15 credits of 300-level+ courses in categories A-E

#### Capstone

- ENG 495 - Language and Literature Credits: 3

**Total Hours: 39**

### Teaching Emphases

Elementary Language Arts Education Emphasis Requirements:

#### Foundation Courses (9 credits)

- ENG 215 - Foundations of Literary Study: Genre Credits: 3
- ENG 216 - Foundations of Literary Study: Critical Approaches Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3

#### Track Requirements (9 credits)

- ENG 307 - Teaching Writing: Elementary Credits: 3
- ENG 309 - Teaching Literature to Children Credits: 3
- ENG 400 - Critical Issues in K-12 Literacy Credits: 3

#### Elective Requirements (18 credits)

- One course from category A
- One course from category C
- One course from category E
- Two courses from categories A-E
- One course from category A-F

#### Capstone

- ENG 495 - Language and Literature Credits: 3

**Total: 39 credits**

Secondary English Education Emphasis Requirements

#### Foundation Courses (9 credits)

- ENG 215 - Foundations of Literary Study: Genre Credits: 3
- ENG 216 - Foundations of Literary Study: Critical Approaches Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3

#### Track Requirements (12 credits)

- ENG 310 - Teaching Writing: Secondary Credits: 3
- ENG 311 - Teaching Literature to Adolescents Credits: 3
- ENG 313 - British Literature: Shakespeare Credits: 3
- ENG 400 - Critical Issues in K-12 Literacy Credits: 3

#### Elective Requirements (15 credits)

- One course from category A
- One course from category B
- One course from category C
- One course from category E
- One course from category A-F

### Capstone

- ENG 495 - Language and Literature Credits: 3

**Total: 39 credits**

### Suggested Order of Coursework for a Major in English Language and Literature

The following schedule assumes that students will consult with an advisor to make appropriate choices in general education courses.

#### First Year

- Foreign language 101 and/or 102
- Four general education Foundations courses
- ENG 215 - Foundations of Literary Study: Genre Credits: 3
- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4

#### Second Year

- Foreign Language 201
- ENG elective (category A)
- Four general education Foundations courses
- ENG 216 - Foundations of Literary Study: Critical Approaches Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3

#### Third Year

- ENG elective (category B)
- ENG elective (category C)
- ENG elective (category D)
- ENG elective (category E)
- Two general education cultural designation courses

#### Fourth Year

- Four ENG electives (any category)
- Two general education Issues courses
- ENG 495 - Language and Literature Credits: 3

### Suggested Order of Coursework for a Major in Elementary Language Arts Education

#### First Year

- Foreign Language 101 and/or 102
- One general education Foundations course
- One English Department foundation course
- One course in elementary distributed minor
- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4
- PSY 101 - Introductory Psychology Credits: 3 (prerequisite for PSY 301 + social studies foundation)

#### Second Year

- Foreign Language 201
- Three general education Foundations courses
- Two English Department foundation courses
- Four courses in elementary distributed minor (may both double count for general education)
- PSY 301 - Child Development Credits: 3

#### Third Year

- Five English Department major track courses
- Final three general education Foundations courses
- Two courses in elementary distributed minor (may both double count for general education)
- EDI 337 - Introduction to Learning and Assessment Credits: 3
- EDF 315 - Diverse Perspectives on Education Credits: 3

#### Fourth Year

- Four English Department major track courses
- Two courses in elementary distributed minor
- One Issues course (may double count in English major track)
- EDI 330 - Teacher Assisting - Elementary Credits: 5
- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDR 320 - Reading: Assessment and Instruction Credits: 3

### Fifth Year

- One Issues course
- ENG 495 - Language and Literature Credits: 3
- EDT 370 - Technology in Education Credits: 3
- EDS 378 - Universal Design for Learning: Elementary Credits: 3
- EDI 430 - Student Teaching, Elementary Credits: 10
- EDF 485 - The Context of Educational Issues Credits: 3

### Suggested Order of Coursework for a Major in Secondary English Education

#### First Year

- Foreign Language 101 and/or 102
- Four general education Foundations courses\*
- One English Department foundation course
- One course in teachable minor
- MTH 110 - Algebra Credits: 4
- PSY 101 - Introductory Psychology Credits: 3 (prerequisite for PSY 301 + social studies foundation)
- WRT 150 - Strategies in Writing Credits: 4

#### Second Year

- Foreign Language 201
- Four general education Foundations courses
- Two English Department foundation courses
- Three courses in teachable minor
- PSY 301 - Child Development Credits: 3

#### Third Year

- Five English Department major track courses
- Final two general education Foundations courses
- One or two courses in teachable minor (may have one in general education)
- EDI 337 - Introduction to Learning and Assessment Credits: 3
- EDF 315 - Diverse Perspectives on Education Credits: 3

#### Fourth Year

- Four English Department major track courses
- One, two, or three courses in teachable minor
- One Issues course (may double count in English major track)
- EDI 331 - Methods and Strategies of Secondary Teaching Credits: 5
- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDR 321 - Content Area Literacy Credits: 3

#### Fifth Year

- One Issues course
- ENG 495 - Language and Literature Credits: 3
- EDT 370 - Technology in Education Credits: 3
- EDS 379 - Universal Design for Learning: Secondary Credits: 3
- EDI 431 - Student Teaching, Secondary Credits: 8
- EDF 485 - The Context of Educational Issues Credits: 3

## Master of Arts in English

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/grad/english](http://www.gvsu.edu/grad/english)

### Program Description

The Master of Arts in English is a program intended to provide students with advanced studies in the various literatures written originally in English. The program concentrates on the range of British, American, and Anglophone literatures with emphasis on literary history, history of genre, close analysis of individual authors and themes, cultural context, and critical theory.

The degree offers two tracks—one requiring 33 hours of coursework followed by qualifying examinations, and the other requiring 27 hours of coursework followed by a six-credit-hour thesis project. Students must take courses in an author or topic, a literary period, and a genre. These are all variable-content courses and may be taken more than once. The

curriculum also requires a course that introduces students to the history of literary studies and provides them with the conceptual and critical vocabulary of the discipline, as well as instruction in research methods.

### Admission to the Master of Arts in English Program

- A brief statement of purpose explaining the applicant's academic preparation, interest in this program, and professional goals.
- An original essay writing sample of 10-15 pages (approximately) that demonstrates the writer's potential for literary analysis, including the use of sources. (It may be a paper written for a previous course.)
- Contact information for three people who can assess the applicant's academic preparation.
- Applications are considered throughout the year.

### Program Requirements

- Track 1: 33 credit hours of coursework plus qualifying examinations
- Track 2: 27 credit hours of coursework plus a six-credit-hour thesis

### Core Requirements (credit hours: 12)

Degree-seeking students must take ENG 600 - Graduate Literary Studies Seminar before completion of more than nine credit hours in the program.

- ENG 600 - Graduate Literary Studies Seminar Credits: 3
- ENG 624 - Genre Studies Credits: 3
- ENG 651 - Literary Period Seminar Credits: 3
- ENG 661 - Author or Topic Seminar Credits: 3
- **OR** ENG 663 - Shakespeare Credits: 3

### Electives

- Track 1: 21 credit hours
- Track 2: 15 credit hours

### Qualifying Examinations

Students who elect Track 1 must complete 33 credit hours of coursework in the program, including the required core courses. After all coursework is completed, they must take qualifying examinations. After all coursework is finished, students must pass the M.A. Exam in order to be awarded the degree. This track is appropriate for students who wish to take more coursework than the thesis option requires or don't need the kind of research experience a thesis project provides.

**1) Description:** The exam consists of two essays written in a total of four hours. The purpose of the exam is for students to demonstrate a range of skills and knowledge in literary study, including familiarity with a variety of approaches to literature. Students will choose two of the following areas to write on, which correspond with the core courses in the program:

- Major author
- Literary-historical period
- Literary genre
- Criticism and theory

**2) The Exam Committee:** The committee is made up of the student's choosing, in addition to the graduate director. At least one semester before taking the exam, the student will choose and consult with a faculty member specializing in one of the selected examination areas. This faculty member will serve as the student's exam advisor and will help the student to select another faculty member to serve as an area specialist.

**3) The Reading Lists:** In consultation with the advisor and the area specialist the student will draw up a separate reading list for each area of the exam. The student will submit the preliminary reading lists to the faculty advisor and area specialist, who will revise them. The advisor will then submit them to the graduate director for final approval. (This step helps to insure consistency among the various Exam Committees over time.) The reading lists will consist of major primary texts as well as significant critical works in the field.

**4) The Exam:** Students will arrange with the graduate director a date for the four-hour exam period during either fall or winter semester. (Students may choose to write for a single four-hour period, or two two-hour periods on the same day.) The exam must be scheduled by the third week of

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the semester, and may not take place during the last three weeks of the semester. The exam will present the student with a choice of questions, from which the student will choose two, one from each of the selected areas.

**5) Evaluation:** Both exam essays will be read by the student's advisor and area specialist. Both readers will assign to each exam essay one of the following grades: High Pass, Pass, or Fail. If the two readers disagree on their rating, the Graduate Director will serve as the third reader.

Any student who does not earn a passing score after two attempts will not be awarded the degree and will not be eligible to retake the exam. However, a student who does not earn a passing score on the M.A. exam may, with the permission of the graduate director, and in consultation with the student's faculty advisor and area specialist be allowed to propose a thesis project, which includes registering for six hours of thesis credit. As in every case, the student's thesis prospectus must be approved before the student can register for thesis credits (see "Thesis Preparation" for details).

### Thesis Preparation

Students who elect Track 2 must complete 27 credit hours of coursework in the program (including the required core courses) and may then begin work on the thesis. A more detailed flowchart for thesis preparation is available on The Graduate School website. Students must follow these steps in writing the thesis:

1. Select thesis advisor and receive advisor's approval of topic.
2. Submit prospectus (including thesis statement and bibliography) for approval of the advisor and the graduate director. After the prospectus is approved, the student enrolls in ENG 695 - Master's Thesis. A student must enroll for one to six credits of ENG 695 per semester (summer, fall and winter) until the thesis is successfully defended and accepted.
3. Select two other faculty members for thesis committee.
4. Submit draft for suggested revisions from committee.
5. Submit final draft for approval of committee. Minimum length for the thesis will be 50 pages (double-spaced, not including bibliography).
6. Thesis defense. The thesis director will schedule a time for the defense when the entire committee can be present. The student must have registered for a total of at least 6 credit hours of ENG 695 before the defense is scheduled. The defense may be scheduled in summer, fall, or winter terms and should be at least three weeks before the end of classes for that term. The revised draft of the thesis must be submitted to the committee at least two weeks prior to the defense date. Copies will be made available for other interested faculty members to read. All English Department faculty will be invited to attend the defense and participate in the discussion. The defense will be open to other English graduate students as observers.
7. After the defense, the committee may require further revisions; if so, the student will have 30 days to submit the revised thesis for final determination. If the committee votes not to accept the thesis, the student would have the option of changing to Track 1, which would require taking 6 additional credit hours of coursework and passing the Qualifying Examinations.
8. Once the thesis has been approved, the student submits the final .pdf to ScholarWorks at scholarworks@gvsu.edu.

### Course Offerings

- ENG 600 - Graduate Literary Studies Seminar Credits: 3
- ENG 603 - Seminar in British Literature Credits: 3
- ENG 605 - Seminar in American Literature Credits: 3
- ENG 612 - Women Writers Credits: 3
- ENG 614 - Literature of American Ethnic Minorities Credits: 3
- ENG 616 - World Literature in English Credits: 3
- ENG 624 - Genre Studies Credits: 3
- ENG 651 - Literary Period Seminar Credits: 3
- ENG 655 - History of Literary Criticism and Theory Credits: 3

- ENG 661 - Author or Topic Seminar Credits: 3
- ENG 663 - Shakespeare Credits: 3
- ENG 680 - Special Topics in English Credits: 1 to 4
- ENG 695 - Master's Thesis Credits: 1 to 3
- ENG 699 - Independent Study Credits: 1 to 3

## English Minor

The English minor is designed for the student who desires a general study of English through literature, linguistics, and writing. It is also designed for those seeking minor certification in English.

### Requirements for a Minor in English (21 credits)

Required courses (9 credits):

- ENG 215 - Foundations of Literary Study: Genre Credits: 3
- ENG 216 - Foundations of Literary Study: Critical Approaches Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3

Electives (12 credits):

- 4 ENG courses, three of which must be at the 300-level or above.

### Requirements for a Secondary Teachable Minor in English (24 credits)

Required courses (15 credits):

- ENG 215 - Foundations of Literary Study: Genre Credits: 3
- ENG 216 - Foundations of Literary Study: Critical Approaches Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3
- ENG 310 - Teaching Writing: Secondary Credits: 3
- ENG 311 - Teaching Literature to Adolescents Credits: 3

Electives (9 credits):

- 1 course from Category A: American
- 1 course from Category B: British
- 1 course from any Category at or above 300-level

## Entrepreneurship - Program Description

**Website:** [www.gvsu.edu/seidman](http://www.gvsu.edu/seidman)

The entrepreneurship major is designed to provide students broad, intellectual, and practical skills, and a demonstrated ability to apply knowledge using skills such as creativity, critical thinking, communication, and collaboration in real world settings to help them develop an entrepreneurial mindset and/or new venture. Students learn to identify opportunities, solve problems, build business strategies, test and validate assumptions, execute, and present. Through a series of courses that include hands on and experiential learning opportunities, students develop the knowledge and skills that serve as a springboard for students to start, run, or grow their own personal or family owned business.

Students who pursue the entrepreneurship major are required to complete a second Seidman major in a functional discipline (such as finance, marketing, accounting, etc.) Students should contact the Seidman Undergraduate Student Services Office early in their program for a suggested pattern of coursework.

## Bachelor of Business Administration in Entrepreneurship

Requirements for the B.B.A.

Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses.

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3

- BUS 201 - Legal Environment for Business Credits: 3
- BOTH**
- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**  
ECO 211 - Introductory Microeconomics Credits: 3
- OR** ECO 200 - Business Economics Credits: 3
- Upper-division economics course (not ECO 490) Credits: 3
  - FIN 320 - Managerial Finance Credits: 3
  - MGT 268 - Business Processes and Management Information Systems Credits: 3
  - MGT 331 - Concepts of Management Credits: 3
  - MGT 366 - Operations Management Credits: 3
  - MGT 495 - Administrative Policy Credits: 3
  - MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

#### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

#### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

#### Requirements for a Major in Entrepreneurship

Required courses:

- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

Then one option from the creativity courses, three core courses, one option from the application or the practicum courses, one option from the elective courses, and a **second Seidman major** (excluding general business and international business).

#### One Creativity Course

- LIB 310 - Creativity Credits: 3
- MKT 369 - Creativity in a Cubicle Environment Credits: 3

#### Three Core Courses

- ENT 350 - Entrepreneurial Business Plan Credits: 3
- MGT 330 - Entrepreneurship and Small Business Management Credits: 3
- MKT 370 - New Product Development Credits: 3

#### One Application or Practicum Course

- BUS 490 - Business Internship Credits: 1 to 6
- ENT 351 - Entrepreneurial Project Credits: 3

#### One Elective

- ACC 321 - Cost Strategy and Decision Making Credits: 3
- ECO 300 - Applied Economic Analysis Credits: 3
- ECO 342 - Strategic Games Credits: 3
- MGT 345 - Team Building Credits: 3
- MGT 437 - Family Business Credits: 3

- MKT 352 - Marketing Research Credits: 3
- MKT 358 - Advertising and Marketing Communications Credits: 3

## Entrepreneurship Certificate

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

#### ENT Certificate Goal

The goal of the entrepreneurship certificate program is to provide Seidman College of Business students a short track of courses to learn the process and tools, and to develop the skills and experiences necessary to identify and create a sustainable business opportunity.

#### ENT Certificate Program

The ENT certificate program is comprised of four courses that along with the business core courses help prepare students for an entrepreneurial career while being flexible to the diverse interests and opportunities of students. These courses provide applied opportunity to work with regional entrepreneurs as well as to prepare and launch student owned businesses. An elective course in a variety of areas allows the student to customize their certificate study to the type of business or industry of most interest.

#### Certificate Requirements

Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. There are four required courses for the ENT certificate program. They do not need to be taken in sequential order except for the following prerequisites: MGT 330 and the core courses ACC 213, FIN 320 and MKT 350 are prerequisites for ENT 350 and ENT 351. Students must achieve a cumulative 2.5 GPA in these four required courses to receive the entrepreneurship certificate designation.

- ENT 350 - Entrepreneurial Business Plan Credits: 3
- ENT 351 - Entrepreneurial Project Credits: 3
- MGT 330 - Entrepreneurship and Small Business Management Credits: 3

#### Electives

Take one elective from the following list:

- ACC 340 - Accounting Systems Credits: 3
- FIN 350 - Real Estate Principles Credits: 3
- MGT 360 - Business Process Redesign Credits: 3
- MGT 364 - Service Operations Management Credits: 3
- MGT 437 - Family Business Credits: 3
- MKT 352 - Marketing Research Credits: 3
- MKT 354 - Distribution Institutions and Logistics Credits: 3
- MKT 357 - Retailing Credits: 3
- MKT 370 - New Product Development Credits: 3

## Interdisciplinary Entrepreneurship Certificate

For additional information about opportunities this college offers, please refer to the Seidman College of Business section in this catalog.

#### Interdisciplinary Entrepreneurship Certificate Goal

This certificate is primarily designed for nonbusiness majors. Nonbusiness majors (e.g. - graphic design, music literature, and health professions) who are currently taking limited entrepreneurship classes would benefit from the completion of the certificate. The certificate would allow the student to become more knowledgeable regarding starting or running a new business. It also allows the nonbusiness major to gain knowledge, skill sets, and experiences beyond their major studies. Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree.

## Environmental Studies

### Certificate Requirements

There are three courses (9 credits) that comprise the certificate.

- ENT 150 - Entrepreneurial Quest Credits: 3
- ENT 151 - New Venture Feasibility Credits: 3
- ENT 251 - Entrepreneurial Management and Marketing Credits: 3

## Environmental Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/ens](http://www.gvsu.edu/ens)

Environmental sustainability and ecological integrity are increasingly central to Grand Valley State University's academic and community identity. The earth's environment is under stress, and the search for solutions requires an interdisciplinary approach to problem-solving. Only by examining our dependence on our environment, and the causes and consequences of our impacts on that environment, will we be able to fashion ways of living equitably and sustainably with other species. Finding effective and practical solutions to environmental problems requires an understanding of their scientific, socio-economic, political, and cultural dimensions. To meet these challenges in the roles of leaders, thinkers and decision-makers, students, regardless of their major, need to have access to environmental education.

The environmental studies program emphasizes the diverse contributions of natural and social sciences, technology, art and humanities to understanding and solving environmental problems. Consequently, ideas and information from a wide array of fields such as public policy, sociology, economics, geography, history, anthropology, philosophy, psychology, religion, ecology, biology, and chemistry are important components of the environmental studies minor.

The program integrates humanities, natural and social science, environmental policy and planning perspectives. You will gain the broad educational background needed to assist in developing sustainable development policies to create positive social change within the environmental context. Real world links to practical environmental issues are developed through environmental problem-solving at the local and regional levels, faculty-led research projects, internships and participation in campus environmental planning. This minor is structured for students with strong interest in environmental issues but who do not necessarily wish to pursue postgraduate opportunities in the natural sciences.

## Environmental Studies Minor

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

Students enrolled in an environmental studies major will explore multiple dimensions on human-environmental interactions: sociocultural, scientific, technological, political, and economic. They will also develop an understanding of sustainability concepts, acquire experience in interdisciplinary collaboration, and become familiar with basic field research focused on local environmental issues.

### Requirements for a Minor in Environmental Studies

The environmental studies minor will require a minimum of 21 credit hours including the following courses.

- ENS 201 (3 credits)
  - ENS 201 - Introduction to Environmental Studies and Sustainability Credits: 3
- One course from each of the following categories (9 credits)
  - Sociocultural Perspectives on Environment
    - ANT 340 - Culture and Environment Credits: 3

- BIO 338 - Environmental Ethics Credits: 3
- ENG 382 - Literature and the Environment Credits: 3
- GPY 220 - Cultural Geography Credits: 3
- GPY 362 - Farmers, Crops, and Our Challenging Agricultural World Credits: 3
- GPY 363 - World Forests and Their Use Credits: 3
- GPY 410 - Landscape Analysis Credits: 3
- HST 320 - American Indians Credits: 3
- HST 323 - Michigan History Credits: 3
- HST 327 - History of United States Urban Society Credits: 3
- LIB 322 - Wicked Problems of Sustainability Credits: 3
- LIB 330 - The Idea of Nature Credits: 3
- PSY 362 - Environmental Psychology Credits: 3
- SOC 288 - Sociology of Food Credits: 3
- SOC 351 - Urban Sociology Credits: 3
- SW 150 - Human Needs in Complex Societies Credits: 3
- WGS 335 - Women, Health and Environment Credits: 3

### Physical Life Science Perspectives on Environment

- BIO 105 - Environmental Science Credits: 3
- BIO 107 - Great Lakes and Other Water Resources Credits: 4
- BIO 215 - Ecology Credits: 4
- BIO 470 - Conservation Biology Credits: 3
- EGR 360 - Thermodynamics Credits: 4
- GEO 100 - Environmental Geology Credits: 3
- GEO 105 - Living with the Great Lakes Credits: 3
- GEO 111 - Exploring the Earth Credits: 4
- GEO 300 - Geology and the Environment Credits: 3
- GPY 100 - Physical and Environmental Geography Credits: 3
- GPY 412 - Global Environmental Change Credits: 3
- NRM 330 - Environmental Pollution Credits: 3
- OSH 414 - Environmental Safety and Health Regulations Credits: 3

### Political and Economic Perspectives on Environment

- BIO 319 - Global Agricultural Sustainability Credits: 3
- ECO 345 - Environmental and Resource Economics Credits: 3
- EGR 306 - Urban Sustainability Credits: 3
- EGR 406 - Renewable Energy Systems: Structure, Policy, and Analysis Credits: 3
- ENS 492 - Sustainable Agriculture Practicum: Ideas and Techniques Credits: 3
- GPY 312 - Urban and Regional Environmental Planning Credits: 3
- GPY 324 - Urbanization Credits: 3
- GPY 335 - Globalization and Development Credits: 3
- GPY 345 - The Geography and Land Use Management of Michigan and the Great Lakes Area Credits: 3
- GPY 353 - Geography of the United States and Canada Credits: 3
- GPY 361 - People, Environment, and Development in the Amazon Credits: 3
- HTM 175 - International Food and Culture Credits: 3
- HTM 268 - Adventure Tourism Credits: 3
- NRM 150 - Introduction to Natural Resources Credits: 3
- NRM 420 - Wildland Recreation Management Credits: 3
- NRM 451 - Natural Resource Policy Credits: 3
- PA 307 - Local Politics and Administration Credits: 3
- PA 360 - Voluntarism and the Nonprofit Sector Credits: 3
- PLS 303 - Introduction to U.S. Environmental Policy Credits: 3
- PLS 314 - International Law Credits: 3

### C. Electives (6 credits)

Any two upper-level electives (300 or above) from two different disciplines from the list of all environmental studies electives (socio-cultural, physical and life science, and political and economic) listed previously. ENS 490 - Internship in Environmental Studies (up to 5 credit hours) can be taken as one of the two upper-level electives.

### D. ENS 401 (3 credits)

- ENS 401 - Environmental Problem Solving Credits: 3

## Undergraduate Certificate in Sustainable Food Systems

Strong local food systems are essential for healthy local communities. Students preparing for careers in local food enterprises, health care, sustainability, education, business, social work, non-profit administration and many other fields will benefit from the skills and experience necessary to address the role of food in community life.

Why study sustainable food systems at Grand Valley?

- A deep understanding of sustainable food systems and their impacts on society and the environment.
- Practical gardening, recycling and composting skills.
- Hands-on experience at the GVSU Sustainable Agriculture Project campus farm site.
- Broad interdisciplinary understanding of and integration of multiple perspectives on food systems, food justice, environmental stewardship, nutrition, and community.
- An understanding of food needs of different communities.
- The ability to take action that supports local food production and environmental stewardship for the next generation.

### Admission Requirements

Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. To complete the certificate, students must select a total of at least 15 credits. Students may pursue the certificate in sustainable food systems concurrently with the environmental studies minor. Any course that satisfies both requirements will be counted toward the certificate and the minor.

### Certificate Requirements

In order to complete the certificate you must earn a bachelor's degree. Students must select a total of at least 15 credits from a list of required and elective courses. For elective courses, students must select one course from each of the two groups of electives, and one additional elective from either group for a total of three elective courses. No more than two elective courses with the same prefix are allowed.

Required courses (6 credits)

- ENS 201 - Introduction to Environmental Studies and Sustainability Credits: 3
- ENS 492 - Sustainable Agriculture Practicum: Ideas and Techniques Credits: 3

Elective courses (9 to 10 credits)

#### Group 1: Agriculture (select at least one course = 3 or 4 credits)

- BIO 309 - Plants and Human Health Credits: 3
- BIO 319 - Global Agricultural Sustainability Credits: 3
- BIO 423 - Plant Biotechnology Credits: 3
- GPY 362 - Farmers, Crops, and Our Challenging Agricultural World Credits: 3
- GPY 412 - Global Environmental Change Credits: 3
- NRM 281 - Principles of Soil Science Credits: 4

#### Group 2: Food and Nutrition (select at least one course = 3 credits)

- BMS 105 - Basic Nutrition Credits: 3
- HTM 175 - International Food and Culture Credits: 3
- LIB 342 - Food Matters Credits: 3
- SOC 288 - Sociology of Food Credits: 3

## Exercise Science - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/exercisescience](http://www.gvsu.edu/exercisescience)

Exercise science is the study of physical activity and exercise and the associated short-term functional responses and long-term adaptations

the human body experiences. The exercise science major will seek to serve the students of Grand Valley State University by providing theoretical foundations for exercise testing and prescription in apparently healthy and clinical populations. Students receive hands-on experience and skill preparation to work in a wide variety of health, fitness, and wellness careers. The exercise science degree, with emphasis areas in health/fitness instruction and clinical exercise science, is consistent with American College of Sports Medicine (ACSM) standards. The major prepares students for opportunities in community health and fitness, corporate wellness, personal training, cardiac rehabilitation, performance enhancement, and future graduate study in related areas.

### Exercise Science Mission Statement

To prepare students for physical activity, exercise, health and sport-related professions through academic, practical, and research experiences. Our students will have the knowledge and skills to promote and impact their health and that of society.

### Exercise Science Vision Statement

The exercise science program in the Movement Science Department at Grand Valley State University is committed to being nationally recognized for its excellence in teaching and scholarship. Through our excellence, we prepare future leaders in the areas of health, physical activity, exercise, and sport. We achieve excellence in teaching by using innovative teaching strategies that incorporate active student learning. We complement excellence in teaching with innovative scholarship addressing critical issues related to health, fitness, and sports performance across the life span.

### Graduate School Opportunities

Students are well-prepared to enter graduate school. Examples of graduate programs are:

- Physical therapy
- Kinesiology
- Exercise science
- Exercise physiology
- Epidemiology and public health
- Health promotion
- Biomechanics
- Physician assistant studies
- Occupational therapy
- Medicine
- Sport and exercise psychology
- Nutrition
- Orthotics and prosthetics

## Bachelor of Science in Exercise Science

### Requirements for a Major in Exercise Science

Students in the exercise science program at Grand Valley State University must follow all general education requirements as defined in the Grand Valley State University Undergraduate and Graduate Catalog.

### Program Costs

Students will be responsible for the costs associated with the required pre-internship health compliance check (immunizations, background check, and drug screening), travel to and from fieldwork or internship sites, and all textbooks and supplemental materials required for each course.

### Exercise Science Major B.S. Course Requirements

- BMS 202 - Anatomy and Physiology Credits: 4  
**OR** BMS 208 - Human Anatomy Credits: 3
- MOV 304 - Introduction to Exercise Physiology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Exercise Science Major Courses (credit hours 36 to 42)

- BMS 105 - Basic Nutrition Credits: 3
- MOV 101 - Foundations of Human Movement Science Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2
- MOV 217 - Modern Principles of Athletic Training Credits: 2

## Film and Video Production

- MOV 218 - Modern Principles of Athletic Training Lab Credits: 1
- MOV 300 - Kinesiology Credits: 3
- MOV 309 - Measurement and Evaluation Credits: 2
- MOV 320 - Exercise Testing and Prescription Credits: 3
- MOV 321 - Exercise Testing Lab Credits: 1
- MOV 420 - Laboratory Practicum in Exercise Science Credits: 2
- MOV 470 - Exercise for Special Populations Credits: 3
- MOV 475 - Fieldwork in Exercise Science Credits: 2
- MOV 490 - Internship in Exercise Science Credits: 6, 9, or 12
- MOV 495 - Professionalism in Exercise Science Credits: 3 (SWS)

### Emphasis Areas

Students in the exercise science program must complete one of the following emphasis areas.

#### Clinical Exercise Science (28 credits)

- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- BMS 306 - Advanced Human Nutrition Credits: 3
- BMS 415 - Nutrition and Physical Performance Credits: 3
- CHM 231 - Introductory Organic Chemistry Credits: 4
- CHM 232 - Biological Chemistry Credits: 4
- MOV 365 - Clinical Exercise Physiology Credits: 3
- PHY 200 - Physics for the Life Sciences Credits: 4
- PSY 310 - Behavior Modification Credits: 3

#### Health-Fitness Instruction (27 credits)

- BMS 223 - Infectious Human Diseases; Prevention and Control Credits: 3
- CIS 150 - Introduction to Computing Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- MOV 201 - Psychosocial Aspects of Physical Education and Sport Credits: 3
- MOV 310 - Motor Skill Development Credits: 3
- PSY 310 - Behavior Modification Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3
- SOC 286 - Sociology of Health Care Credits: 3
- SOC 252 - Sociology of Drug Use and Abuse Credits: 3

### Suggested Order of Coursework for Clinical Exercise Science

#### Year 1:

- BIO 120 - General Biology I Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4
- MTH 110 - Algebra Credits: 4
- MOV 101 - Foundations of Human Movement Science Credits: 3
- BMS 208 - Human Anatomy Credits: 3
- CHM 231 - Introductory Organic Chemistry Credits: 4
- WRT 150 - Strategies in Writing Credits: 4

#### Year 2:

- CHM 232 - Biological Chemistry Credits: 4
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- PSY 101 - Introductory Psychology Credits: 3
- MOV 217 - Modern Principles of Athletic Training Credits: 2
- MOV 218 - Modern Principles of Athletic Training Lab Credits: 1
- BMS 105 - Basic Nutrition Credits: 3
- PHY 200 - Physics for the Life Sciences Credits: 4
- MOV 304 - Introduction to Exercise Physiology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### Year 3:

- MOV 309 - Measurement and Evaluation Credits: 2
- MOV 300 - Kinesiology Credits: 3
- MOV 320 - Exercise Testing and Prescription Credits: 3
- MOV 321 - Exercise Testing Lab Credits: 1
- MOV 365 - Clinical Exercise Physiology Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2

- BMS 306 - Advanced Human Nutrition Credits: 3
- MOV 420 - Laboratory Practicum in Exercise Science Credits: 2
- PSY 310 - Behavior Modification Credits: 3

#### Year 4:

- BMS 415 - Nutrition and Physical Performance Credits: 3
- MOV 470 - Exercise for Special Populations Credits: 3
- MOV 475 - Fieldwork in Exercise Science Credits: 2
- MOV 495 - Professionalism in Exercise Science Credits: 3
- MOV 490 - Internship in Exercise Science Credits: 6, 9, or 12

### Suggested Order of Coursework for Health-Fitness Instruction

#### Year 1:

- BMS 105 - Basic Nutrition Credits: 3
- MTH 110 - Algebra Credits: 4
- MOV 101 - Foundations of Human Movement Science Credits: 3
- PSY 101 - Introductory Psychology Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

#### Year 2:

- BMS 202 - Anatomy and Physiology Credits: 4
- CIS 150 - Introduction to Computing Credits: 3
- MOV 201 - Psychosocial Aspects of Physical Education and Sport Credits: 3
- BMS 223 - Infectious Human Diseases; Prevention and Control Credits: 3
- MOV 217 - Modern Principles of Athletic Training Credits: 2
- MOV 218 - Modern Principles of Athletic Training Lab Credits: 1
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- MOV 304 - Introduction to Exercise Physiology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### Year 3:

- MOV 300 - Kinesiology Credits: 3
- MOV 310 - Motor Skill Development Credits: 3
- MOV 320 - Exercise Testing and Prescription Credits: 3
- MOV 321 - Exercise Testing Lab Credits: 1
- MOV 309 - Measurement and Evaluation Credits: 2
- MOV 102 - First Aid, CPR and AED Credits: 2
- MOV 420 - Laboratory Practicum in Exercise Science Credits: 2
- PSY 364 - Life Span Developmental Psychology Credits: 3
- SOC 252 - Sociology of Drug Use and Abuse Credits: 3

#### Year 4:

- PSY 310 - Behavior Modification Credits: 3
- MOV 470 - Exercise for Special Populations Credits: 3
- MOV 475 - Fieldwork in Exercise Science Credits: 2
- MOV 495 - Professionalism in Exercise Science Credits: 3
- MOV 490 - Internship in Exercise Science Credits: 6, 9, or 12

## Film and Video Production - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences sections in this catalog.

**Website:** [www.gvsu.edu/filmvideo](http://www.gvsu.edu/filmvideo)

A strong hands-on emphasis characterizes the film and video production major. Courses include animation, cinema studies, documentary and nonfiction, fiction filmmaking, new media, and sound design. The curriculum integrates production experience with the insights offered by media history, theory, and criticism.

Digital video facilities include editing suites, a full complement of field gear, a studio classroom, and a digital audio studio. Students work with a variety of software in Macintosh computer laboratories. Student internship opportunities include regional and national productions, post-production houses, and many more.

### Accreditation

The Film and Video Production major is accredited by the National Association of Schools of Art and Design (NASAD).

### Admission

In order to maintain high-quality instruction, the film and video production major limits the number of students accepted each year into CFV 226, CFV 227, and all 300- and 400-level film/video courses.

Students are required to have an overall GPA above 2.5 and complete the two film and video pre-admission courses (CFV 123 and CFV 125) with a minimum of 3.0 GPA in order to apply for admission to the major and take CFV 226/227 and 300- and 400-level film and video courses. Achievement of these minimum criteria does not guarantee admission.

Having met these requirements, students will submit an admission application. Guidelines for the application are available on the film and video production website at [www.gvsu.edu/filmvideo](http://www.gvsu.edu/filmvideo), and upon request from the School of Communications office, 290 Lake Superior Hall. Admission applications are accepted the first Monday of November, April, and August.

Students interested in the film and video production major are encouraged to complete the film and video production foundation requirements early in their course of study, and to maintain regular contact with their advisor to ensure proper course enrollment and steady progress toward full acceptance.

Students may petition to bypass the two pre-admission courses on the basis of prior coursework for which they have received a 3.0 minimum GPA at another postsecondary institution. The petition should include a syllabus plus one or more projects and/or papers from the prior course(s). On the basis of these materials, the film and video production faculty will determine what Grand Valley coursework, if any, is required of the petitioner. Students may not take upper-level production CFV courses until they are admitted to the major.

## Bachelor of Arts or Bachelor of Science in Film and Video Production

### Requirements for a Major in Film and Video Production

#### School of Communications Core (credits: 6)

All students majoring in the School of Communications must complete the following core courses, for a total of six credits:

- COM 101 - Concepts of Communication Credits: 3
- COM 201 - Speech Credits: 3
- OR COM 215 - Story Making Credits: 3

#### Requirements for the B.A. and B.S. Degree

All undergraduate programs in the school of communications offer both the B.A. and B.S. degree. All students selecting majors in the school of communications must choose either the B.A. or B.S. requirement that is intended for a particular undergraduate program.

#### B.A. Degree Requirement

The B.A. degree requires a third semester proficiency in a foreign language of the student's choice.

#### B.S. Degree Requirement

- STA 215 - Introductory Applied Statistics Credits: 3
- COM 275 - Foundations of Communication Research Credits: 3
- COM 375 - Communication Research Credits: 3

#### Pre-admission Courses (can be taken in any order)

- CFV 123 - Survey of Media Production Modes Credits: 3
- CFV 125 - Media Production I Credits: 3

Minimum 3.0 GPA required for CFV pre-admission courses, and 2.5 GPA overall required to apply to the major. See admission policy. Students must maintain good academic standing at the university after admission to the major.

### Film/Video Production Foundation (credits: 22)

Take each of the following:

- CFV 123 - Survey of Media Production Modes Credits: 3
- CFV 125 - Media Production I Credits: 3
- CFV 226 - Media Production II Credits: 3
- CFV 227 - Digital Media Lab Credits: 1
- CFV 261 - Scriptwriting I Credits: 3
- CFV 282 - Audio Production I Credits: 3

Choose two history/theory/criticism courses from the following:

- CFV 348 - Film Theories Credits: 3
- CFV 370 - American Cinema Credits: 3
- CFV 371 - History of Animation Credits: 3
- CFV 372 - History of Documentary Film Credits: 3
- CFV 373 - Issues of Representation Credits: 3
- CFV 374 - Experimental Film and Video Credits: 3
- CFV 375 - World Cinema Credits: 3
- CFV 376 - Latin American Cinema Credits: 3

### Film/Video Production Emphasis (credits: 15)

Choose five courses. One course must be a 400-level advanced production course.

#### Intermediate Production

- CFV 321 - Fiction Filmmaking I Credits: 3
- CFV 322 - Documentary Production I Credits: 3
- CFV 323 - Media Technologies Credits: 3
- CFV 324 - 3D Computer Animation Credits: 3
- CFV 325 - Animation I Credits: 3
- CFV 326 - New Media I Credits: 3
- CFV 327 - Film and Video Art Credits: 3
- CFV 328 - Intermediate Film Practicum Credits: 3 or 6
- CFV 330 - Digital Post Production Credits: 3
- CFV 362 - Scriptwriting II Credits: 3
- CFV 368 - Lighting for Film and Video Productions Credits: 3
- CFV 380 - Special Topics in Film and Video Credits: 3
- CFV 382 - Audio Production II Credits: 3

#### Advanced Production

- CFV 421 - Fiction Filmmaking II Credits: 3
- CFV 422 - Documentary Production II Credits: 3
- CFV 425 - Animation II Credits: 3
- CFV 426 - New Media II Credits: 3
- CFV 428 - Advanced Film Practicum Credits: 3 or 6
- CFV 429 - Post Production Practicum Credits: 3
- CFV 470 - Producing for Clients Credits: 3
- CFV 482 - Sound Design for Film and Video Credits: 3

#### History/Theory/Criticism

- CFV 348 - Film Theories Credits: 3
- CFV 370 - American Cinema Credits: 3
- CFV 371 - History of Animation Credits: 3
- CFV 372 - History of Documentary Film Credits: 3
- CFV 373 - Issues of Representation Credits: 3
- CFV 374 - Experimental Film and Video Credits: 3
- CFV 375 - World Cinema Credits: 3
- CFV 376 - Latin American Cinema Credits: 3

#### Internship or Thesis (credits: 1 to 6)

- CFV 490 - Internship Credits: 1 to 6
- CFV 498 - Senior Thesis/Project Credits: 1 to 6

#### Capstone (Credits: 3)

- CFV 495 - Issues in Film and Media Arts (Capstone) Credits: 3

All students majoring in film and video production must take CFV 495 Capstone during their senior year. The Capstone is a culminating course in which students demonstrate their conceptual understanding and creative abilities as they relate to film and media arts.

## Finance - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

**Website:** [www.gvsu.edu/business](http://www.gvsu.edu/business)

The finance program provides students with an understanding of financial definitions, concepts, relationships, and strategies involving individuals, financial institutions, and non-financial business activities. This 18-credit-hour program is designed to provide fundamental knowledge for careers in banking, financial management, investments, portfolio management and financial planning. It recognizes that finance is becoming an increasingly complex and critical area in the overall management of all types of institutions - business and others - and for individuals as well.

### Career Opportunities

Generally, 80 percent to 90 percent of finance graduates report finding jobs directly related to their major, giving them one of the highest placement rates among new Grand Valley State University graduates. Graduates obtain careers in business and personal finance, investments, banking, insurance, real estate, government, and international financial management. You may become a financial analyst, credit analyst, commercial lender, bank branch manager, mutual fund/pensions manager, project finance manager, cash manager, capital budgeting manager, or financial planner.

Seidman Investment Portfolio Organization (IPO), a student business organization, provides many opportunities for you to explore different avenues of finance. As a member of IPO, you will gain valuable investment experience by helping to manage a \$65,000 stock portfolio.

## Bachelor of Business Administration in Finance

Requirements for the B.B.A.

### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

### BOTH

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**  
ECO 211 - Introductory Microeconomics Credits: 3
- OR** ECO 200 - Business Economics Credits: 3
- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

### Requirements for a Major in Finance

#### Business Core

- FIN 321 - Investments Credits: 3
  - FIN 322 - Intermediate Managerial Finance Credits: 3
  - FIN 422 - Advanced Managerial Finance Credits: 3
  - CIS 150 - Introduction to Computing Credits: 3
  - STA 215 - Introductory Applied Statistics Credits: 3
- Quantitative group - choose one:
- MTH 122 - College Algebra Credits: 3
  - MTH 125 - Survey of Calculus Credits: 3
  - MTH 201 - Calculus I Credits: 4
  - PHI 103 - Logic Credits: 3
  - MGT 361 - Management Science Credits: 3

#### Additional Courses

And three other courses from the following list with at least one of three being a finance course:

- ACC 310 - Intermediate Accounting I Credits: 3
- ACC 311 - Intermediate Accounting II Credits: 3
- ACC 318 - Entity Taxation Credits: 3
- ACC 321 - Cost Strategy and Decision Making Credits: 3
- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- ECO 414 - Money and Banking Credits: 3
- FIN 331 - Risk and Insurance Credits: 3
- FIN 350 - Real Estate Principles Credits: 3
- FIN 420 - Bank Management Credits: 3
- FIN 427 - Derivative Assets and Markets Credits: 3
- FIN 428 - Security Analysis and Portfolio Management Credits: 3
- FIN 429 - International Financial Management Credits: 3
- FIN 480 - Special Topics in Finance Credits: 1 to 9
- FIN 499 - Independent Research Credits: 1 to 3

Note: The economics courses selected to fulfill the upper division economics course requirement cannot count as a finance elective. Some financial institutions require a minimum of 12 credits of accounting for students who plan to seek positions as credit analysts.

## French - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/ml](http://www.gvsu.edu/ml)

French is a language spoken natively on all continents by over 160 million speakers and as a second language by millions more. French is in fact the most commonly studied second language in the world. It remains therefore one of the major languages of diplomacy worldwide. The study of French encompasses both a study of the language and the investigation of the cultures/literatures wherever French is spoken. French and Francophone culture is vibrant: French is a language of the arts and literature, of technology, of social and political institutions that promote freedom of thought and expression as well as multiculturalism. Study of the French language prepares students for multicultural career settings in the United States and abroad.

A French major and minor are available. Students majoring in French will choose one of three areas of emphasis: literature, linguistics or

civilization. A French minor complements majors in many other fields, such as international relations, business, philosophy, English, education, history, the arts, and increasingly the sciences. Students who plan to complete the French major or minor for secondary education certification must meet the additional requirements of the French Secondary Education program and College of Education.

### Participating Programs

The French section of the Department of Modern Languages and Literatures works closely with the Padnos International Center to make available many opportunities for Study Abroad. We offer one faculty-led summer program in Nice, France, where students complete six credits in French language and French culture (FRE 385, FRE 386). Semester-long programs are offered with several partner institutions in France: in Angers (the *École Supérieure des sciences commerciales d'Angers* and the *Université Catholique*), and in Grenoble (*Groupe ESC*). Many other opportunities for study abroad are available. We also offer summer internships in France through EUSA, where students are placed in positions related to their career focus.

## Bachelor of Arts in French

### Requirements for a Major in French

Students majoring in French are required to complete 36 hours beyond the FRE 202 course, including the following:

- The four core curriculum courses (12 credits)
  - FRE 315 - French Conversation Credits: 3
  - FRE 316 - Advanced French Grammar Credits: 3
  - FRE 317 - Writing in French Credits: 3
  - FRE 318 - Introduction to French Literature Credits: 3
- One course in each of the following areas: literature, linguistics, civilization, global competence as follows. (12 credits)
- Three elective courses at the 300 and 400 level, at least one of which must be at the 400 level. (9 credits)
- FRE 495 - Advanced Topics in French (Capstone) Capstone must be taken in the last year preceding graduation. Credits: 3

Students should take careful note of the prerequisites for their chosen courses.

Students seeking to pursue a graduate degree in French are advised to complete a minor or major in another foreign language. All secondary education majors and minors must complete a study abroad program (as follows).

#### Areas

##### Literature

Students must choose one course from the following:

- FRE 321 - Survey of French Literature I Credits: 3
- FRE 322 - Survey of French Literature II Credits: 3
- FRE 323 - Survey of French Literature III Credits: 3

##### Linguistics

Students must choose one course from the following:

- FRE 331 - French Phonetics Credits: 3
- FRE 332 - Introduction to French Linguistics Credits: 3

#### AND EITHER

- FRE 341 - French History and Civilization Credits: 3
- OR FRE 342 - Contemporary French Culture and Society Credits: 3

##### Civilization

Students must choose one course from the following:

- FRE 341 - French History and Civilization Credits: 3
- FRE 342 - Contemporary French Culture and Society Credits: 3
- FRE 343 - Francophone Civilization Credits: 3

##### Global Competence

Students must choose one course from the following:

- FRE 351 - Business French Credits: 3
- FRE 386 - French Culture Abroad Credits: 3
- FRE 395 - Advanced Speaking Strategies and Skills Credits: 3

## Suggested Order of Coursework for a Major in French

Suggested order of coursework for students without prior language background:

- FRE 101 - Beginning French I: Language and Culture followed by FRE 102 - Beginning French II: Language and Culture
- FRE 201 - Intermediate French I: Language and Culture followed by FRE 202 - Intermediate French II: Language and Culture
- The core curriculum:
  - FRE 315 - French Conversation Credits: 3
  - FRE 316 - Advanced French Grammar Credits: 3
  - FRE 317 - Writing in French Credits: 3
  - FRE 318 - Introduction to French Literature Credits: 3
- Selection of one course in each of four areas (literature, linguistics, civilization, and global competence)
- Three electives (one at 400 level, not including FRE 495)
- FRE 495 - Advanced Topics in French (Capstone) Credits: 3

Students entering GVSU with previous experience in French may start French courses at the 200 or 300 level, based on a placement exam, CLEP or AP credits, or consultation with an advisor from the French Section.

Students who wish to review beginning material before taking 200 level courses can take FRE 150 - Intensive Elementary French.

### Requirements for a Certificate in Secondary Education

Students majoring in French secondary education are required to complete 39 hours beyond the FRE 202 course, including the following:

- The four core curriculum courses (12 credits)
  - FRE 315 - French Conversation Credits: 3
  - FRE 316 - Advanced French Grammar Credits: 3
  - FRE 317 - Writing in French Credits: 3
  - FRE 318 - Introduction to French Literature Credits: 3
- FRE 331 - French Phonetics Credits: 3
- AND FRE 332 - Introduction to French Linguistics Credits: 3 (6 credits).
- FRE 334 - Foreign Language Acquisition and Pedagogy Credits: 3
- One course in each of the following areas: literature, civilization, global competence, see preceding information. (9 credits)
- Two elective courses, at least one of which must be at the 400 level, not including FRE 495 (6 credits)
- FRE 495 - Advanced Topics in French (Capstone) Credits: 3
- Capstone must be taken in the last year preceding graduation (3 credits)

### Oral Proficiency Requirement

It is a requirement of the Michigan Department of Education and Grand Valley's College of Education that teacher candidates achieve the Advanced-Low level on the Oral Proficiency Interview (OPI) in French before student teaching. The OPI should be taken right away after returning from a study abroad program. Information sessions on the OPI and other requirements for certification are provided each semester.

### Study Abroad Requirement

Students with a French secondary education major or minor must study abroad in a French-speaking country for a minimum of one semester (12-15 credits in French at the 300- or 400-level) in a departmentally approved program. Courses taken during the study abroad semester normally fulfill some of the courses required for the major, but these need to be determined ahead of time by a French advisor. Advising is critical. Students interested in pursuing a teaching degree in French are urged to meet with a French advisor as early as possible in their program.

Students are advised to complete at least two courses (6 credits) of French at the 300-level prior to studying abroad in order to maximize proficiency gains abroad.

Students who cannot meet the study abroad requirement will need to complete an alternative plan approved by a French advisor.

### French Minor

#### Requirements for a Minor in French

Students choosing French as a minor program must complete a minimum of 21 hours of French beyond the FRE 201 course, including FRE 202 or its equivalent and the French core curriculum (FRE 315, FRE 316, FRE 317, and FRE 318). Six credits of electives beyond the core must be completed at the 300 or 400 level.

#### Required Courses

- FRE 202 - Intermediate French II: Language and Culture Credits: 4
- French core curriculum (12 credits):
  - FRE 315 - French Conversation Credits: 3
  - FRE 316 - Advanced French Grammar Credits: 3
  - FRE 317 - Writing in French Credits: 3
  - FRE 318 - Introduction to French Literature Credits: 3
- Two electives at the 300- or 400-level. (6 credits)

#### Alternative Path for Students who Start the Program at the 300 level (21 credits)

- French Core Curriculum (12 credits):
  - FRE 315 - French Conversation Credits: 3
  - FRE 316 - Advanced French Grammar Credits: 3
  - FRE 317 - Writing in French Credits: 3
  - FRE 318 - Introduction to French Literature Credits: 3
- Three electives at the 300- or 400-level. (6 credits)

#### Requirements for a French Secondary Education Minor

Students choosing French as a secondary education minor must complete 24 hours of French beyond the FRE 202 course. Note: FRE 202 does not count toward the secondary education minor.

#### Required courses:

- French core curriculum:
  - FRE 315 - French Conversation Credits: 3
  - FRE 316 - Advanced French Grammar Credits: 3
  - FRE 317 - Writing in French Credits: 3
  - FRE 318 - Introduction to French Literature Credits: 3
- FRE 332 - Introduction to French Linguistics Credits: 3
- FRE 334 - Foreign Language Acquisition and Pedagogy Credits: 3
- Two electives at the 300- or 400-level.

#### Study Abroad Requirement

Students with a French secondary education major or minor must study abroad in a French-speaking country for a minimum of one semester (12-15 credits in French at the 300- or 400-level) in a departmentally approved program. Courses taken during the study abroad semester normally fulfill some of the courses required for the major, but these need to be determined ahead of time by a French advisor. Advising is critical. Students interested in pursuing a teaching degree in French are urged to meet with a French advisor as early as possible in their program. Students are advised to complete at least 2 courses (6 credits) of French at the 300-level prior to studying abroad in order to maximize proficiency gains abroad. Students who cannot meet the study abroad requirement will need to complete an alternative plan approved by a French advisor.

#### Oral Proficiency Requirement

It is a requirement of the Michigan Department of Education and the GVSU College of Education that teacher candidates reach the Advanced-Low level on the Oral Proficiency Interview (OPI) in French before Student Teaching. The OPI should be taken right away after returning from a study abroad program. Information sessions on the OPI and other requirements for certification are provided each semester.

### Geography and Sustainable Planning - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/geography](http://www.gvsu.edu/geography)

Contact: Phone: (616) 331-3065; Fax: (616) 331-8635;  
email: [gpydept@gvsu.edu](mailto:gpydept@gvsu.edu)

Geography and Sustainable Planning faculty: Full Professors: Roy Cole, Elena Lioubimtseva; Associate Professors: Jim Penn, Wanxiao Sun, Jeroen Wagendorp, Gang Xu; Assistant Professor: Kin Ma; Visiting Professor: Yanning Wei; Adjunct instructors: Michael Gutowsky, Steven Stepek, Judith Transue, Frank Wash, Jonathan Wessell.

The Department of Geography and Sustainable Planning offers the following programs:

- Bachelor of Arts and Bachelor of Science in geography, including the general geography major and three emphasis areas: geospatial technology, urban and regional planning and environment and global development
- Geographic techniques (GIS and remote sensing) minor
- Sustainable urban and regional planning minor
- Geography education at the secondary level minor (teachable minor)
- Geographic information systems technology undergraduate certificate
- Sustainable urban and regional planning undergraduate certificate

The geography and sustainable planning curriculum at GVSU integrates the natural and social sciences and geospatial technologies and offers students strong analytical and problem solving skills. Geography and sustainable planning areas offer a wide range of opportunities to people with various interest and talents focusing on finding real solutions to complex environmental, economic and social problems and issues (such as food and water security, sustainable economic growth, environmental justice, climate change resiliency and adaptations, etc.). Students majoring in geography will develop strong analytical, research, civic engagement and communication skills and master sophisticated technologies such as Geographic Information Systems (GIS), remote sensing, Global Positioning Systems (GPS), climate and environmental modeling, digital image processing and computer cartography. The department offers 40 different courses, including faculty-led international summer school in urban and regional planning in the Netherlands.

Geography and Sustainable Planning department faculty are experts in sustainable development and global change, geospatial technologies (GIS, satellite remote sensing, and digital image processing), sustainable urban and regional planning, environmental, cultural, and regional geography. Our flexible interdisciplinary programs provide courses of study focused on geospatial technologies (computer cartography, GIS, satellite remote sensing, and digital image processing), sustainable urban and regional planning, environment and global, and regional development. Due to the revolution in geospatial information technologies and spatial data analysis, geographers are very much in demand in the job market and in graduate school. Please consult the department's website information about employment opportunities, scholarships, and grants.

#### Degrees Offered

- B.A. and B.S. in geography
- B.A. and B.S. in geography: geospatial technology emphasis
- B.A. and B.S. in geography: urban and regional planning emphasis
- B.A. and B.S. in geography: environment and global development

#### Three minors:

- Sustainable urban and regional planning,
- Geographical techniques, and
- Geography education at the secondary level (teachable minor). A teachable major with elementary and secondary education is also offered in social studies major with a geography emphasis.

#### Two certificates:

- Geographic information systems technology certificate and
- Sustainable urban and regional planning.

Available to all majors, certificate credit hours can be duplicated with a major or minor.

For more information about geography and planning degrees, please, contact Professor Elena Lioubimtseva at lioubime@gvsu.edu.

### Participating Programs

The Department of Geography and Sustainable Planning participates in the social studies major. The major in social studies is designed for students seeking teacher certification in secondary or middle school social studies or in elementary education. The major includes a minimum of 42 credit hours in economics, geography, history, and political science. Students seeking teacher certification also complete an appropriate minor and the professional program offered by the College of Education. The social studies major meets State of Michigan content standards for teacher preparation in social studies, which require at least six credit hours and two courses in each of the four disciplines and at least 18 credits and six courses in one of the four areas.

### Honors Organizations

Lambda Omega is GVSU's Chapter of the Gamma Theta Upsilon, the International Geography Honor Society. Gamma Theta Upsilon (GTU) is an international honor society in geography. Gamma Theta Upsilon was founded in 1928 and became a national organization in 1931. Members of GTU have met academic requirements and share a background and interest in geography. GTU chapter activities support geography knowledge and awareness.

The GTU's goals:

1. To further professional interest in Geography by affording a common organization for those interested in the field.
2. To strengthen student and professional training through academic experiences in addition to those of the classroom and laboratory.
3. To advance the status of geography as a cultural and practical discipline for study and investigation.
4. To encourage student research of high quality, and to promote an outlet for publication.
5. To create and administer funds for furthering graduate study and/or research in the field of geography.
6. To encourage members to apply geographic knowledge and skills in service to humankind.

See [www.gammathetaupsilon.org](http://www.gammathetaupsilon.org).

## Bachelor of Arts or Bachelor of Science in Geography

### Requirements for a Major in Geography

#### Core Courses

All geography majors, regardless of the area of emphasis, are required to complete the following core courses (12 credit hours):

- GPY 100 - Physical and Environmental Geography Credits: 3
- GPY 200 - Computer Cartography Credits: 3
- GPY 220 - Cultural Geography Credits: 3
- GPY 495 - Senior Thesis Credits: 3

#### B.A. or B.S. Degree Requirements

Students pursuing the B.A. degree requirements must satisfy the third semester proficiency (through the 201 level) in one of the classical or modern languages offered by the Classics or Modern Languages and Literature Departments.

Students pursuing the B.S. degree requirements must complete the following courses:

- STA 215 - Introductory Applied Statistics Credits: 3
- GPY 307 - Introduction to Geographic Information Systems Credits: 3

And **one** of the following courses:

- GPY 407 - Advanced GIS Credits: 4
- GPY 410 - Landscape Analysis Credits: 3
- GPY 412 - Global Environmental Change Credits: 3
- GPY 470 - Digital Image Processing Credits: 3

**B.A. or B.S. General Geography Degree Without an Emphasis**  
Students pursuing the general geography degree without an emphasis, select their elective courses in consultation with their academic advisors to acquire significant transdisciplinary breadth, including courses in geospatial technology, urban and regional planning, environmental geography, sustainability science, and regional and global human development.

- GPY 235 - Geography for a Changing World Credits: 3
- GPY 345 - The Geography and Land Use Management of Michigan and the Great Lakes Area Credits: 3
- GPY 350 - Geopolitics, Energy and Environment of Russia and Central Eurasia Credits: 3
- GPY 351 - Geography of Africa Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- GPY 353 - Geography of the United States and Canada Credits: 3
- GPY 354 - Geography and Globalization of Asia Credits: 3
- GPY 355 - Geography of Southwest Asia (The Middle East). Credits: 3
- GPY 356 - The Geography, Culture and Land Use Management of Europe Credits: 3
- GPY 361 - People, Environment, and Development in the Amazon Credits: 3
- GPY 381 - Study Abroad I Credits: 3 to 9

And at least 15 credits of the following topical geography and planning courses, selected from:

- GPY 101 - Sustainability and Place Credits: 1
- GPY 209 - Introduction to Urban and Regional Planning Credits: 3
- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GPY 310 - Land Use Planning Credits: 3
- GPY 312 - Urban and Regional Environmental Planning Credits: 3
- GPY 314 - Land Use and Planning Law Credits: 3
- GPY 316 - Introduction to Transportation Planning Credits: 3
- GPY 324 - Urbanization Credits: 3
- GPY 335 - Globalization and Development Credits: 3
- GPY 362 - Farmers, Crops, and Our Challenging Agricultural World Credits: 3
- GPY 363 - World Forests and Their Use Credits: 3
- GPY 365 - GIS for Economic and Business Decision-Making Credits: 3
- GPY 370 - Introduction to Remote Sensing Credits: 3
- GPY 380 - Special Topics in Geography Credits: 3
- GPY 385 - GIS in Urban and Regional Analysis Credits: 3
- GPY 399 - Independent Readings Credits: 1 to 3
- GPY 407 - Advanced GIS Credits: 4
- GPY 410 - Landscape Analysis Credits: 3
- GPY 412 - Global Environmental Change Credits: 3
- GPY 470 - Digital Image Processing Credits: 3
- GPY 490 - Internship Credits: 1 to 9
- GPY 499 - Independent Research Credits: 1 to 3

No more than six hours of GPY 399 and GPY 499 combined may count toward the major.

#### B.A. or B.S. in Geography with an Emphasis in Geospatial Technology

In addition to the geography major core courses (12 credits), as previously specified, students pursuing a B.A. or B.S. in geography with an emphasis in geospatial technology are required to take the following GIS and remote sensing courses (13 credits):

- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GPY 370 - Introduction to Remote Sensing Credits: 3
- GPY 407 - Advanced GIS Credits: 4
- GPY 470 - Digital Image Processing Credits: 3

## Geography and Sustainable Planning

And one of the following GIS applications courses:

- GPY 365 - GIS for Economic and Business Decision-Making Credits: 3
- GPY 385 - GIS in Urban and Regional Analysis Credits: 3

And take at least six nonduplicated credits of any upper-level (300 or 400-level) geography and sustainable planning courses. These may include independent studies, internships, and study abroad courses.

### B.A. or B.S. in Geography with an Emphasis in Urban and Regional Planning

In addition to the geography major core courses (12 credits), as previously specified, students pursuing a B.A. or B.S. in geography with an emphasis in urban and regional planning are required to take the following fundamental urban and regional planning courses (6 credits):

- GPY 209 - Introduction to Urban and Regional Planning Credits: 3
- GPY 310 - Land Use Planning Credits: 3

And take at least six credits of the following planning courses:

- GPY 312 - Urban and Regional Environmental Planning Credits: 3
- GPY 314 - Land Use and Planning Law Credits: 3
- GPY 316 - Introduction to Transportation Planning Credits: 3
- GPY 385 - GIS in Urban and Regional Analysis Credits: 3

And take at least seven nonduplicated credits from the following courses related to sustainable planning:

- GPY 101 - Sustainability and Place Credits: 1
- GPY 324 - Urbanization Credits: 3
- GPY 345 - The Geography and Land Use Management of Michigan and the Great Lakes Area Credits: 3
- GPY 356 - The Geography, Culture and Land Use Management of Europe Credits: 3
- GPY 381 - Study Abroad I Credits: 3 to 9
- GPY 410 - Landscape Analysis Credits: 3

And take at least six nonduplicated credits of any upper-level (300 or 400) geography and planning courses. These may include independent studies, internships, and study abroad courses.

### B.A. or B.S. in Geography with an Emphasis in Environment and Global Development

In addition to the geography major core courses (12 credits), as previously specified, students pursuing a B.A. or B.S. in geography with an emphasis in environment and global development are required to take the following fundamental courses on global development and environmental changes (9 credits):

- GPY 235 - Geography for a Changing World Credits: 3
- GPY 335 - Globalization and Development Credits: 3
- GPY 412 - Global Environmental Change Credits: 3

And complete at least six credits of the following environmental courses on environmental sustainability:

- GPY 312 - Urban and Regional Environmental Planning Credits: 3
- GPY 362 - Farmers, Crops, and Our Challenging Agricultural World Credits: 3
- GPY 363 - World Forests and Their Use Credits: 3

And at least four credits from the following courses on the regional patterns of environment and development:

- GPY 101 - Sustainability and Place Credits: 1
- GPY 345 - The Geography and Land Use Management of Michigan and the Great Lakes Area Credits: 3
- GPY 350 - Geopolitics, Energy and Environment of Russia and Central Eurasia Credits: 3
- GPY 351 - Geography of Africa Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- GPY 353 - Geography of the United States and Canada Credits: 3
- GPY 354 - Geography and Globalization of Asia Credits: 3
- GPY 355 - Geography of Southwest Asia (The Middle East). Credits: 3
- GPY 356 - The Geography, Culture and Land Use Management of Europe Credits: 3

- GPY 361 - People, Environment, and Development in the Amazon Credits: 3

And at least six nonduplicated credits of any upper-level (3xx or 4xx-level) geography and sustainable planning courses. These may include independent studies, internships, and study abroad courses.

### General Education

In addition to the geography major requirements, all GVSU students must complete the university general education requirements. Please note that some geography courses count for one or more general education categories (foundations, cultures, and issues). Please see your advisor and the Grand Valley general education program requirements if you have any questions about course overlaps.

All Grand Valley students are required to fulfill WRT 150 (first-year composition) and two supplemental writing skills classes (SWS) with a grade not lower than C before graduation. GPY 495 - Senior Thesis is an SWS course.

### Suggested Order of Coursework for a Major in Geography

Suggested sample curriculum for a major in geography (this is an example only, please see your advisor and follow the catalog to develop coursework appropriate for your interests and/or area of emphasis).

#### First Year, Fall Semester

- GPY 100 - Physical and Environmental Geography
- GPY 220 - Cultural Geography
- WRT 150 - Strategies in Writing
- General education Foundations course

#### First Year, Winter Semester

- GPY 200 - Computer Cartography
- GPY 235 - Geography for a Changing World
- MTH 110 - Algebra
- General education Foundations course

#### Second Year, Fall Semester

- GPY 209 - Introduction to Urban and Regional Planning
- STA 215 - Introductory Applied Statistics
- General education SWS course
- General education Foundations course

#### Second Year, Winter Semester

- GPY 307 - Introduction to Geographic Information Systems
- GPY 310 - Land Use Planning
- GPY 354 - Geography and Globalization of Asia
- General education Cultures course

#### Third Year, Fall Semester

- GPY 324 - Urbanization
- GPY 350 - Geopolitics, Energy and Environment of Russia and Central Eurasia
- GPY 370 - Introduction to Remote Sensing
- General education Issues course

#### Third Year, Winter Semester

- GPY 312 - Urban and Regional Environmental Planning
- GPY 356 - The Geography, Culture and Land Use Management of Europe
- GPY 407 - Advanced GIS
- General education Issues course 2

#### Fourth Year, Fall Semester

- GPY 345 - The Geography and Land Use Management of Michigan and the Great Lakes Area
- GPY 362 - Farmers, Crops, and Our Challenging Agricultural World
- GPY 363 - World Forests and Their Use
- GPY 410 - Landscape Analysis

#### Fourth Year, Winter Semester

- GPY 412 - Global Environmental Change
- GPY 470 - Digital Image Processing
- GPY 490 - Internship
- GPY 495 - Senior Thesis

## Sustainable Urban and Regional Planning Minor

The sustainable urban and regional planning minor is housed within the department of Geography and Sustainable Planning ([www.gvsu.edu/geography](http://www.gvsu.edu/geography)) and focuses on optimal and sustainable land use and development in urban, suburban, and rural areas in the U.S. and worldwide. Planners create better living environments for all by designing smart and integrated land use systems. Our graduates find employment in public, private, and governmental institutions.

### Reasons to Study Sustainable Urban and Regional Planning

The minor is a valuable addition to a student's transcript that points to their concentration in the planning field.

Sustainable urban and regional planning students:

- Gain an understanding of planning terms and concepts, which equips them to enter conversations about local planning and zoning, and qualifies them for internships and jobs
- Build a strong foundation in the history and theory of planning and a depth of understanding that informs their analyses of local issues.
- Participate in regional and state planning conferences and are exposed to frequent guest speakers, giving them contact with real-world practitioners in the field of planning.
- Are in contact with a broad community of alumni in planning related fields — people our undergraduates come to know on a first name basis — offering our graduates a ready-made network for job-hunting advice.

Concepts and skills in sustainable urban planning are applicable to a variety of specialties:

- Sustainable urban and regional planning
- Land-use planning
- Urban development and housing
- Transportation planning
- Environmental planning
- Environmental policy and planning law

### Requirements for a Minor in Urban and Regional Planning

Students who minor in sustainable urban and regional planning are required to complete a minimum of 24 credit hours from the courses that follow. These 24 hours or eight courses are to be completed in two separate groupings. Group one consists of a six-credit-hour core: GPY/PA 209 and GPY 310/PA 313. Group two consists of 18 hours or six courses. Students are encouraged to meet with their advisor to optimize course selection.

#### Group One

- GPY/PA 209 - Introduction to Urban and Regional Planning Credits: 3
- GPY 310 /PA 313 - Land Use Planning Credits: 3

#### Group Two: Select six courses or 18 credit hours

- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GPY 308/PA 307 - Local Politics and Administration Credits: 3
- GPY/PA 312 - Urban and Regional Environmental Planning Credits: 3
- GPY/PA 314 - Land Use and Planning Law Credits: 3
- GPY/PA 316 - Introduction to Transportation Planning Credits: 3
- GPY/PA 324 - Urbanization Credits: 3
- GPY/MKT/PA 365 - GIS for Economic and Business Decision Making Credits: 3
- GPY 381/PA 380 - Study Abroad(Summer II in the Netherlands) Credits: 3
- GPY/ECO/PA 385 - GIS in Urban and Regional Analysis Credits: 3
- GPY/ENS/PA 410 - Landscape Analysis Credits: 3
- GPY/ENS 412 - Global Environmental Change Credits: 3
- PA 495 - Community Analysis (Capstone) Credits: 3
- GPY 496 - Field Research Project Credits: 3

## Geographic Techniques Minor

The Geographic Techniques minor is housed within the Department of Geography and Sustainable Planning ([www.gvsu.edu/geography](http://www.gvsu.edu/geography)) and focuses on expertise in geographic information systems (GIS), environmental remote sensing, and manipulation of spatial digital data. It allows for the analysis of complex geographic relationships, essential to understanding underlying social, economic, political, and/or environmental processes.

### Reasons to Take Geographic Techniques Minor

- **An emerging field.** Geospatial technology is one of the most important emerging fields in the United States according to the U.S. Department of Labor.
- **Marketability.** Geospatial technology offers top jobs in a wide variety of sectors.
- **A competitive edge.** Studying these “smart” technologies will give students an edge over peers in the job market.
- **Practical application.** Students will learn practical skills that will benefit their future careers.
- **Flexibility.** Any major combined with the geospatial technology creates a new hybrid skill set.

Our alumni have found rewarding careers such as:

- Environmental specialists
- Transportation analysts
- Urban planners
- Business GIS analysts
- Regional intelligence analysts
- Lead digital mappers
- And in international organizations

### Topics

- Computer cartography
- Geographic information systems
- Remote sensing
- Digital image processing
- Environmental, social and business applications

### Requirements for a Minor in Geographic Techniques

Students will complete a minimum of 25 credit hours and gain an enviable — and marketable — set of “smart” tools. This minor is skills-oriented and compliments a wide variety of majors. Please, contact the Geography and Sustainable Planning department if you have questions about the course order and possible substitutions

#### Required Courses

- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 230 - Hardware and Software Credits: 3
- GPY 200 - Computer Cartography Credits: 3
- GPY 307 - Introduction to Geographic Information Systems Credits: 3

#### Electives

- CIS 162 - Computer Science I Credits: 4
- CIS 260 - Application Development in Visual Basic Credits: 4
- GPY 370 - Introduction to Remote Sensing Credits: 3
- GPY 407 - Advanced GIS Credits: 4
- GPY 470 - Digital Image Processing Credits: 3
- NRM 250 - Resource Measurement and Maps Credits: 3
- NRM 395 - GIS Applications in Resource Management Credits: 3

## Geography - Teacher Certification Minor

Expertise in geography is important to all elementary and secondary education students. This minor provides education students with a foundation in human and physical geography, a strong understanding of concepts and principles of global and regional geography, a deep content understanding of regions of the world, and a basic competency in the use of geographic techniques.

## Geography and Sustainable Planning

### Requirements for a Minor in Geography - Teacher Certification

Students seeking certification to teach geography at the secondary level are required to complete

- Three core courses
- Four regional studies courses
- One methods course from the list of electives
- Those students pursuing a GPY teachable minor must complete SST 310 - Teaching Social Studies: Secondary Credits: 3

Core Courses:

- GPY 100 - Physical and Environmental Geography Credits: 3
- GPY 220 - Cultural Geography Credits: 3
- SST 310 - Teaching Social Studies: Secondary Credits: 3

Required Regional Studies Courses

- GPY 235 - Geography for a Changing World Credits: 3
- GPY 353 - Geography of the United States and Canada Credits: 3
- GPY 345 - The Geography and Land Use Management of Michigan and the Great Lakes Area Credits: 3

And one course from the following:

- GPY 350 - Geopolitics, Energy and Environment of Russia and Central Eurasia Credits: 3
- GPY 351 - Geography of Africa Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- GPY 354 - Geography and Globalization of Asia Credits: 3
- GPY 355 - Geography of Southwest Asia (The Middle East). Credits: 3
- GPY 356 - The Geography, Culture and Land Use Management of Europe Credits: 3
- GPY 362 - Farmers, Crops, and Our Challenging Agricultural World

Methods Courses

Choose one:

- GPY 200 - Computer Cartography Credits: 3
- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GPY 209 - Introduction to Urban and Regional Planning Credits: 3
- GPY 370 - Introduction to Remote Sensing Credits: 3
- NRM 250 - Resource Measurement and Maps Credits: 3

## Geographic Information Systems (GIS) Technology - Certificate

The GIS technology certification program is housed with the department of Geography and Sustainable Planning ([www.gvsu.edu/geography](http://www.gvsu.edu/geography)). Geographic Information Systems (GIS) are used to map, model, query, synthesize, and analyze big spatial data according to their location. GIS benefits organizations in almost every industry. There is growing interest in the economic, environmental, and strategic planning value of GIS.

Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree.

The GIS Technology certificate is designed for GVSU students who want to add geospatial technology skills to their major. Students learn practical applications of geospatial technologies and develop working competency in GIS software, such as ESRI ArcGIS, Business Analyst, and Edras Imagine. Open for all majors. For more information see <http://www.gvsu.edu/geography/gis-certificate-47.htm>.

Program coordinator: Professor Gang Xu, Ph.D., department of Geography and Sustainable Planning.

### Reasons to Study GIS Technology

- **An emerging field.** Geospatial technology is one of the most important emerging fields in the United States according to the U.S. Department of Labor.

- **Marketability.** GIS competency offers top jobs in a wide variety of sectors.
- **A competitive edge.** Studying these technologies will give students an edge over peers in the current job market.
- **Practical application.** Students will learn practical skills that will benefit their future careers.
- **Flexibility.** Students can attend full or part time. Any major combined with this certificate creates a new hybrid skill set.
- **Affordability.** An extra credential on your official transcript with little to no additional cost.

Our alumni have found rewarding careers such as environmental specialists, transportation analysts, urban planners, business GIS analysts, regional intelligence analysts, lead digital mappers, and as county GIS directors.

### Coursework

Students will complete a minimum of 13 credit hours to receive certification in GIS. Up to six credits can be transferred from another institution (subject to course content approval).

### Required Courses

- GPY 200 - Computer Cartography Credits: 3
- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GPY 407 - Advanced GIS Credits: 4

### Electives

- GPY 365 - GIS for Economic and Business Decision-Making Credits: 3
- GPY 370 - Introduction to Remote Sensing Credits: 3
- NRM 395 - GIS Applications in Resource Management Credits: 3
- GEO 425 - GIS Applications in Geology Credits: 3
- GPY 470 - Digital Image Processing Credits: 3
- PA 644 - GIS in the Public Service Credits: 3

Natural resource management majors pursuing the NRM resource analysis methods emphasis may substitute the following for GPY 200:

- NRM 250 - Resource Measurement and Maps Credits: 3
- NRM 395 - GIS Applications in Resource Management Credits: 3
- NRM 450 - Applied Spatial Analysis of Natural Resources Credits: 3

### Topics

- GIS science and technology
- Remote sensing (satellite image interpretation)
- Advanced GIS
- Environmental, social, and business applications of GIS
- Spatial analysis techniques
- Computer mapping

## Certificate in Sustainable Urban and Regional Planning

The certification program in Sustainable Urban and Regional Planning is housed within the department of Geography and Sustainable Planning ([www.gvsu.edu/geography](http://www.gvsu.edu/geography)). This applied program offers practical tools and strategies to students interested in smart urban development, land-use planning, transportation, green architecture and design, and applications of geographic techniques in planning and urban development. Open for all majors.

Program coordinator: Professor Jeroen Wagendorp, Ph.D., department of Geography and Sustainable Planning.

### Reasons to Study Sustainable Urban and Regional Planning

The certificate in sustainable urban and regional planning gives students additional expertise and opportunities for applying geographic understandings and skills in the wider community.

Our students:

- Gain an understanding of planning terms and concepts, which equips them to enter conversation about local planning and zoning, and qualifies them for internship and jobs.
- Build a strong foundation in the history and theory of planning and a depth of understanding that informs their analyses of local issues.
- Participate in regional and state planning conferences and are exposed to frequent guest speakers, giving them contact with real-world practitioners in the field of planning.
- Are in contact with a broad community of alumni in planning related fields - people our undergraduates come to know on a first name basis - offering our graduates a ready-made network for job-hunting and advice.

Students who have graduated from GVSU with the sustainable urban and regional planning certificate have found employment in economic development, housing, real estate, transportation planning, watershed management, land-use planning, and environmental planning.

### Requirements for a Certificate in Sustainable Urban and Regional Planning

Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. Students who seek a certificate in sustainable urban and regional planning are required to complete GPY/PA 209, a course that should be taken first. GPY 209 is followed by three or more courses for a minimum of 12 credit hours from the electives listed as follows.

Required:

- GPY/PA 209 - Introduction to Urban and Regional Planning Credits: 3

Electives:

- GPY 101 - Sustainability and Place Credits: 1
- GPY 310/PA 313 - Land Use Planning Credits: 3
- GPY/PA 312 - Urban and Regional Environmental Planning Credits: 3
- GPY/PA 316 - Introduction to Transportation Planning Credits: 3
- GPY/PA 324 - Urbanization Credits: 3
- GPY/MKT /PA 365 - GIS for Economic and Business Decision Making Credits: 3
- GPY 381/PA 380 - Study Abroad (Summer II in the Netherlands) Credits: 3
- GPY/ECO/PA 385 - GIS in Urban and Regional Analysis Credits: 3
- GPY/ENS/PA 410 - Landscape Analysis Credits: 3
- GPY 496 - Field Research Project Credits: 3

## Geology - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/geology](http://www.gvsu.edu/geology)

Geology is the study of the earth — its composition, processes, and history. The great outdoors is the laboratory of geology, where one may study landforms, rock and mineral deposits, fossils, folds, faults, glaciers, groundwater, and the processes that have shaped the earth and that affect its inhabitants. Geology also provides context for understanding Earth's energy, water, and mineral resources. A relatively young science, geology continues on the threshold of new discovery as geoscientists explore the frontiers of the continents, oceans, atmosphere, and planets. The geology department offers B.S. degrees in geology, geology-chemistry, and earth science, and minors in geology and earth science. The B.S. degrees in geology and geology-chemistry prepare students for graduate study in the geological sciences and work in industry. As terminal degrees, they can lead to a variety of careers, including environmental technology, mineral

and energy resource exploration, science writing, and business. The B.S. degree in earth science prepares students to teach in the secondary grades. Michigan teacher certification also requires completion of the College of Education professional program and a minor area of study. The minor program in geology is designed to provide a supportive second discipline for students in a variety of majors, including other sciences or engineering, anthropology, business, or law. The earth science minor is for students seeking certification as secondary school teachers, and is also a suitable minor for such majors as anthropology, geography, and natural resources management.

## Bachelor of Science in Geology

### Requirements for a Major in Geology

Completion of a B.S. in geology requires the following:

#### 1. General Education Requirements

As identified in the General Academic Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog.

#### 2. Geology Core Courses

Requires 46-47 semester hours of geology courses with a minimum overall GPA of C (2.0):

Core geology courses (33 semester hours):

- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 4
- GEO 175 - Research Tools for Geosciences Credits: 1
- GEO 214 - Solid Earth Materials and Systems Credits: 4
- GEO 220 - Earth Surface Materials and Systems Credits: 4
- GEO 311 - Structural Geology Credits: 4
- GEO 312 - Sedimentation-Stratigraphy Credits: 4
- GEO 485 - Geology Research and Writing Seminar Credits: 1
- GEO 486 - Geology Reading Seminar Credits: 1
- Geology Field Requirement (Credits: 6)

Students must complete one of the following options that includes a summer field camp in geology (taught by another college or university) that is approved as GEO 493. Credits: 3-6

- GEO 315 - Geological Field Methods (Credits: 3)  
AND an approved Field camp - GEO 493 - Applied Field Geology (Credits: 3)
- Approved Field camp - GEO 493 - Applied Field Geology (Credits: 6)

#### 3. Emphases

Requires 13-14 semester hours from either the geology B.S. or the geology B.S. environmental emphasis.

##### Geology B.S.

- GEO 314 - Petrography: Mineral and Rock Analysis Credits: 2
- One of the following: (Credits 2 or 3)
  - GEO 414 - Advanced Petrology Credits: 2
  - GEO 411 - Global Tectonics Credits: 3
- GEO electives - Three Geology courses at the 300- or 400-level (geology Issues courses cannot count toward the geology major). At least 9 semester credits

##### Geology B.S. Environmental Emphasis

- GEO 320 - Geomorphology Credits: 4
- GEO 440 - Geohydrology Credits: 3

Choose one from:

- GEO 420 - Glacial and Quaternary Geology Credits: 4
- GEO 425 - GIS Applications in Geology Credits: 3
- GEO 430 - Oceanography Credits: 3
- GEO 445 - Introduction to Geochemistry Credits: 3
- GEO 470 - Geophysics Credits: 4
- GEO elective: One geology course at the 300- or 400-level (geology Issues courses cannot count toward the geology major). At least three semester credits.

## Geology

### 4. Required Cognate Science Courses

Requires 31-33 semester hours of cognate science courses in chemistry, physics, mathematics, statistics, computer science, and/or geographic information systems as follows.

#### a. Two Chemistry Courses

- CHM 115 - Principles of Chemistry I
- CHM 116 - Principles of Chemistry II

#### b. Two Physics Courses

One of the following pairs:

##### **EITHER**

- PHY 220 - General Physics I Credits: 5
- AND** PHY 221 - General Physics II Credits: 5

##### **OR**

- PHY 230 - Principles of Physics I Credits: 5
- AND** PHY 231 - Principles of Physics II Credits: 5

#### c. Basic Mathematics Courses

- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3

#### d. Two Additional Mathematics, Statistics, Computer Science, or Geographic Information Systems Courses

Choose two courses from **one** of the following options:

##### **EITHER Calculus**

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4

##### **OR Statistics**

- STA 215 - Introductory Applied Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3

##### **OR Computer Science**

**Chose one course from each group of CIS courses:**

##### **Group 1**

- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 161 - Computational Science Credits: 3
- CIS 162 - Computer Science I Credits: 4

##### **Group 2**

- CIS 163 - Computer Science II Credits: 4
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 260 - Application Development in Visual Basic Credits: 4

##### **OR Geographic Information Systems (GIS)**

- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- AND** one of the following:
- GPY 407 - Advanced GIS Credits: 4
- GEO 425 - GIS Applications in Geology Credits: 3
- NRM 395 - GIS Applications in Resource Management Credits: 3

## Suggested Order of Coursework for a Major in Geology

### First Year

Fall Semester Credits: 15

- CHM 115 - Principles of Chemistry I Credits: 4
- GEO 111 - Exploring the Earth Credits: 4
- MTH 122 - College Algebra Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

Winter Semester Credits: 15

- General education courses Credits: 6
- CHM 116 - Principles of Chemistry II Credits: 5
- GEO 112 - Earth History Credits: 4

### Second Year

Fall Semester Credits: 14-16

- General education courses Credits: 6
- Geology elective Credits: 3
- GEO 214 - Solid Earth Materials and Systems Credits: 4
- OR** GEO 220 - Earth Surface Materials and Systems Credits: 4
- GEO 175 - Research Tools for Geosciences Credits: 1
- MTH/CIS/STA Elective Credits: 3-5

Winter Semester Credits: 13-17

- General education courses Credits: 6-9
- GEO 214 - Solid Earth Materials and Systems Credits: 4
- OR** GEO 220 - Earth Surface Materials and Systems Credits: 4
- MTH/CIS/STA Elective Credits: 3-5

### Geology BS Option

#### Third Year

Fall Semester Credits: 15

- General education course Credits: 3
- GEO 311 - Structural Geology Credits: 4
- GEO 315 - Geological Field Methods Credits: 3
- Physics Sequence Credits: 5

Winter Semester Credits: 14

- General education course Credits: 3
- GEO 312 - Sedimentation-Stratigraphy Credits: 4
- GEO 314 - Petrography: Mineral and Rock Analysis Credits: 2
- Physics Sequence Credits: 5

Summer Field Course Credits: 3-6

#### Fourth Year

Fall Semester Credits: 13

- Geology elective Credits: 3-4
- General education course Credits: 3-6
- GEO 486 - Geology Reading Seminar Credits: 1
- Elective Credits: 3

Winter Semester Credits: 13

- General education course Credits: 3
- Geology elective Credits: 3
- Electives Credits: 6
- GEO 485 - Geology Research and Writing Seminar Credits: 1
- GEO 411 - Global Tectonics Credits: 3

### Geology BS - Environmental Emphasis Option

#### Third Year

Fall Semester Credits: 16

- General education course Credits: 3
- GEO 311 - Structural Geology Credits: 4
- GEO 320 - Geomorphology Credits: 4
- OR** GEO 440 - Geohydrology Credits: 3
- Physics Sequence Credits: 5

Winter Semester Credits: 14-16

- General education course Credits: 3
- Geology elective Credits: 2-4
- GEO 312 - Sedimentation-Stratigraphy Credits: 4
- Physics Sequence Credits: 5

Summer Field Course Credits: 3-6

#### Fourth Year

Fall Semester Credits: 12-15

- GEO 320 - Geomorphology Credits: 4
- OR** GEO 440 - Geohydrology Credits: 3
- GEO 486 - Geology Reading Seminar Credits: 1
- General education course Credits: 3-6
- Geology elective Credits: 3-4

Winter Semester Credits: 13

- General education course Credits: 3
- Geology elective Credits: 3
- Electives Credits: 6
- GEO 485 - Geology Research and Writing Seminar Credits: 1

## Geology Minor

### Requirements for a Minor in Geology

Completion of a minor in geology requires 25-26 credits including the following.

- GEO elective: One course at the 300 or 400 level (3 to 4 credits)
- Geology Issues courses (300-level) cannot count toward the geology minor.
- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 4
- GEO 175 - Research Tools for Geosciences Credits: 1
- GEO 214 - Solid Earth Materials and Systems Credits: 4
- GEO 220 - Earth Surface Materials and Systems Credits: 4
- GEO 311 - Structural Geology Credits: 4
- GEO 486 - Geology Reading Seminar Credits: 1

## Bachelor of Science in Geology-Chemistry

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

### Requirements for a Geology-Chemistry Major

Completion of a major in dual geology-chemistry requires the following.

#### 1. General University Degree Requirements

As identified in the general Academic Regulations section of the Grand Valley State University Graduate and Undergraduate Catalog.

#### 2. Geology Courses

Requires 34 semester credit hours of geology courses with a minimum overall GPA of C (2.0).

- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 4
- GEO 175 - Research Tools for Geosciences Credits: 1
- GEO 214 - Solid Earth Materials and Systems Credits: 4
- GEO 220 - Earth Surface Materials and Systems Credits: 4
- GEO 311 - Structural Geology Credits: 4
- GEO 312 - Sedimentation-Stratigraphy Credits: 4
- GEO 445 - Introduction to Geochemistry Credits: 3
- GEO 485 - Geology Research and Writing Seminar Credits: 1
- GEO 486 - Geology Reading Seminar Credits: 1
- GEO electives: At least one course at the 300- or 400-level
- Geology Issues courses cannot count toward the geology major. At least three semester credits.

#### 3. Chemistry Courses

Requires 21 semester credit hours of chemistry courses with a minimum overall GPA of C (2.0).

- CHM 115 - Principles of Chemistry I Credits: 4
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 325 - Instrumental Analysis Credits: 4
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1

#### 4. Mathematics Courses

Requires four semester credit hours.

- MTH 201 - Calculus I Credits: 4

#### 5. Physics Course

Requires five semester credit hours.

- PHY 230 - Principles of Physics I Credits: 5

### Suggested Order of Coursework for a Major in Geology-Chemistry

The CLAS Academic Advising Center has geology-chemistry curriculum guides for the major.

## Bachelor of Arts in German

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

### Requirements for a Major in German

Students majoring in German are required to complete at least 33 hours beyond the 200-level, including:

- GER 301 - German Composition Credits: 3
- GER 302 - German Conversation Credits: 3

- A 400-level course Credits: 3
- GER 495 - Advanced Topics in German (Capstone) Credits: 3

Students select one of three emphases: culture, linguistics, or literature.

#### Culture Emphasis

For the culture emphasis, students must complete **two** of the following (6 credits):

- GER 303 - Introduction to German Literature I Credits: 3
- GER 311 - The Long Nineteenth Century Credits: 3
- GER 312 - Contemporary German Culture Credits: 3
- GER 315 - German Cinema Credits: 3

#### Linguistics Emphasis

For the linguistics emphasis, students must complete **two** of the following (6 credits):

- GER 321 - Improving German Pronunciation Credits: 3
- GER 322 - Introduction to German Linguistics Credits: 3
- GER 421 - History of the German Language Credits: 3

#### Literature Emphasis

For the literature emphasis, students must complete **two** of the following (6 credits):

- GER 303 - Introduction to German Literature I Credits: 3
- GER 304 - Introduction to German Literature II Credits: 3
- GER 401 - Modern German Literature Credits: 3
- GER 402 - German Authors Credits: 3

#### Electives

In addition to the previously listed, majors must complete three elective courses (nine credits) at the 300- or 400-level, which may include additional courses in culture, linguistics, and literature, or some of the following:

- GER 331 - Business German Credits: 3
- GER 341 - Advanced German Grammar Credits: 3
- GER 385 - German Language Credits: 3
- GER 386 - German Culture and Society Credits: 3

#### Additional Requirements

- The 400-level course is to be taken in the fall preceding the Capstone.
- GER 495 must be taken in the last year preceding graduation, and not before.

### Requirements for Secondary Education Major in German

Students majoring and planning for certification in German are required to complete at least 36 hours in German beyond the 200 level (GER 202), including:

- GER 301 - German Composition Credits: 3
- GER 302 - German Conversation Credits: 3
- GER 314 - Foreign Language Acquisition and Pedagogy Credits: 3
- GER 322 - Introduction to German Linguistics Credits: 3
- GER 341 - Advanced German Grammar Credits: 3
- At least one course each in culture and literature, plus one additional linguistics course Credits: 9
- A 400-level course Credits: 3
- GER 495 - Advanced Topics in German (Capstone) Credits: 3

#### Electives

In addition to the previously listed, all students must complete two elective courses (six credits) at the 300- or 400-level, which may include additional courses in culture, linguistics, and literature, or some of the following:

- GER 341 - Advanced German Grammar Credits: 3
- GER 342 - Advanced Speaking Strategies and Skills Credits: 3
- GER 385 - German Language Credits: 3
- GER 386 - German Culture and Society Credits: 3

#### Additional Requirements

- All German secondary education majors must complete an approved study-abroad program in a German-speaking country of a minimum of one semester in length. Students who cannot complete this requirement may work with a faculty advisor to complete one of several alternative programs, which may add additional credits.

## Global Studies and Social Impact

Students who have already spent considerable time abroad, especially in a German-language high school, may be exempt from the requirement. Please discuss your situation with an advisor as early in your program as possible.

- The 400-level course is to be taken in the fall preceding the Capstone.
- GER 495 must be taken in the last year preceding graduation, and not before.
- German secondary education majors must achieve a rating of at least Advanced-low on an official Oral Proficiency Interview before they may begin their Student Teaching semester.

### Requirements for Certification in Secondary Education

Students seeking teaching certification with a major or minor in German must attain a level of at least Advanced-Low in an official Oral Proficiency Interview (OPI) before applying to the College of Education. We will provide information sessions on preparing for the Oral Proficiency Interview each year.

## German Minor

### Requirements for a Minor in German

Minors must take at least 21 credits of German beyond GER 201, including:

- GER 202 - Intermediate German II: Language and Culture Credits: 4
- GER 301 - German Composition Credits: 3
- GER 302 - German Conversation Credits: 3
- Four upper-level courses, only one of which may be GER 341, GER 342, or GER 385. Credits: 12.

### Electives

In addition to the previously listed information, minors must complete two elective courses at the 300- or 400-level, which may include additional courses in culture, linguistics and literature, or other elective courses.

### Requirements for a Secondary Education Minor in German

Students minoring and planning for certification in German are required to complete at least 27 hours beyond the 200 level (GER 202), including:

- GER 301 - German Composition Credits: 3
- GER 302 - German Conversation Credits: 3
- GER 314 - Foreign Language Acquisition and Pedagogy Credits: 3
- GER 322 - Introduction to German Linguistics Credits: 3
- GER 341 - Advanced German Grammar Credits: 3
- One literature course, selected from GER 303/304/401/402 Credits: 3
- One culture course, selected from GER 311/312/315 Credits: 3
- Two additional elective courses, selected from the literature, culture, or linguistics (GER 321/421) categories
- **OR** GER 342 - Advanced Speaking Strategies and Skills. Credits: 6

### Additional Requirements

- All German secondary education minors must complete an approved study abroad program in a German-speaking country of a minimum of one semester in length. Students who cannot complete this requirement may work with a faculty advisor to complete one of several alternative programs, which may add additional credits. Students who have already spent considerable time abroad, especially in a German-language high school, may be exempt from the requirement. Please discuss your situation with an advisor as early in your program as possible.
- German secondary education minors must achieve a rating of at least advanced-low on an official Oral Proficiency Interview in order to receive an endorsement to teach German.

## Global Studies and Social Impact - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/areastudies](http://www.gvsu.edu/areastudies)

Global studies and social impact is an interdisciplinary major with a focus on understanding, through multiple perspectives, global issues and how they affect people in all areas of the world. Students who choose the Global Studies and Social Impact major will engage in critical reflection on how the world works as an interlinked, interactive set of systems, processes and relationships that operate across broad spheres of social, political, economic, cultural, religious and environmental experiences. Global Studies and Social Impact helps students to understand the interconnectedness of the world, and how distant events have local effects. Global Studies and Social Impact at GVSU also emphasizes social transformation and social change to prepare students to be global citizens who can positively impact their worlds.

Participating programs: Area studies programs, including African and African American studies, Chinese studies, East Asian studies, Latin American studies and Middle East studies.

## Bachelor of Arts or Bachelor of Science in Global Studies and Social Impact

Global studies and social impact is an interdisciplinary major with a focus on understanding, through multiple perspectives, global issues and how they affect people in all areas of the world.

### Requirements for a Major in Global Studies

Credits required for the major: 39 (+12 for B.A. or +9 for B.S.)

#### I. Core Requirements (credits: 9)

- GSI 201 - (Dis)Order and (In)Justice: An Introduction to Global Studies Credits: 3
- GSI 202 - History of Global Change and Social Transformation Credits: 3
- GSI 495 - Global Studies and Social Impact Credits: 3

#### II. Area Studies Courses (credits: 12)

Choose two areas (MES, LAS, AAA, EAS) and take two courses from the list of courses available from each area. In the case of Meijer Honors College sequences, students need to take the entire four-course sequence to earn credit for that area.

An asterisk (\*) designates experiential learning.

#### African and African American Studies Electives

- AAA 300 - US-Africa Relations Credits: 3
- AAA 319 - African Politics Credits: 3
- AAA 337 - Contemporary Black Literature Credits: 3
- AAA 341 - Civil Conflicts in Africa Credits: 3
- AAA 355 - History of Underground Railroad Credits: 3
- GPY 351 - Geography of Africa Credits: 3
- HNR 254/HNR 255 - Africa Seen Through African Eyes 2 Credits: 3
- **AND** HNR 274/HNR 275 - Africa Seen Through African Eyes 4 Credits: 3
- HST 335 - Africa Before 1870 Credits: 3
- HST 336 - Africa After 1870 Credits: 3

#### East Asian Studies Electives

- EAS 301 - Masterpieces of East Asian Literature Credits: 3
- GPY 354 - Geography and Globalization of Asia Credits: 3
- HNR 256/HNR 257 - East Asia and the World: Ideas, Inventions, and Power 2 Credits: 3 **AND** HNR 276/HNR 277 - East Asia and the World: Ideas, Inventions, and Power 4 Credits: 3
- HST 240 - A History of East Asia to 1800 Credits: 3
- HST 333 - Modern China Credits: 3
- HST 342 - History of Buddhism and East Asian Religions Credits: 3
- PHI 306 - Wisdom of the East: Asian Philosophy Credits: 3
- PLS 283 - Chinese Politics and U.S. - China Relations Credits: 3

#### Latin American Studies Electives

- CFV 376 - Latin American Cinema Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- HST 330 - Colonial Latin America Credits: 3
- HST 331 - Modern Latin America Credits: 3

- HST 334 - The Making of the Caribbean Credits: 3
- HST 372 - From Slavery to Freedom Credits: 3
- LAS 320 - Model Organization of American States Credits: 3 \*
- LAS 374 - Revolution in the Americas Credits: 3
- PLS 284 - Latin American Politics Credits: 3

#### Middle East Studies Electives

- ANT 350 - Archaeology of Mid-East Credits: 3
- GPY 355 - Geography of Southwest Asia (The Middle East). Credits: 3
- HNR 209/HNR 210 - The Middle East Beyond the Headlines 2 Credits: 3 **AND** HNR 219/HNR 220 - The Middle East Beyond the Headlines 4 Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 338 - Modern Middle East Credits: 3
- HST 339 - Modern Iran Credits: 3
- MES 350 - Islam: Scripture and Ritual Credits: 3
- MES 370 - Contemporary Issues in the Middle East: The Model Arab League Credits: 3
- PLS 320 - Comparative Politics of the Middle East Credits: 3

#### III. Clusters Credits: 18

Students choose two courses from each of the three clusters. No more than two courses from each discipline. GSI 490 may only be taken once for credit.

An asterisk (\*) designates experiential learning.

##### Cluster 1: Places, Movements, Encounters

Courses in this cluster help students to think about how place and culture connect, and about how people and ideas move and shift in a global world. Students will learn how the fast changing, globalized world is constantly presenting new challenges and new kinds of encounters and opportunities.

- AAA 302 - African Diaspora Credits: 3
- COM 378 - Intercultural Communication Credits: 3
- GPY 335 - Globalization and Development Credits: 3
- GSI 490 - Internship\*
- HTM 368 - Geotourism Credits: 3
- LAS 373 - Latinos/as in West Michigan Credits: 3
- LIB 319 /HST 319 - Human Traffic and Trafficking Credits: 3
- LIB 350 - The Immigrant Experience in the U.S. Credits: 3
- MES 202 - Arab Americans Credits: 3
- SOC 355 - Sociology of Work and Employment Credits: 3

##### Cluster 2: Expressions and Identities

Courses in this cluster address issues of individual and social identity in a global context. Students will learn to think theoretically and apply this knowledge to understandings of gender, race, ethnicity, class, spirituality and sexuality, and the construction of hybrid identities.

- AAA 351 - Perspectives on African American Males Credits: 3
- ANT 340 - Culture and Environment Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- COM 372 - Global Communications Credits: 3
- CFV 375 - World Cinema Credits: 3
- GSI 490 - Internship\*
- REL 335 - Sacred Texts - Global Contexts Credits: 3
- REL 300 - Contemporary Theories and Issues in Religious Studies Credits: 3
- WGS 352/AAA 352 - Black Women's Culture and Communities Credits: 3
- WRT 354 - Writing in the Global Context: Culture, Technology, and Language Practices Credits: 3

##### Cluster 3: Systems and Actions

Courses in this cluster focus on large-scale and global policies and structures within which people and ideas circulate. Students will learn to think about human agency within such structures, as well as how to critically evaluate how these structures enable and challenge social justice locally and globally.

- AHS 330 - Health Care: A Global Perspective Credits: 3
- BIO 319 - Global Agricultural Sustainability Credits: 3
- ECO 365 - Comparative Economic Systems Credits: 3
- GPY 412/ENS 412 - Global Environmental Change Credits: 3
- GSI 490 - Internship\*
- LIB 342 - Food Matters Credits: 3 \*
- LIB 400 - Global Visionary Thinkers  
**OR** LIB 402 - Feminist Visionary Thinkers Credits: 3
- PLS 313 - International Organization Credits: 3
- PLS 316 - Human Rights in International Politics Credits: 3
- SOC 377 - Globalization: Structures and Movements Credits: 3
- WGS 450 - Global Feminisms Credits: 3

#### IV. B.A. /B.S. Options

This major offers both a B.A. and a B.S. option. Students who opt for the B.A. must gain fourth semester proficiency in a world language. To complete the B.S. requirements, students must take:

1. STA 215
  - STA 215 - Introductory Applied Statistics Credits: 3
2. One of the following research methods courses:
  - LIB 301 - Interdisciplinary Research Methods Credits: 3
  - HST 290 - Research Methods in History Credits: 3
3. One of the following additional courses in methodology or statistics (cannot be the same methods course selected previously):
  - AHS 301 - Introduction to Health Care Research Credits: 3
  - COM 375 - Communication Research Credits: 3
  - HST 290 - Research Methods in History Credits: 3
  - LIB 301 - Interdisciplinary Research Methods Credits: 3
  - PLS 300 - Political Analysis Credits: 3
  - STA 216 - Intermediate Applied Statistics Credits: 3
  - STA 301 - Questionnaire Design and Execution Credits: 3
  - STA 314 - Statistical Quality Methods Credits: 3
  - STA 318 - Statistical Computing Credits: 3
  - STA 340 - Statistics in the Media Credits: 3
  - STA 341 - Demographic Methods Credits: 3
  - WGS 395 - Women and Gender Studies Research Methods Credits: 3

#### V. Experiential Learning or Study Abroad

Students are required to complete either an experiential learning course or study abroad. An experiential learning course takes the place of one cluster course. Study abroad course takes the place of one area studies course.

#### Suggested Order of Coursework for a Major in Global Studies

##### First Year

- Language 101
- Language 102
- GSI 201 - (Dis)Order and (In)Justice: An Introduction to Global Studies Credits: 3
- GSI 202 - History of Global Change and Social Transformation Credits: 3

##### Second Year

- Language 201
- Language 202
- AAA 300 - US-Africa Relations Credits: 3
- AAA 319 - African Politics Credits: 3
- LAS 373 - Latinos/as in West Michigan Credits: 3
- LIB 350 - The Immigrant Experience in the U.S. Credits: 3

##### Third Year

- CFV 375 - World Cinema Credits: 3
- MES 370 - Contemporary Issues in the Middle East: The Model Arab League Credits: 3
- PLS 311 - International Conflict and Conflict Resolution Credits: 3
- WRT 354 - Writing in the Global Context: Culture, Technology, and Language Practices Credits: 3

## Health Administration

### Fourth Year

- HST 339 - Modern Iran Credits: 3
- WGS 450 - Global Feminisms Credits: 3

## Master of Health Administration - Program Description

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

The mission of the School of Public, Nonprofit and Health Administration is to educate students for lives of active citizenship as contributing members of their local, regional, national and global communities, and for professional careers in public and nonprofit organizations. We are dedicated to developing in our graduates the capacities for ethical judgment, critical thinking and the core competencies necessary to fulfill multiple roles as effective public servants and healthcare managers and leaders.

The mission of the Master's of Health Administration program (M.H.A.) is to develop new, early-, and mid-career students into leaders who combine the essential knowledge, specific competencies, and practical experiences for a management career in nonprofit and governmental healthcare organizations in the Midwest, nation, and world. We actively engage the healthcare community to prepare ethical and effective practitioners for healthcare management and leadership.

An advanced degree in health administration opens up career opportunities that span the diverse components that make up the health care delivery system including: hospitals, ambulatory care practices, assisted living communities, skilled nursing facilities, home health agencies, and hospice care. In addition to direct health service providers, MHA graduates are qualified for management positions in marketing, human resources, finance, and planning in pharmaceutical, medical device and supplies, and insurance companies.

**Minimum Hours for Graduation:** 48 to 54 credit hours

### Admission to Master of Health Administration Program

- An undergraduate grade point average of at least 3.0 on a 4.0 scale calculated on the last 60 credit hours of undergraduate coursework
- Three letters of reference from informed sources
- A detailed resume
- An essay on career and educational objectives (250-750 words)
- A demonstrated commitment to community and public service. Ideally this would be five or more years of professional work experience since receiving a baccalaureate degree.
- Submitting a GRE score is recommended for applicants who have neither a 3.0 undergraduate GPA nor five years of professional experience. The GRE is also recommended for applicants applying for a graduate assistantship with SPNHA.

**Website:** [www.gvsu.edu/grad/mha](http://www.gvsu.edu/grad/mha)

## Master of Health Administration

### Requirements for the M.H.A. Master of Health Administration

The curriculum is multidisciplinary (includes health administration, health professions, public and nonprofit management, business, and computing science) and consists of a large required core and a choice of concentration. Other courses, such as PA 680 - Special Topics in Public and Nonprofit Administration, PA 693 - Research Project, or PA 699 - Directed Readings may be substituted for concentration or core courses with advisor approval. The program consists of a total of 48 to 54 credit hours depending on student status.

Student status is determined after program entry. Students are classified as pre-career (little or no experience working in the field of health care),

early career (some experience working in the field of healthcare but little or no management experience) and midcareer (several years' experience working in the field of health care and currently holding a management position in the field). Pre-career students must complete two internships (6 credits), early career students must complete one internship (3 credits) and midcareer students are not required to complete an internship.

### Required Core (Credits: 36)

- PA 611 - Research Methods Credits: 3
- PA 612 - Human Resources in Organizations Credits: 3
- PA 614 - Organization Theory Credits: 3
- PA 630 - Health Administration and Service Credits: 3
- PA 631 - U.S. Health Policy and Politics Credits: 3
- PA 632 - Health Services Financial Management Credits: 3
- PA 633 - Health Economics Credits: 3
- PA 634 - Health Care Law and Ethics Credits: 3
- PA 636 - Health Care Quality Improvement Credits: 3
- PA 640 - Marketing Health and Human Services Credits: 3
- PA 643 - Strategic Management and Planning Credits: 3
- CIS 665 - Clinical Information Systems Credits: 3

### Concentrations (credits: 9)

There are four concentrations available, one in hospital administration, one in long term care administration, one self-directed concentration for mid-career students, and one concentration in finance.

#### 1. Hospital Administration

Prerequisites: PA 611 and PA 630 may be concurrent.

Required:

- PA 635 - Hospital Organization and Management Credits: 3
- PA 639 - Community Benefit Analysis and Management Credits: 3
- PA 646 - Managerial Epidemiology for Health Administrators Credits: 3

#### 2. Long-term Care Administration

Prerequisites: PA 611 and PA 630 may be concurrent.

Required:

- PA 637 - Ambulatory Care Organization and Management Credits: 3
- PA 645 - Aging in Society: Concepts, Controversies, and Challenges for Public Service Administrators Credits: 3
- PA 646 - Managerial Epidemiology for Health Administrators Credits: 3

#### 3. Self-directed Concentration

Prerequisites: PA 611 and PA 630 may be concurrent.

Required: Nine credits selected and preapproved by advisor.

#### 4. Finance

- ACC 611 - Contemporary Managerial Accounting Credits: 3
- FIN 626 - Advanced Managerial Finance Credits: 3
- **OR** ECO 641 - Business Economics and Strategy Credits: 3
- PA 646 - Managerial Epidemiology for Health Administrators Credits: 3

### Capstone (credits: 9)

Prerequisites: PA 611 and PA 630 and one additional core course.

PA 619 is the Capstone Course for the M.H.A. program. It may be substituted with PA 693 - Research Project.

PA 690 and PA 691 are required for students with fewer than three years of professional experience. Early and mid-career students may, based on health care management experience, have one or both internships waived.

Special topics courses (PA 680) or other graduate-level courses may be substituted for specialization courses with advisor's permission.

Select three:

- PA 619 - Public Management Seminar Credits: 3
- PA 690 - Public Administration Internship I Credits: 3
- PA 691 - Public Administration Internship II Credits: 3

## Health Communication - Program Description

For additional information about opportunities your college offers, please refer to the School of Communication website.

**Website:** [www.gvsu.edu/soc](http://www.gvsu.edu/soc)

The need for professional communicators in the health care industry has never been greater or more urgent. This industry, one of the largest in the United States, is expanding. It is also changing, so that the nature of health care delivery in the 21st century will be drastically different from what it is today.

Hospital-based health care under the supervision of a physician in private practice is being replaced by a complex system of health maintenance organizations (HMOs). These old and new components of health care, in keen competition with each other, have turned to techniques used by other industries. They are retailing their services to the public, using marketing, advertising, direct sales, public relations, and information activities.

The health communicator has the vital role of facilitating communications between aware but technically naive consumers and a system that is operated by highly skilled, deeply educated technical professionals whom the public does not fully understand. Thus, the skills and competency of the health communicator have become central to the success of the health care industry and, indeed, to its success in maintaining wellness and conquering disease.

Health communicators are well-educated college graduates who have a foundation in biomedical sciences and who understand the principles and techniques of human communication. They are adept at written and visual communication and are skilled in public relations, advertising, and marketing. Health communicators also know the health care industry and its markets of potential patients.

Note: The health communication major requires COM 201 to be taken in the School of Communication core.

## Bachelor of Arts or Bachelor of Science in Health Communication

### Requirements for a Major in Health Communication

#### Program Requirements for a B.A. in Health Communication

The B.A. degree in health communication requires a third-semester proficiency in a classical or modern foreign language of the student's choice.

#### Program Requirements for a B.S. in Health Communication

The Bachelor of Science degree in health communication requires the following three courses:

- COM 275 - Foundations of Communication Research Credits: 3
- COM 375 - Communication Research Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### Biomedical Sciences Core (credits: 19)

A higher-level laboratory biology class (such as BIO 120) can be substituted for BIO 104. A higher-level laboratory chemistry class (such as CHM 115) can be substituted for CHM 109. See the School of Communications for an evaluation and further recommendations.

- BMS 202 - Anatomy and Physiology Credits: 4
- BMS 223 - Infectious Human Diseases; Prevention and Control Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- AHS 340 - Health Care Management Credits: 3
- AHS 100 - Medical Terminology Credits: 3
- BIO 104 - Biology for the 21st Century Credits: 4

#### Health Communication Core (credits: 27)

- CAP 210 - Fundamentals of Advertising Credits: 3
- CAP 220 - Fundamentals of Public Relations Credits: 3

- CAP 321 - Media Relations Writing Credits: 3
- CMJ 256 - News Reporting Credits: 3
- CMJ 390 - Technical Writing Credits: 3
- COM 209 - Health Communication Systems Credits: 3
- COM 410 - Senior Seminar in Health Communication Credits: 3
- COM 490 - Internship Credits: 1 to 6
- MKT 350 - Marketing Management Credits: 3

#### Elective Group

Two elective courses are required for six to eight credits. Please consult with your faculty advisor for possible and appropriate elective courses.

- CFV 125 - Media Production I Credits: 3
- CFV 226 - Media Production II Credits: 3
- CPH 171 - Photography I Credits: 4
- CPH 172 - Photography II Credits: 3

#### Capstone (Credits: 3)

- COM 495 - Issues in Communication (Capstone) Credits: 3

## History - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/history](http://www.gvsu.edu/history)

The study of the past has captivated generations of people around the globe. As historical beings, we wonder about the ways our ancestors lived, the origins of our cultural and political practices, the causes of important events (both local and world), and the reasons for technological and economic disparities between peoples in our modern world. History explores the past in order to seek answers to such questions and to better understand our world.

As one of the liberal arts, history provides the opportunity to explore the past through a careful consideration of the evidence our forebears have left behind. Historians make critical contributions to society in diverse areas, such as teaching, the law, business, foreign and civil service, archival work, museum studies, professional writing and editing, and library science, just to name a few. In sum, an historian possesses the primary training for any job that requires analytical writing and reading skills and an ability to communicate ideas knowledgeably and clearly.

Degrees offered: Master of Education, advanced content specialization with a concentration in history; Bachelor of Arts, Bachelor of Science in history, major and minor for secondary teaching certification, minor in history, minor in history of science.

#### Mission Statement

The Department of History advances public knowledge and understanding of the past as it informs the present and future. We offer a multidisciplinary approach that combines our global cultural heritage with long-neglected voices, uses a range of tools and perspectives, and provides the knowledge and skills necessary for informed decision making.

#### Vision

We provide a student-centered program that is committed to excellent teaching, scholarship, and service. Through our commitment to the liberal arts tradition, we help students develop skills of inquiry, reflection, critical analysis, dialogue, and expression. We are dedicated to inspiring all our students - be they our history and group social studies majors or students we encounter in our general education courses - to pursue excellence in their chosen professions and serve the broader local, regional, national, and international communities in which they live.

As a community of scholars, we help to enlarge the state of knowledge in our field through our active engagement in intellectual and creative pursuits. We recognize that active scholarship enriches our teaching and enables us to serve students, the university and the broader community. We bring the historian's perspective to courses in the Meijer Honors College and other interdisciplinary programs; we participate actively in

## History

preparing teachers of history and social studies as well as preparing our majors for further study and careers in a variety of fields. We promote faculty and student participation in national and international inquiry and discourse. We are dedicated to serving the broader West Michigan community through our engagement in local and regional history forums.

### Participating Programs

The history department participates in the following programs:

- African/African American Studies
- Archaeology
- Art History
- Classics
- College of Education
- East Asian studies
- Group social studies
- Meijer Honors College
- International relations
- Latin American studies
- Liberal studies
- Middle East studies
- Russian studies
- Women, gender, and sexuality studies

### Honors Organization

#### Phi Alpha Theta

The local chapter of this international history honor society promotes the study of history by honoring students who have maintained high academic standards throughout their college careers. Members participate in a variety of intellectual and social activities throughout the academic year. Students who have completed at least four history classes at Grand Valley State University with a minimum GPA of 3.25 in those history classes, and an overall GPA of at least 3.25 are encouraged to apply. Contact Professor Alice Chapman, chapter advisor, for more information.

## Bachelor of Arts or Bachelor of Science in History

### Requirements for a History Major (without secondary certification)

Students majoring in history are required to complete at least 39 credit hours, including a course in writing history (HST 200 - Writing History), any three 200-level foundation courses, six 300-level electives, two junior seminars, and the Capstone.

### Requirements for a History Major (with secondary teaching certification)

Students majoring in history with secondary teaching certification are required to complete at least 39 credit hours, including a course in writing history (HST 200 - Writing History), two World history courses (HST 203 - World History to 1500 A.D. and HST 204 - World History since 1500) and two American history courses (HST 205 - American History to 1877 and HST 206 - American History since 1877), and the Capstone. Students pursuing teacher certification must also take SST 310 and six 300-level electives in history. Only one of the foundation courses can come from the 100-level.

### History Electives

The electives in history for all majors must include at least one 300-level course in United States history, one 300-level course in European history, and one 300-level course in non-Western history. All students must also take three additional 300-level history courses. An Internship (HST 490) or HST 415 may be substituted for a 300-level elective. Each student will select those courses in consultation with his or her major advisor. Majors must maintain a GPA of at least 2.0 in courses in the department and must receive a grade of C or better in HST 200 and 495. **Majors seeking teacher certification must maintain a GPA of at least 3.0 in the major.**

## B.A. or B.S. Degree Requirements

Students planning to enter a program of graduate study in history should earn a B.A. degree. Candidates for the B.A. degree must demonstrate third-semester proficiency in a foreign language, either by completing successfully a 201-level language course or by passing a proficiency examination in the language chosen.

History and social studies majors will have the opportunity to complete a B.S. degree. The B.S. option is designed to give students training in scientific analysis that they can apply to their careers in teaching and historical research. A B.S. in history can be fulfilled by taking the following courses. Please note that STA 215 is a prerequisite for HST 290 (or ED 370 if student is majoring in group social studies or fulfilling requirements for a Secondary Certification).

Students who choose to earn a B.S. degree must complete the following sequence:

- STA 215 - Introductory Applied Statistics Credits: 3
- HST 290 - Research Methods in History Credits: 3
- HST 400 - Junior Seminar in History Credits: 3

Students who choose to earn a B.S. degree with secondary certification must complete the following sequence:

- STA 215 - Introductory Applied Statistics Credits: 3
- EDT 370 - Technology in Education Credits: 3
- HST 290 - Research Methods in History Credits: 3

### Writing History

- HST 200 - Writing History Credits: 3

### History Foundation Courses

The following restrictions apply to the history foundation requirements:

- Students who take HST 101 may only count one of the following foundation courses toward the major: HST 203 or HST 204.
- Students who take HST 102 may only count one of the following foundation courses toward the major: HST 207 or HST 208.
- Students who take HST 103 may only count one of the following courses toward the major: HST 205 or HST 206.
- HST 101 - Introduction to World Civilizations Credits: 3
- HST 102 - Introduction to European Civilizations Credits: 3
- HST 103 - Introduction to American Civilizations Credits: 3
- HST 203 - World History to 1500 A.D. Credits: 3
- HST 204 - World History since 1500 Credits: 3
- HST 205 - American History to 1877 Credits: 3
- HST 206 - American History since 1877 Credits: 3
- HST 207 - European Civilization to the Later Middle Ages Credits: 3
- HST 208 - European Civilization since the Later Middle Ages Credits: 3
- HST 211 - History of Islamic Civilization Credits: 3
- HST 212 - India: History and Civilization Credits: 3
- HST 230 - Latin America in World History Credits: 3
- HST 235 - Africa in World History Credits: 3
- HST 240 - A History of East Asia to 1800 Credits: 3
- HST 241 - A History of East Asia since 1800 Credits: 3
- HSC 201 - The Scientific Revolution Credits: 3
- HSC 202 - The Technological Revolution Credits: 3

\* Students seeking teacher certification are required to take:

- SST 310 - Teaching Social Studies: Secondary Credits: 3

### Electives

#### Category 1: U.S. History

- HST 301 - Colonial America Credits: 3
- HST 302 - Revolutionary America Credits: 3
- HST 303 - Era of Sectional Conflict, Civil War, and Reconstruction Credits: 3
- HST 305 - America Confronts Modernity Credits: 3
- HST 306 - The 'American Century': From the Great Depression to Vietnam Credits: 3

- HST 307 - United States since 1970 Credits: 3
- HST 308 - Cultural and Social Topics in U.S. History Credits: 3
- HST 311 - History of Religion in the United States Credits: 3
- HST 312 - History of American Women Credits: 3
- HST 314 - African American History Credits: 3
- HST 315 - Latinos: The Forging of Ethnic Identities Credits: 3
- HST 316 - U.S. Civil Rights Movement History Credits: 3
- HST 317 - History of American Foreign Relations Credits: 3
- HST 318 - History of Democracy in America Credits: 3
- HST 320 - American Indians Credits: 3
- HST 323 - Michigan History Credits: 3
- HST 327 - History of United States Urban Society Credits: 3
- HST 328 - U.S. Constitutional and Legal History Credits: 3
- HST 329 - U.S. Intellectual History Credits: 3
- HST 370 - History of Medicine and Health Credits: 3
- HST 378 - Contesting Human Rights Credits: 3

Category 2: European History

- HST 309 - Cultural and Social Topics in European History Credits: 3
- HST 350 - Ancient Greece Credits: 3
- HST 351 - Ancient Rome Credits: 3
- HST 355 - Medieval Europe Credits: 3
- HST 360 - Tudor and Stuart England Credits: 3
- HST 361 - Modern Britain Credits: 3
- HST 364 - Renaissance and Reformation Europe Credits: 3
- HST 366 - Spain in the Age of Empire Credits: 3
- HST 370 - History of Medicine and Health Credits: 3
- HST 377 - History of Warfare Credits: 3
- HST 378 - Contesting Human Rights Credits: 3
- HST 386 - 20th Century Europe Credits: 3
- HST 387 - Modern Germany Credits: 3
- HST 390 - Soviet History Credits: 3

Category 3: Nonwestern History

- HST 310 - Cultural and Social Topics in Nonwestern History Credits: 3
- HST 330 - Colonial Latin America Credits: 3
- HST 331 - Modern Latin America Credits: 3
- HST 332 - Emergence of Modern India and South Asia Credits: 3
- HST 333 - Modern China Credits: 3
- HST 334 - The Making of the Caribbean Credits: 3
- HST 335 - Africa Before 1870 Credits: 3
- HST 336 - Africa After 1870 Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 338 - Modern Middle East Credits: 3
- HST 339 - Modern Iran Credits: 3
- HST 342 - History of Buddhism and East Asian Religions Credits: 3
- HST 343 - History of South Africa Credits: 3
- HST 372 - From Slavery to Freedom Credits: 3
- HST 374 - Revolution in the Americas Credits: 3
- HST 375 - History of Mexico Credits: 3
- HST 389 - Russian History Credits: 3
- HST 393 - Study Abroad: Jamaica Credits: 1 to 6

Course Option

Depending on the topic studied, these courses may be used for any of the three categories. Consult with your advisor.

- HST 325 - Topics in the History of Sport Credits: 3
- HST 371 - Historical Perspectives on Gender and Sexualities Credits: 3
- HST 376 - History of Witch Hunts Credits: 3
- HST 378 - Contesting Human Rights Credits: 3
- HST 380 - Special Topics in History Credits: 1 to 4
- HST 399 - Independent Study Credits: 1 to 3
- HST 490 - History Internship Credits: 1 to 3
- HSC 399 - Readings in the History of Science Credits: 1 to 3

Junior Seminar in History

History majors (nonteaching certification) are required to take either two junior seminars OR one junior seminar plus completion of a senior thesis.

- HST 400 - Junior Seminar in History Credits: 3
- HST 498 - Senior Thesis Credits: 3

Capstone

All history majors are required to take the Capstone:

- HST 495 - Varieties of History (Capstone) Credits: 3

Transfer Students

Transfer students seeking a major in history must complete at least 12 credits in history at Grand Valley, including a minimum of two upper-level courses. Ordinarily, transfer students will complete the Capstone course (HST 495) at Grand Valley.

Suggested Order of Coursework for a History Major (without secondary teaching certification)

First Year

- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4
- Three general education Foundation courses
- Two foreign language courses (B.A. candidates)  
OR STA 215 - Introductory Applied Statistics Credits: 3  
AND HST 290 - Research Methods in History Credits: 3 (B.S. candidates)
- HST 200 - Writing History Credits: 3
- HST 290 - Research Methods in History Credits: 3
- Any 200-level history course

Second Year

- Four general education Foundations courses
- Any two 200-level history courses
- Three 300-level history elective courses
- One foreign language course (B.A. candidates)

Third Year

- Three 300-level history courses
- One history junior seminar
- Four elective courses
- Two general education Issues courses

Fourth Year

- Three 300-level history courses
- One general education Issues course
- One history junior seminar or senior thesis
- Five elective courses
- HST 495 - Varieties of History (Capstone) Credits: 3

Suggested Order of Coursework for a History Major (with secondary teaching certification)

First Year

- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4
- Two General education Foundation Courses
- Two foreign language courses (B.A. candidates)  
OR STA 215 - Introductory Applied Statistics Credits: 3  
AND HST 290 - Research Methods in History Credits: 3 (B.S. candidates)
- HST 200 - Writing History Credits: 3
- HST 203 - World History to 1500 A.D. Credits: 3
- HST 204 - World History since 1500 Credits: 3

Second Year

- Five general education Foundations courses
- HST 205 - American History to 1877 Credits: 3
- HST 206 - American History since 1877 Credits: 3
- Two elective courses
- One foreign language course (B.A. candidates)

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### Third Year

- Three 300-level history courses
- Five elective courses
- SST 310 - Teaching Social Studies: Secondary Credits: 3
- Four elective courses
- Two general education Issues courses

### Fourth Year

- Three 300-level history courses
- One general education Issues course
- Six elective courses
- HST 495 - Varieties of History (Capstone) Credits: 3

### Teacher Certification

Postgraduate students seeking teacher certification with a major in history must present a history major that includes courses in American, European, and world history and **must have obtained a major GPA of at least 3.0 in previous work**. Postgraduate students whose degree in history was completed more than three years prior to Grand Valley admission must demonstrate currency by completing at least two upper-level history courses at Grand Valley; such students **must maintain a minimum GPA of 3.0 in those courses**. Students should also consult the chair or the assistant chair for an evaluation of their previous work and to discuss appropriate courses.

### Additional Course Information

Courses at the 100-level are introductory courses designed to fulfill the general education requirement in historical perspectives. Courses at the 200-level are introductory courses designed to prepare students for advanced study in history; HST 203 and HSC 210 also fulfill the general education requirement in Historical Perspectives. Courses at the 300-level focus on particular regions, eras or themes; they are intended for history majors and minors, social studies majors, and other interested students. All 300- and 400-level courses have prerequisites; 600 level courses are intended for graduate students and very well-qualified seniors.

We strongly encourage students to seriously contemplate taking advantage of the various semester and year-long study abroad opportunities offered by Grand Valley State University. History courses taken abroad may count toward the major or minor if granted prior permission by the Department of History chairperson.

## History Minor

### Requirements for a Minor in History (Nonteaching)

Students who minor in history must complete at least 20 credit hours, including:

- HST 200 - Writing History Credits: 3

### Additional Courses

The remaining six history courses must be selected and meet the following requirements:

- No more than 3 credits can be taken at the 100-level
- No more than 6 credits can be taken at the 200-level (exclusive of HST 200)
- At least 9 credits must be taken at the 300- or 400-level

Minors must maintain a GPA of at least 2.0 (cumulative) in courses in the department.

Students may also count up to 3 credit hours of HST 490: History Internship. We encourage students to take advantage of the various faculty-led, semester and year-long study abroad opportunities offered by Grand Valley State University. History courses taken abroad may count toward the major or minor if granted prior permission by the Department of History chairperson.

Students may count HSC 201 or HSC 202 toward their HST 200-level courses; and HSC 399 toward their HST 300-level courses.

Transfer students seeking a minor in history must complete at least six credits from among the Grand Valley history offerings listed in categories 1, 2, and 3.

### Requirements for a Minor in History (teaching)

To complete requirements for the teachable minor, students are required to take two (2) courses that fulfill general education requirements from the Social Studies core and eight (8) courses that make up the teachable minor. Two elective courses are chosen from HST 211 and the department's upper division course offerings (301-399). One of these two electives must be either European or Non-Western history; the other may be in any area of history. HST 211 counts as a Non-Western history course.

\*Note: If you are planning a social studies major with an emphasis in history as well as a history minor, please work with your social studies advisor to ensure that you have enough unduplicated credits. In order to meet state certification requirements for non-duplication of credits in the major and the minor (36 unduplicated in a group major and 20 unduplicated in the minor), you may only use two history courses from the social studies major toward the history minor.

### Courses Required of All Minors

Taken in fulfillment of general education SBS requirements:

- GPY 235 - Geography for a Changing World Credits: 3

Taken as part of the history minor:

- HST 200 - Writing History Credits: 3
- HST 203 - World History to 1500 A.D. Credits: 3
- HST 204 - World History since 1500 Credits: 3
- HST 205 - American History to 1877 Credits: 3
- HST 206 - American History since 1877 Credits: 3
- PLS 206 - American Constitutional Foundations Credits: 3
- SST 310 - Teaching Social Studies: Secondary Credits: 3

### Additional Courses

Two electives, at least one in European or nonwestern history:

HST 3\_\_ \_\_\_\_\_

HST 3\_\_ \_\_\_\_\_

**OR** HST 211 - History of Islamic Civilization

**Minors seeking teacher certification must maintain a GPA of at least 3.0 in the minor.**

Students may also count up to three credit hours of HST 490 - History Internship. We encourage students to take advantage of the various faculty-led, semester and year-long study abroad opportunities offered by Grand Valley State University. History courses taken abroad may count toward the major or minor if granted prior permission by the Department of History chairperson.

Transfer students seeking a minor in history must complete at least six credits from among the Grand Valley history offerings listed in categories 1, 2, and 3.

## Certificate in Medical and Health Humanities

Medical and health humanities is a multidisciplinary investigation of medical and health related topics. This certificate program allows students pursuing careers in health or health-related majors, premedicine, nursing, athletic training, child life, and social work to broaden their understanding of medicine and health by incorporating the diverse perspectives of a variety of disciplines in the liberal arts and sciences. Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. Completion of courses in the student's plan of study will result in award of

the certificate in medical humanities. This shall be noted on the student's official university transcript. Students must apply for an audit for a nonteaching certificate upon completion. Visit this link for the certificate request form: <http://gvsu.edu/s/MI>

### Requirements for a Certificate in Medical and Health Humanities

The medical and humanities certificate requires 11-12 credits from the courses listed as follows. No more than two courses can have the same department prefix. Students can only apply two courses from the certificate toward a major and another two to a minor.

### Transfer Students

A maximum of two courses can be credited by transfer toward completion of the medical humanities certificate. Students must complete at least two of the courses for the certificate at GVSU.

### Certificate Core Course

- HST 370 - History of Medicine and Health Credits: 3 (I-H, SWS)\*

### Elective Courses

The additional eight to nine credits are to be completed by taking one course from each of the three course categories:

- Perspectives on Human Health and Development
- Perspectives Related to End of Life
- Ethics in Health and Medicine

#### Perspectives on Human Health and Development

- AHS 352 - Introduction to Holistic Health Care Credits: 3
- ANT 320 - Culture and Disease Credits: 3
- COM 209 - Health Communication Systems Credits: 3
- LIB 325 - LGBTQ Identities Credits: 3 Identity (I-I)
- PED 206 - Self-Health and Wellness Credits: 2
- PSY 364 - Life Span Developmental Psychology Credits: 3
- PSY 367 - Health Psychology Credits: 3 Health (I-H)
- SOC 286 - Sociology of Health Care Credits: 3
- WGS 335 - Women, Health and Environment Credits: 3 Sustainability (I-S)

#### Perspectives Related to End of Life

- ENG 386 - Literary Responses to Death and Dying Credits: 3
- LIB 314 - Life Journeys Credits: 3 Identity (I-I)
- NUR 344 - Healthy Aging: A Lifelong Journey Credits: 3
- NUR 354 - Living with Life-Limiting Illness Credits: 3 Health (I-H)
- PHI 341 - Philosophy of Death and Dying Credits: 3
- SOC 386 - Death and Dying Credits: 3
- SOC 388 - Middle Age and Aging Credits: 3

#### Ethics in Health and Medicine

- BIO 328 - Biomedical Ethics Credits: 3 Health (I-H)
- BMS 222 - Introduction to Public Health Credits: 3  
OR BMS 223 - Infectious Human Diseases; Prevention and Control
- COM 438 - Communication Ethics Credits: 3 Identity (I-I)
- HNR 312 - Honors Junior Seminar Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3 Human Rights (I-HR)
- PLS 310 - Politics and Health Policy Credits: 3

With permission, additional special topics courses can be counted toward the medical humanities certificate.

### Honors Students

Some HNR 280 courses can be used to fulfill the certificate requirements. Signoff will be handled on a case-to-case basis. HNR 280 can only be used to fulfill one of the elective categories. Examples:

- Ethics: HNR 280 - Food for Thought (semester 2)
- End of Life Perspectives: HNR 280 - Live, Learn, Lead: Saging and Aging

## Frederik Meijer Honors College - Program Description

**Website:** [www.gvsu.edu/honors](http://www.gvsu.edu/honors)

### Mission

The mission of the Frederik Meijer Honors College is to inspire and empower motivated students to be intellectually-curious lifelong learners who contribute to a body of knowledge, and serve as capable leaders and active global citizens.

### Program Information

The Meijer Honors College at Grand Valley State University is intended for students who, in their previous academic work, have demonstrated a distinctly high level of motivation, creativity, and academic achievement. Drawing from all the undergraduate departments, the Meijer Honors College provides its students a program with special academic opportunities and challenges.

Designed to enhance and integrate the intellectual curiosity of students, Meijer Honors College courses help students expand their world views and promote personal development. The designation "Meijer Honors College Graduate" on a Grand Valley State University diploma and transcript recognizes the distinctive work of the students in the program.

The Meijer Honors College curriculum, with its emphasis on interdisciplinary learning, offers a distinctive way to fulfill most of the general education requirements of the university. Meijer Honors College courses, normally limited to twenty-five or fewer students, are uniquely structured in content and instruction for active learning and critical thinking. Sharing specially designed classes with other students of outstanding potential and motivation creates a special atmosphere in which important questions and student ideas are treated seriously. Uniquely qualified and carefully selected faculty drawn from many disciplines teach Meijer Honors College courses; in fact, many classes are team-taught, offering students' significant individualized attention. Working with a faculty mentor, honors students design and complete an independent project in their senior year.

The greater student-faculty interaction, as well as classes which are specially designed to foster advanced writing and speaking skills, critical thinking, and analysis, prepare students to be competitive for graduate and professional programs. Our students develop high levels of proficiency in research, writing, critical thinking, synthesizing material from multiple disciplines, and applying critical skills to primary sources. Because of these advanced skills, honor students have more opportunities to participate in and present research as undergraduates at the Grand Valley State University Student Scholars Day, regional honors conferences, the National Collegiate Honors Council annual meeting, and other professional meetings.

The Meijer Honors College encourages its students to engage in extra-curricular activities to develop leadership skills and an appreciation of the richness and diversity of university life. Honors students frequently engage in service and volunteer projects at the university or in the community. They also have unique cultural experiences and travel opportunities such as subsidized museum visits and faculty-led trips to places like Chicago, Toledo, New York City, and Washington D.C. Trips for credit are offered to various international destinations such as Germany and Poland, and there are annual summer service-learning program to Ghana and Haiti. Students are also encouraged to take advantage of the other study abroad opportunities offered by the university.

Completion of the Meijer Honors College program should not be confused with "Graduation with Honors," which is determined strictly by final grade point average. The Meijer Honors College requires not only a high grade point average but also successful completion of a special series of challenging courses. Completion of all Meijer Honors College

## Frederik Meijer Honors College

requirements results in the “Meijer Honors College Graduate” designation on both the baccalaureate diploma and the college transcript. Graduates are eligible to wear a special stole and medallion at Commencement.

### Admission

Applicants must first be accepted to GVSU before applying to the Meijer Honors College. The normal qualifications for the program are a 3.5 high school GPA and ACT score of 28, but other factors (such as quality of essay, paper sample, and honors/leadership activities) are considered for entrance, and all these criteria are weighed to assess academic motivation and potential for success in the program.

Transfer students and those already enrolled at Grand Valley State University who wish to enter the Meijer Honors College may apply for admission if they have a 3.5 college grade point average. The application form is available online at [www.gvsu.edu/honors/](http://www.gvsu.edu/honors/).

### Academic Standing

To remain in good standing in the Meijer Honors College, a student must maintain a 3.2 grade point average. Failure to do so will result in the student being placed on probationary status and given two consecutive semesters to bring his or her GPA back up to a 3.2. Honors courses may be repeated only with the consent of both the director and the faculty member involved. Students may voluntarily withdraw from honors but will be responsible for completing the regular General Education Program of the university if they do so.

### Learning and Living Community

One of the hallmarks of the Meijer Honors College is its rich learning and living community. For this reason, honors students—especially freshmen—are encouraged to live in one of the two honors housing centers, so that they strengthen the bonds of community and reinforce each other’s commitment to academic excellence.

**The Glenn A. Niemeyer Learning and Living Center** is a state-of-the-art residential and academic center with two and four bedroom apartments, lounges, study areas, and a computer lab. Most honors classrooms are also in the building.

**The Holton-Hooker Learning and Living Center** is a brand new residential and academic center which provides optimal housing for first-year honors students because it builds rich and deep community.

### Accreditation

There is no accrediting body for honors, though the National Collegiate Honors Council sets guidelines and offers resources for honors programs. Grand Valley is an active member of the National Collegiate Honors Council.

## Meijer Honors College Requirements

To graduate from the Meijer Honors College a student must satisfy the following course requirements, which also fulfill the general education and writing skills requirements of the university, as well as the Issues requirement.

### University Basic Skills Requirements

#### 1. Writing

Many honors students satisfy this requirement by taking AP English in high school and scoring a 3 or better on the AP test. Completion of any Foundational Interdisciplinary Sequence with a B average satisfies the WRT 150 requirement.

- WRT 150 - Strategies in Writing Credits: 4

#### 2. Mathematical Sciences

All students must satisfy this requirement by taking one of the following courses or through AP scores of 3 or better in calculus. Courses satisfying this requirement are:

- CIS 160 - Programming with Visual Basic Credits: 3
- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3

- MTH 125 - Survey of Calculus Credits: 3
- MTH 131 - Introduction to Mathematics Credits: 3
- MTH 201 - Calculus I Credits: 4
- MTH 221 - Mathematics for Elementary Teachers I Credits: 4
- PHI 103 - Logic Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### 3. General Education Issues

Honors students satisfy the requirement for two issues courses by completing the honors curricular requirements. If, on the other hand, a student does not complete the honors curriculum, then they must complete the basic course requirements of the university.

## Additional Meijer Honors College Requirements

### 1. Foundational Interdisciplinary Sequence

Honors students will normally complete one of the foundational interdisciplinary sequences. Except in extraordinary circumstances, this sequence should be taken in the first year, as it offers guidance to students in making a transition from high school to university work.

The following sequences are regularly offered as two courses per semester for two successive semesters. The Making of Europe is usually offered as one course per semester for four successive semesters. Other options are available from year to year.

#### American Civilization

- HNR 213 - American Civilization 1 Credits: 3
- HNR 214 - American Civilization 2 Credits: 3
- HNR 223 - American Civilization 3 Credits: 3
- HNR 224 - American Civilization 4 Credits: 3

#### The Worlds of Greece and Rome

- HNR 211 - The Worlds of Greece and Rome 1 Credits: 3
- HNR 212 - The Worlds of Greece and Rome 2 Credits: 3
- HNR 221 - The Worlds of Greece and Rome 3 Credits: 3
- HNR 222 - The Worlds of Greece and Rome 4 Credits: 3

#### Europe: The Center and the Margins

- HNR 215 - Europe: The Center and the Margins 1 Credits: 3
- HNR 216 - Europe: The Center and the Margins 2 Credits: 3
- HNR 225 - Europe: The Center and the Margins 3 Credits: 3
- HNR 226 - Europe: The Center and the Margins 4 Credits: 3

#### The Middle East Beyond the Headlines

- HNR 209 - The Middle East Beyond the Headlines 1 Credits: 3
- HNR 210 - The Middle East Beyond the Headlines 2 Credits: 3
- HNR 219 - The Middle East Beyond the Headlines 3 Credits: 3
- HNR 220 - The Middle East Beyond the Headlines 4 Credits: 3

#### The Making of Europe

- HNR 217 - The Making of Europe 1 Credits: 3
- HNR 218 - The Making of Europe 2: The High Middle Ages Credits: 3
- HNR 227 - The Making of Europe 3: Early Renaissance Credits: 3
- HNR 228 - The Making of Europe 4: Late Renaissance Credits: 3

#### Africa Seen Through African Eyes

- HNR 254 - Africa Seen Through African Eyes 1 Credits: 3
- HNR 255 - Africa Seen Through African Eyes 2 Credits: 3
- HNR 274 - Africa Seen Through African Eyes 3 Credits: 3
- HNR 275 - Africa Seen Through African Eyes 4 Credits: 3

#### The History of Science

- HNR 258 - History of Science I Credits: 3
- HNR 259 - History of Science I Credits: 3
- HNR 278 - History of Science II Credits: 3
- HNR 279 - History of Science II Credits: 3

#### Asia and the World: Ideas, Inventions, and Power

- HNR 256 - East Asia and the World: Ideas, Inventions, and Power 1 Credits: 3
- HNR 257 - East Asia and the World: Ideas, Inventions, and Power 2 Credits: 3

- HNR 276 - East Asia and the World: Ideas, Inventions, and Power 3 Credits: 3
- HNR 277 - East Asia and the World: Ideas, Inventions, and Power 4 Credits: 3

#### The Following Sequences

The following sequences are three credit hours in the fall and six credit hours in the winter, but normally require taking a section of HNR 201 - Live, Learn, Lead: Introduction to Life in Honors, as well as the sequence in the fall. HNR 201 complements the sequence and helps students in the transition to college.

#### Theory and Practice of Rights

- HNR 201 - Live. Learn. Lead.: An Introduction to Life in Honors Credits: 3
- HNR 263 - Theory and Practice of Rights 1 Credits: 3
- HNR 264 - Theory and Practice of Rights 2 Credits: 3
- HNR 265 - Theory and Practice of Rights 3 Credits: 3

#### Alliance and Conflict: World Construction in Religion and Society

- HNR 201 - Live. Learn. Lead.: An Introduction to Life in Honors Credits: 3
- HNR 260 - Alliance and Conflict: World Construction in Religion and Society Credits: 3
- HNR 261 - Alliance and Conflict: World Construction in Religion and Society Credits: 3
- HNR 262 - Alliance and Conflict: World Construction in Religion and Society Credits: 3

#### 2. Culture Requirements

Students selecting the Meijer Honors College will most often satisfy the U.S. Diversity and World Perspectives requirements with the foundational interdisciplinary sequences and/or other specifically designated courses in the Meijer Honors College. For example, students taking American Civilization will need a World Perspectives course, while students taking Alliance and Conflict, Asia and the World, The History of Science, Africa Seen Through African Eyes, The Worlds of Greece and Rome, Europe: The Center and the Margins, Middle East Beyond the Headlines, Theory and Practice of Rights, and the Making of Europe will need a U.S. Diversity course. Alternatively, a student can take general courses in the greater university that carry the designation World Perspectives (WP) or the United States Diversity (USD), but this does not substitute for a course in the curriculum in the Meijer Honors College. Many honors students study abroad, and this can fulfill the World Perspectives category of general education too.

#### 3. Honors Social Sciences

Students need two honors social sciences courses, each from a different discipline. They may select an integrated sequence, or may take two separate courses. High school advanced placement exams may satisfy an honors social sciences requirement. Substitutions may also be made if a student's major, minor, or concentration requires it, though the approval of the director must be obtained in this or any other case of substitution. Honors social science courses include:

- HNR 231 - The Holocaust Credits: 3
- HNR 232 - Trauma, Culture, Memory Credits: 3
- HNR 235 - Democracy and Political Thinking Credits: 3
- ANT 204 - Peoples and Cultures of the World Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- PSY 101 - Introductory Psychology Credits: 3

#### 4. Honors Natural Sciences

All students must take two Natural Science courses, one in Life Sciences and one in Physical Sciences. One must be a course that includes a laboratory component. High school advanced placement exams may satisfy an honors science requirement. Substitutions may also be made if a student's major, minor, or concentration requires another general education science course, though the approval of the director must be obtained in this or any other case of substitution. Honors sciences are as follows:

#### Physical Sciences (choose one):

- HNR 241 - The Earth, A Global View Credits: 4
- HNR 246 - Chemistry in Perspective Credits: 4

#### Life Sciences (choose one):

- HNR 242 - Plants and People Credits: 3
- HNR 245 - Microbes and Society Credits: 3
- HNR 247 - Molecules of Life in Perspective Credits: 3

#### OR

- HNR 243 - The Human Body in Motion I Credits: 4
- HNR 244 - The Human Body in Motion II Credits: 3

#### 5. Honors Junior Seminar

Each student takes at least one course from among the following during her/his junior or senior year.

- HNR 311 - Honors Junior Seminar Credits: 3
- HNR 312 - Honors Junior Seminar Credits: 3
- HNR 313 - Honors Junior Seminar Credits: 3

#### 6. Honors Senior Project

See course description under course offerings.

- HNR 499 - Honors Senior Project Credits: 1 to 4

#### General Education Requirements Information

Satisfaction of the Grand Valley general education requirements through completion of the Meijer Honors College curriculum does not add any additional coursework to a student's program. In fact, it often results in a reduction of the number of general education credits required. Each student is encouraged to see either the director or a Meijer Honors College advisor to prepare a course of study, which satisfies university requirements and honors requirements. There is flexibility in Meijer Honors College planning to meet the needs of various majors.

Students, especially in the prehealth and engineering curricula, should meet regularly with their major advisors as well as with a Meijer Honors College advisor.

The information given in course offerings, as follows, helps the student and her/his advisor determine which requirements in general education have been satisfied.

#### Suggested Order of Coursework to Complete Honors

##### First Year

- Foundational interdisciplinary sequence: Six credit hours fall, six credit hours winter.

##### Second Year

- Honors Social Sciences and sciences (in any order)

##### Third Year

- Honors junior seminar

##### Fourth Year

- Honors senior project

## Hospitality and Tourism Management - Program Description

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

**Website:** [www.gvsu.edu/htm](http://www.gvsu.edu/htm)

#### Degrees Offered

B.S. in hospitality and tourism management.

#### Mission

To provide outstanding community focused hospitality and tourism professionals with dynamic management and leadership skills grounded in significant, contemporary industry experience.

## Bachelor of Science in Hospitality and Tourism Management

### Requirements for a Major in Hospitality and Tourism Management (HTM)

Students interested in majoring in hospitality and tourism management must complete the following business course requirements. (Note: With the addition of MGT 331 and FIN 320, a business minor can be obtained. Students must achieve a minimum 2.5 GPA in these courses to receive the business minor designation.)

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3
- MKT 350 - Marketing Management Credits: 3

The hospitality and tourism program offers a Bachelor of Science (B.S.) degree. The program combines a directed sequence of field experiences with a comprehensive interdisciplinary curriculum consisting of courses in the arts and sciences, business, and hospitality and tourism.

#### 1. General University Degree Requirements

As identified in the General Academic Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog.

#### 2. Hospitality and Tourism Core Management Courses

**There are 36 required core credits.**

- CIS 150 - Introduction to Computing Credits: 3
- HTM 101 - Introduction to Hospitality and Tourism Credits: 4
- HTM 213 - Introduction to Food and Beverage Management Credits: 3
- HTM 222 - Introduction to Lodging Management Credits: 3
- HTM 343 - Human Resource Management Credits: 4
- HTM 361 - Hospitality Law and Legislation Credits: 3
- HTM 373 - Hospitality Information Analysis Credits: 4
- HTM 375 - Hospitality and Tourism Research Credits: 3
- HTM 452 - Hospitality and Tourism Marketing Credits: 3
- HTM 495 - Hospitality Management (Capstone) Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### 3. Hospitality and Tourism Management Field Requirement (credits: 7)

- HTM 190 - Field Preparation Credits: 1
- HTM 290 - Field Experience I Credits: 2
- HTM 390 - Field Experience II Credits: 2
- HTM 490 - Senior Internship Credits: 2

#### 4. Career Emphasis

Minimum of 15 credits.

##### A. Food and Beverage Management (15 credit minimum)

Required:

- HTM 250 - Food Production and Kitchen Management Credits: 4
- HTM 318 - Responsible Beverage Management Credits: 3
- HTM 413 - Advanced Food and Beverage Management Credits: 4

Electives:

- BMS 105 - Basic Nutrition Credits: 3
- HTM 175 - International Food and Culture Credits: 3
- HTM 275 - Culinary Tourism Credits: 3
- HTM 323 - Festival and Special Event Management Credits: 3
- HTM 330 - International Event Management Credits: 3
- HTM 350 - Banquet and Catering Management Credits: 3
- SOC 288 - Sociology of Food Credits: 3

Other electives that are approved by faculty mentor.

##### B. Lodging Management (15 credit minimum)

Required:

- HTM 253 - Convention Sales and Service Credits: 3
- HTM 333 - Hospitality Facilities Management Credits: 3
- HTM 422 - Advanced Lodging Management Credits: 4

Electives:

- HTM 240 - Introduction to Meeting and Event Management Credits: 3
  - HTM 275 - Culinary Tourism Credits: 3
  - HTM 318 - Responsible Beverage Management Credits: 3
  - HTM 323 - Festival and Special Event Management Credits: 3
  - HTM 330 - International Event Management Credits: 3
  - HTM 350 - Banquet and Catering Management Credits: 3
  - HTM 440 - Advanced Meeting and Event Management Credits: 3
- Other electives that are approved by faculty mentor.

##### C. Tourism Management (15 credit minimum)

Required:

- HTM 202 - International Tourism Credits: 3
- HTM 235 - Tourism and Recreation Management Credits: 3
- HTM 402 - Tourism Policy Issues Credits: 3

Electives:

- GPY 220 - Cultural Geography Credits: 3
- **OR** GPY 235 - Geography for a Changing World Credits: 3
- HTM 268 - Adventure Tourism Credits: 3
- HTM 275 - Culinary Tourism Credits: 3
- HTM 323 - Festival and Special Event Management Credits: 3
- HTM 330 - International Event Management Credits: 3
- HTM 368 - Geotourism Credits: 3

Other electives that are approved by faculty mentor.

##### D. Meeting and Event Management (15 credit minimum)

Required:

- HTM 240 - Introduction to Meeting and Event Management Credits: 3
- HTM 253 - Convention Sales and Service Credits: 3
- HTM 440 - Advanced Meeting and Event Management Credits: 3

Electives:

- HTM 275 - Culinary Tourism Credits: 3
- HTM 318 - Responsible Beverage Management Credits: 3
- HTM 323 - Festival and Special Event Management Credits: 3
- HTM 330 - International Event Management Credits: 3
- HTM 350 - Banquet and Catering Management Credits: 3
- HTM 422 - Advanced Lodging Management Credits: 4

Other electives that are approved by faculty mentor.

##### E. Recreation and Leisure Management (15 credit minimum)

Required:

- HTM 235 - Tourism and Recreation Management Credits: 3
- HTM 237 - Fundamentals of Recreation and Leisure Programming Credits: 3
- HTM 437 - Leadership in Recreation and Leisure Credits: 3

Electives:

- HTM 330 - International Event Management Credits: 3
- HTM 333 - Hospitality Facilities Management Credits: 3
- PA 335 - Grant Writing Credits: 3
- PED 345 - Disability, Sport and Physical Activity Credits: 3

Other electives that are approved by faculty mentor.

### Suggested Order of Coursework for a Major in Hospitality and Tourism Management

#### First Year

- CIS 150 - Introduction to Computing Credits: 3
- HTM 101 - Introduction to Hospitality and Tourism Credits: 4
- HTM 190 - Field Preparation Credits: 1
- HTM 290 - Field Experience I Credits: 2
- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4
- Five general education courses

#### Second Year

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3

- BUS 201 - Legal Environment for Business Credits: 3
- HTM 213 - Introduction to Food and Beverage Management Credits: 3
- HTM 222 - Introduction to Lodging Management Credits: 3
- HTM 390 - Field Experience II Credits: 2
- Two HTM emphasis/core courses
- Three general education courses
- One open elective

#### Third Year

- HTM 343 - Human Resource Management Credits: 4
- HTM 361 - Hospitality Law and Legislation Credits: 3
- HTM 373 - Hospitality Information Analysis Credits: 4
- HTM 490 - Senior Internship Credits: 2
- MKT 350 - Marketing Management Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- Two HTM emphasis courses
- One general education course

#### Fourth Year

- HTM 375 - Hospitality and Tourism Research Credits: 3
- HTM 452 - Hospitality and Tourism Marketing Credits: 3
- HTM 495 - Hospitality Management (Capstone) Credits: 3
- Two HTM emphasis courses
- Two general education courses
- Three open electives

## Adventure Tourism Management Minor

### Requirements for a Minor in Adventure Tourism Management

Students in HTM and other majors may minor in adventure tourism management by completing 12 credits in the required core, two credits from the PED skills development, and seven elective credits as per the following plan.

#### A. Required Foundation Courses (12 credits)

- HTM 268 - Adventure Tourism Credits: 3
- HTM 235 - Tourism and Recreation Management Credits: 3
- HTM 368 - Geotourism Credits: 3
- NRM 420 - Wildland Recreation Management Credits: 3

#### B. FIT Skills Development Courses (two from the following)

- FIT 119 - Outdoor Skills/Snowshoeing Credits: 1
- FIT 128 - Rock Climbing Credits: 1
- FIT 153 - Sailing-Large Boat Credits: 1  
(or other FIT courses with approval of department chair/assistant chair)

#### C. Electives (minimum of 7 credits):

To complete the adventure tourism management minor, students must also undertake a minimum of seven **additional** credits from the following:

- HTM 202 - International Tourism Credits: 3
- NRM 451 - Natural Resource Policy Credits: 3
- NRM 300 - Ethical Recreation: Leave No Trace Credits: 1
- MGT 345 - Team Building Credits: 3
- MGT 330 - Entrepreneurship and Small Business Management Credits: 3
- MGT 364 - Service Operations Management Credits: 3
- \*HTM 290/390/490 (adventure tourism based) Field Experience Credits: 2

\*Students minoring in adventure tourism management are encouraged to consider including at least one field experience course in their program. MGT, NRM, MOV appropriate adventure based internships may be included. Interested students should meet with the HTM chair or assistant chair to establish a specific minor plan.

## Hospitality and Tourism Management Minor

### Requirements for a Minor in Hospitality and Tourism Management

Students in other majors may minor in hospitality and tourism management by completing a minimum of six courses in HTM, including HTM 101 Introduction to Hospitality and Tourism, totaling a minimum of 21 credits, with approval of department chair/assistant chair. Students minoring in HTM are encouraged to consider including at least one field experience course in their program. Interested students should meet with the HTM chair or assistant chair to establish a specific plan.

For courses, curriculum, other degree related information, and faculty listings, please visit the Grand Valley State University catalog online at [www.gvsu.edu/catalog/](http://www.gvsu.edu/catalog/).

## Bachelor of Business Administration in Human Resource Management

This major emphasizes the management of the relationship between an organization and its employees. Business firms need human resource specialists who are capable of helping position the organization strategically through the design and administration of policies dealing with diversity and equal opportunity, recruiting and selection, training, performance appraisal, compensation, benefits, discipline, employee rights, and labor negotiations. Curriculum is focused on organizational efficiency and effectiveness.

### Requirements for the B.B.A.

#### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

#### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**  
ECO 211 - Introductory Microeconomics Credits: 3

#### **OR** ECO 200 - Business Economics Credits: 3

- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

## Human Resources

### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

### Required Courses

Business core and the following:

- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- MGT 333 - Human Resource Management Credits: 3
- MGT 334 - Employment and Labor Law Credits: 3
- MGT 336 - Compensation and Benefits Management Credits: 3
- MGT 429 - Staffing and Development Credits: 3
- MGT 431 - Strategic Human Resources Management Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

And one of the following:

- MGT 355 - The Diversified Workforce Credits: 3
- MGT 430 - Organizational Development Credits: 3
- MGT 432 - Grievance Administration, Arbitration, and Collective Bargaining Credits: 3
- MGT 433 - International Human Resource Management Credits: 3

## Minor in Human Rights

Human rights have become the moral language of today in fields as disparate as philosophy, international politics and health care, as well as other service professions. This program provides students with both intellectual and practical opportunities to engage with human rights in preparation for encountering a wide variety of 21<sup>st</sup>-century political issues, social problems, and employment opportunities.

The human rights curriculum is distinctively interdisciplinary, mirroring the world of human rights today. Completing the minor will equip students with key concepts and opportunities within this world, such as:

- The political, philosophical and legal development of human rights concepts within academic scholarship and political practice
- The role of human rights in international relations and law
- The growth of human rights institutions, courts, tribunals, and the emergence of human rights law as a profession
- The explosive growth of humanitarian organizations and non-governmental organizations (NGOs) dedicated to human rights activism and practice.
- The incorporation of human rights concerns in the corporate world regarding job relocation, human resources, and international investment.

### Admission Requirements

Anyone admitted to GVSU as a degree-seeking student can declare the human rights minor.

### Minor Requirements

Students must complete 19 credits, including the introductory and Capstone courses, two courses from the core course lists, and three additional elective courses. A maximum of three of the core and elective courses may be from the same prefix.

### Required Courses (4 credits)

- HRT 105 / PLS 105 - Introduction to Human Rights Credits: 3  
OR HNR 263 - Theory and Practice of Rights I Credits: 3
- HRT 450 - Reflection on Human Rights Credits: 1

### Core Courses (6 credits)

Take two courses (three credits each), one each from core courses list A and B; each course must have a different prefix.

#### Core List A (choose one course)

- CJ 325 - Criminal Justice and Human Rights Credits: 3
- HST 378 - Contesting Human Rights Credits: 3
- HRT 316 / PLS 316 - Human Rights in International Politics Credits: 3
- HRT 319 / HST 319 / LIB 319 - Human Traffic and Trafficking Credits: 3

#### Core List B (choose one course)

- AAA 341 - Civil Conflicts in Africa Credits: 3
- HRT 320 / LIB 320 - Voices of the Civil Rights Movement in the United States Credits: 3
- HRT 335 / PLS 335 - Theory of Human Rights Credits: 3
- PLS 240 / HNR 231 - The Holocaust Credits: 3

### Elective Courses (9 credits)

Take three courses (three credits each) from elective courses list, with no more than two courses from a single major/designator. Courses from core courses lists A and B may also be counted as elective courses, but a single course may not count both as a core course and an elective.

- AAA 319 - African Politics Credits: 3
- AAA 352 - Black Women's Culture and Communities Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- ANT 370 - Cross-cultural Perspectives on Gender Credits: 3
- CLA 367 - Thinking Like a (Roman) Lawyer Credits: 3
- CJ 305 - Constitutional Rights and Civil Liberties Credits: 3
- CJ 320 - Crimes Against Women Credits: 3
- CJ 482 - Culture, Crime and Justice Credits: 3
- ECO 350 - Economics of Gender Credits: 3
- ENG 335 - Literature of American Minorities Credits: 3
- ENG 336 - Lesbian, Gay and Queer Literature Credits: 3
- ENG 392 - Language and Power Credits: 3
- GPY 335 - Globalization and Development Credits: 3
- GPY 351 - Geography of Africa Credits: 3
- HRT 380 - Special Topics in Human Rights Credits: 1 to 3
- HRT 389 - Study Abroad in Human Rights Credits: 3
- HRT 399 - Independent Study in Human Rights Credits: 1 to 3
- HRT 490 - Internship in Human Rights Credits: 3
- HRT 499 - Independent Research/Thesis Credits: 1 to 3
- HST 316 - U.S. Civil Rights Movement History Credits: 3
- HST 318 - History of Democracy in America Credits: 3
- HST 332 - Emergence of Modern India and South Asia Credits: 3
- HST 333 - Modern China Credits: 3
- HST 336 - Africa After 1870 Credits: 3
- HST 371 - Historical Perspectives on Gender and Sexualities Credits: 3
- HST 386 - 20th Century Europe Credits: 3
- IDS 350 - Civil Discourse Credits: 3
- LS 370 - Women and the Law Credits: 3
- LIB 325 - LGBTQ Identities Credits: 3
- LIB 342 - Food Matters Credits: 3
- LIB 350 - The Immigrant Experience in the U.S. Credits: 3
- MES 370 - Contemporary Issues in the Middle East: The Model Arab League Credits: 3
- PHI 320 - Social and Political Philosophy: Liberty and Justice Credits: 3
- PHI 370 - Sex Matters: Feminist Philosophy in the Contemporary World Credits: 3
- PLS 302 - Women, Politics, and Public Policy Credits: 3
- PLS 319 - African Politics Credits: 3
- PLS 334 - Sex, Power, and Politics Credits: 3
- PLS 338 - Citizenship Credits: 3
- SOC 313 - Race and Ethnicity Credits: 3
- SOC 315 - Social Class Inequality Credits: 3

- SOC 317 - Sociology of Gender Credits: 3
- SOC 318 - Sociology of Sexuality Credits: 3
- SOC 333 - Sociology of The Civil Rights Movement Credits: 3
- SOC 350 - Family and Gender in the Developing World Credits: 3
- WGS 302 - Women, Politics, and Public Policy Credits: 3
- WGS 310 - Sexual Orientation and the Law Credits: 3
- WGS 317 - Sociology of Gender Credits: 3
- WGS 318 - Sociology of Sexuality Credits: 3
- WGS 320 - Crimes Against Women Credits: 3
- WGS 334 - Sex, Power, and Politics Credits: 3
- WGS 336 - Lesbian, Gay and Queer Literature Credits: 3
- WGS 350 - Family and Gender in the Developing World Credits: 3
- WGS 352 - Black Women's Culture and Communities Credits: 3
- WGS 370 - Women and the Law Credits: 3
- WGS 371 - Historical Perspectives on Gender and Sexualities Credits: 3

## Information Systems - Program Description

For additional information about opportunities your college offers, please refer to the Seymour and Esther Padnos College of Engineering and Computing section in this catalog.

### Degrees Offered

M.S. in computer information systems, M.S. in medical and bioinformatics. B.S. in computer science, B.S. in information systems. Minors offered: computer engineering, computer science, computer science (6-12 secondary teacher certification), health care information systems, information systems, information security systems, and information technology.

**Website:** [www.cis.gvsu.edu/degrees/inf](http://www.cis.gvsu.edu/degrees/inf)

Undergraduate and graduate computing programs at Grand Valley State University are offered by the School of Computing and Information Systems. Computing programs prepare students for a rewarding career that is in high-demand.

One of the strengths of the computing programs at Grand Valley is flexibility. We offer majors in computer science and information systems. All programs share faculty, courses, and laboratory resources. Also, by choosing electives and minors in related subject areas, students can further tailor their degrees to fit their individual needs and career goals.

Computers play important roles in virtually every aspect of our lives. Technological advances are extending the influences of the computer even further and many more applications of the computer remain to be discovered. For example, expert systems model the knowledge and strategies of experts in an area so others may benefit. Such systems have been developed for medical diagnosis and treatment, automotive engine analysis, and many other fields. Voice recognition systems allow the pilot of a military aircraft to give voice commands for certain operations.

Information systems majors study the use of computers in organizing and processing information. This includes such topics as database management systems, networking and distributed computing, network management, and systems analysis. Cognate courses emphasize communication skills and business fundamentals. The degree includes the equivalent of a minor in business.

### The School of CIS Mission

The mission of the School of Computing and Information Systems is to provide the GVSU student community with the intellectual foundations and experiences necessary to use information technology effectively in their chosen careers.

To enable students to attain this goal, the CIS faculty have two primary responsibilities. First, we will offer a solid conceptual foundation required for a career in information technology. Second, we will provide direct,

experiential knowledge of technology necessary to be a productive user/producer of information technology.

To achieve these goals we

- work continuously to keep our curriculum relevant to our mission;
- ensure that work-relevant experience is part of every class;
- establish and nurture industrial contacts;
- establish an integrated, supported co-op experience for CIS majors; and
- provide all students, regardless of their major interests, fundamental knowledge of computers and information processing.

### Information Systems Objectives

By the time of graduation, information systems students will

- appropriately apply general knowledge of information systems fundamentals;
- identify and analyze potential solutions to IS problems. Design and deploy specific solutions to IS problems, employing current tools, techniques, and skills;
- demonstrate an understanding of the organizational processes and contexts in which information systems (IS) are developed, deployed, and maintained;
- assess the consequences of organizational and technology decisions in the context of ethical, professional, and social responsibility;
- function effectively on teams;
- communicate effectively with a range of audiences; and
- show a recognition of the need for, and ability to engage in, continuing professional development.

Three years after graduation, our typical information systems alumni are expected to be computing professionals who

- continue to develop their knowledge and skills after graduation;
- use information technology to build and manage effective organizational systems; and
- use technical, communication, teamwork, and leadership skills to function productively, professionally, and ethically.

### Accreditation

The **computer science major** is accredited under the General Criteria and Computer Science Criteria by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: (410) 347-7700. Website: [www.abet.org](http://www.abet.org)

The **information systems major** is accredited under the General Criteria and Information Systems Criteria by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone (410) 347-7700. Website: [www.abet.org](http://www.abet.org)

### School of Computing and Information Systems Advisory Board

The School of Computing and Information Systems Advisory Board (CISAB) is composed of the school's director and leading computing and information systems experts in West Michigan. The board meets twice each year and advises the school on curriculum development and continuing education. It serves as an important interface between the school and the computing community.

### Admission to the Information Systems Major

Admission to major standing in information systems (IS) is competitive and requires an application for admittance into the major. Applicants must meet the following criteria:

1. Overall GPA of 2.5 or above in all Grand Valley State University coursework.
2. Completion of each course in the IS Foundation with a grade of C or above (C- is not sufficient).
3. GPA of 2.5 or above in the IS Foundation.

The IS Foundation includes CIS 162 and 260; MTH 125; STA 215, 312 or 318; and either COM 201 or WRT 350. Completing the IS Foundation courses require programming, analytical reasoning, and communication skills. These skills are important to excel in the computing field.

## Information Systems

The IS Foundation GPA is calculated on no more than one repeat per course. Achievement of the minimum requirements does not guarantee admission to the major. The School of CIS will also consider internship availability and the applicant's suitability for internships before granting admission. Transfer students must complete at least six hours of CIS coursework before applying, but should consult with a CIS advisor before scheduling their first semester.

Note: While admission to major standing in information systems (IS) may be achieved with completion of the computer science foundation instead of the IS foundation, it is still necessary to complete all the required courses of the information systems major.

### Participating Programs

The School of Computing and Information Systems currently is participating with the following programs/colleges/schools to offer students varying computing programs:

- Professional science master's program: Master of Science in medical and bioinformatics
- School of Engineering: Computer engineering major
- School of Engineering: Computer engineering minor
- Seidman College of Business: General business minor (built into our information systems major)
- Allied Health Sciences Department in the College of Health Professions: Health care information systems minor
- School of Criminal Justice: Information security systems minor

### Student Honor Society

Upsilon Pi Epsilon is the international honor society for the computing and information disciplines. The Gamma Chapter of Michigan (GVSU's student chapter) was established on April 4, 1992. It has received endorsements from the two largest computer organizations in the world, the Association for Computing Machinery (ACM) and the IEEE Computer Society (IEEE-CS). According to certain criteria, students are invited to become members and are inducted at the initiation ceremony, which is scheduled in the fall of each year.

To be eligible for election to membership, undergraduate students

(1) shall have attained a general scholarship rating, in all college work thus far completed, of not less than 3.0/4.0 grade-points provided; and

(2) shall have completed at least 45 semester hours of college work including 15 semester hours in the basic courses in the computing and information disciplines.

## Bachelor of Science in Information Systems

Students who wish to major in information systems must complete the following.

### Requirements for a Major in Information Systems

#### 1. University Degree Requirements

As identified in the General Academic Policies section of the catalog.

#### 2. Admission to the Information Systems Major

Admission to major standing in information systems (IS) or computer science (CS) is competitive and requires an application. Applicants must meet the following criteria:

1. Overall GPA of 2.5 or above in all Grand Valley State University coursework.
2. Completion of each course in the IS Foundation or the CS Foundation with a grade of C or above (C- is not sufficient).
3. GPA of 2.5 or above in the IS Foundation or the CS Foundation.

The IS foundation includes CIS 162 and 260; MTH 125; STA 215, 312; and either COM 201 or WRT 350. (The CS Foundation is listed in the catalog with the computer science major.) Completing the IS (or CS) Foundation courses require programming, analytical reasoning, and communication skills. These skills are important to excel in the computing field.

The IS/CS foundation GPA is calculated on no more than one repeat per course. Achievement of the minimum requirements does not guarantee admission to the major. The School of CIS will also consider internship availability and the applicant's suitability for internships before granting admission. Transfer students must complete at least six hours of CIS coursework before applying, but should consult with a CIS advisor before scheduling their first semester.

Note: While admission to major standing in information systems may be achieved with completion of the CS foundation instead of the IS foundation, it is still necessary to complete all the required courses of the information systems major.

### 3. Information Systems Major

All information systems majors must complete the following 49-52 credit hours of CIS courses with a minimum 2.0 GPA:

- CIS 150 - Introduction to Computing Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 230 - Hardware and Software Credits: 3
- CIS 238 - Internet Media and Programming Credits: 3
- CIS 253 - COBOL Credits: 4 **OR** CIS 371 - Web Application Programming Credits: 3
- **OR** CIS 163 - Computer Science II Credits: 4
- CIS 260 - Application Development in Visual Basic Credits: 4
- CIS 290 - CIS Internship Preparation Credits: 1
- CIS 330 - Systems Analysis and Design Credits: 3
- CIS 333 - Database Management and Implementation Credits: 3
- CIS 337 - Network Systems Management Credits: 3
- CIS 450 - IS Project Management Credits: 3
- CIS 460 - Management of Information Systems Credits: 3
- CIS 463 - Information Systems Project Credits: 3
- CIS 490 - Internship Credits: 2 to 5

### Select One

Information systems majors must select one of the following tracks.

#### Software Development: (two-course track)

- CIS 253 - COBOL Credits: 4
- **OR** CIS 371 - Web Application Programming Credits: 3
- **OR** CIS 163 - Computer Science II Credits: 4
- (If one of these courses was selected in the core preceding, it cannot be counted again in this software development track)
- CIS 443 - Software Development Tools Credits: 3

#### Networking: (two-course track)

- CIS 338 - Wide Area Network Engineering Credits: 3
- **OR** CIS 375 - Wireless Networking Systems Credits: 3
- CIS 437 - Distributed Computing Credits: 4

### 4. Bachelor of Science Course Requirements

Completion of MTH 125, and either STA 215 or 312, and either STA 216 or 318 satisfies the B.S. degree requirement courses for information systems majors.

All information systems majors must complete the following 39 credits of cognate courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3
- COM 201 - Speech Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MKT 350 - Marketing Management Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- WRT 350 - Business Communication Credits: 3

**Select one from each of the following three groupings:**

- ECO 210 - Introductory Macroeconomics Credits: 3  
**OR** ECO 211 - Introductory Microeconomics Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3  
**OR** STA 312 - Probability and Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3  
**OR** STA 318 - Statistical Computing Credits: 3

**Suggested Order of Coursework for a Major in Information Systems**

This suggested order of coursework assumes that students will complete the IS foundation and general education courses with the help of their advisor and apply for admission during the winter semester of their first year. The following course sequence also assumes a strong mathematics background for the entering student. If mathematics deficiencies exist, completing the mathematics prerequisites should be the student's top priority.

**First Year:**

- General education courses
- CIS 150 - Introduction to Computing Credits: 3
- CIS 162 - Computer Science I Credits: 4
- WRT 150 - Strategies in Writing Credits: 4
- General education course
- CIS 260 - Application Development in Visual Basic Credits: 4
- COM 201 - Speech Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

**Second Year:**

- General education courses
- ACC 212 - Principles of Financial Accounting Credits: 3
- CIS 238 - Internet Media and Programming Credits: 3
- CIS 290 - CIS Internship Preparation Credits: 1
- STA 216 - Intermediate Applied Statistics Credits: 3  
**OR** STA 318 - Statistical Computing Credits: 3
- General education course
- CIS 253 - COBOL Credits: 4  
**OR** CIS 371 - Web Application Programming Credits: 3  
**OR** CIS 163 - Computer Science II Credits: 4
- ACC 213 - Principles of Managerial Accounting Credits: 3
- CIS 230 - Hardware and Software Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3

**Third Year:**

- BUS 201 - Legal Environment for Business Credits: 3
- CIS 337 - Network Systems Management Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MKT 350 - Marketing Management Credits: 3
- WRT 350 - Business Communication Credits: 3
- General education courses
- CIS 330 - Systems Analysis and Design Credits: 3
- CIS 333 - Database Management and Implementation Credits: 3
- ECO 210 - Introductory Macroeconomics Credits: 3  
**OR** ECO 211 - Introductory Microeconomics Credits: 3
- WRT 305 - Writing in the Disciplines

**Fourth Year:**

- General education courses
- IS track course elective Credits: 3
- CIS 450 - IS Project Management Credits: 3
- CIS 460 - Management of Information Systems Credits: 3
- CIS 490 - Internship Credits: 2 to 5
- General education courses
- IS track course elective Credits: 3 or 4
- CIS 463 - Information Systems Project Credits: 3
- FIN 320 - Managerial Finance Credits: 3

**Health Information Management - Program Description****Health Information Management Major with a Minor in CIS Health Care Information Systems**

Health information management (HIM) is the practice of acquiring, analyzing, and protecting digital and traditional medical information vital to providing quality patient care. HIM organizes and manages health information data by ensuring its quality, accuracy, accessibility, and security. Health information managers regularly communicate with physicians and other healthcare professionals to clarify diagnoses or to obtain additional information.

The increasing use of electronic health records (EHR) will continue to broaden and alter the job responsibilities of HIM. HIM administrators must be familiar with EHR computer software, maintaining EHR security, and analyzing electronic data to improve healthcare information. HIM uses EHR software to maintain data on patient safety and disease treatment and outcome. Administrators also may assist with improving EHR software usability and contribute to the development and maintenance of health information networks.

Students pursuing the health information management program will also be required to complete the minor in health care information systems, through the computer information systems (CIS) department ([www.cis.gvsu.edu](http://www.cis.gvsu.edu)).

The baccalaureate degree Health Information Management Program is in candidacy status, pending accreditation review by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

**Secondary Admissions Criteria for the Health Information Management (HIM) Program**

The HIM program is a secondary admission program. The admissions process will take place winter semester and will require an HIM application by March 1, prior to the intended fall entry. The minimum criteria for application will be:

- A minimum overall GPA of 2.5
- Completion of the HIM application form
- Completion of 45 semester hours, which includes current enrollment, verified by transcript(s)
- No grade less than a C in BMS 250, BMS 251 and AHS 100

**Health Information Management, B.S.****Required Courses**

- AHS 100 - Medical Terminology Credits: 3
- AHS 110 - Introduction to Health Care Credits: 3
- AHS 301 - Introduction to Health Care Research Credits: 3
- BMS 222 - Introduction to Public Health Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- CIS 150 - Introduction to Computing Credits: 3
- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 237 - Introduction to Network Management Credits: 3
- CIS 340 - Health Care Information Systems Credits: 3
- HIM 301 - Introduction to Health Information Management Credits: 3
- HIM 302 - Health Care Law Credits: 3
- HIM 304 - Advanced Med Terms of Disease Credits: 3
- HIM 310 - Functional and Administrative Practices in Health Information Management Credits: 3
- HIM 311 - CPT/HCPCS Coding Credits: 3

## Health Information Management

- HIM 320 - Applications of Organizational Planning for Health Information Management Credits: 3
- HIM 345 - Orientation to Health Information Management Practicum Credits: 1
- HIM 361 - Disease Classification System I Credits: 3
- HIM 362 - Disease Classification System II Credits: 3
- HIM 364 - Financial Reimbursement Credits: 3
- HIM 365 - Quality Management in Health Care Credits: 3
- HIM 366 - Health Information Data Systems and Statistics Credits: 3
- HIM 402 - Health Information Management Review Credits: 1
- HIM 470 - Field Practicum in Health Information Management Credits: 12
- SOC 286 - Sociology of Health Care Credits: 3

Total HIM Major Credits	61 credits
Total CIS Minor Credits	27 credits
Total General Education Credits (unduplicated)	38 credits
Total	126 credits

\* The minor in CIS health information systems is required in this program.

Students must take two courses with the Supplemental Writing Skills (SWS) designation.

Math 110 is a prerequisite to courses in the mathematical foundations.

The health information and reimbursement emphasis under the allied health sciences major, will be replaced by the health information management program.

### Suggested Course Sequence of Study

#### Fall Year 1 (14 credits)

- General education arts Credits: 3
- General education philosophy/literature Credits: 3
- BIO 120 - General Biology I Credits: 4
- WRT 150 - Strategies in Writing Credits: 4

#### Winter Year 1 (15 credits)

- General education U.S. diversity Credits: 3
- General education social/behavior sciences Credits: 3
- General education physical sciences Credits: 3
- AHS 110 - Introduction to Health Care Credits: 3
- CIS 150 - Introduction to Computing Credits: 3

#### Fall Year 2 (16 credits)

- General education History (advised HST 203 SWS) Credits: 3
- AHS 100 - Medical Terminology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3

#### Winter Year 2 (16 credits)

- General education Social/Behavioral Sciences Credits: 3
- BMS 251 - Anatomy and Physiology II Credits: 4
- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 237 - Introduction to Network Management Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### Fall Year 3 (16 credits)

- General education World Perspectives (Issues) Credits: 3
- BMS 222 - Introduction to Public Health Credits: 3
- CIS 340 - Health Care Information Systems Credits: 3
- HIM 301 - Introduction to Health Information Management Credits: 3
- HIM 304 - Advanced Med Terms of Disease Credits: 3

#### Winter Year 3 (15 credits)

- General education Issues Credits: 3
- HIM 361 - Disease Classification System I Credits: 3
- HIM 364 - Financial Reimbursement Credits: 3
- HIM 365 - Quality Management in Health Care Credits: 3

- HIM 366 - Health Information Data Systems and Statistics Credits: 3

#### Spring/Summer Year 3 (9 credits)

- AHS 301 - Introduction to Health Care Research Credits: 3
- HIM 302 - Health Care Law Credits: 3
- HIM 362 - Disease Classification System II Credits: 3

#### Fall Year 4 (13 credits)

- HIM 310 - Functional and Administrative Practices in Health Information Management Credits: 3
- HIM 311 - CPT/HCPCS Coding Credits: 3
- HIM 320 - Applications of Organizational Planning for Health Information Management Credits: 3
- HIM 345 - Orientation to Health Information Management Practicum Credits: 1
- SOC 286 - Sociology of Health Care Credits: 3

#### Winter Year 4 (13 credits)

- HIM 402 - Health Information Management Review Credits: 1
- HIM 470 - Field Practicum in Health Information Management Credits: 12

## Health Care Information Systems Minor

### Requirements for a Minor in Health Care Information Systems

The following minor requires a minimum GPA of 2.0 to be approved.

- AHS 100 - Medical Terminology Credits: 3
- AHS 110 - Introduction to Health Care Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 335 - Data Mining Credits: 3
- CIS 340 - Health Care Information Systems Credits: 3
- CIS 358 - Information Assurance Credits: 3
- HIM 310 - Functional and Administrative Practices in Health Information Management Credits: 3

Select one:

- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 161 - Computational Science Credits: 3
- CIS 162 - Computer Science I Credits: 4

Select one:

- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 333 - Database Management and Implementation Credits: 3
- CIS 353 - Database Credits: 3
- CIS 360 - Information Management and Science Credits: 3

Select one:

- CIS 237 - Introduction to Network Management Credits: 3
- CIS 337 - Network Systems Management Credits: 3
- CIS 457 - Data Communications Credits: 4

## Information Security Systems Minor

The information security systems minor, offered by the School of Computing and Information Systems and the School of Criminal Justice, is open to all students. This minor is designed to provide students with a foundation related to the principles of information security in a theoretical and practical application related to how a comprehensive information security program will contribute to protecting organizational information assets.

Only 12 credits maximum may apply to both the criminal justice major and ISS minor. Seek advising for assistance.

### Requirements for a Minor in Information Security Systems

The ISS minor requires 24-26 credit hours:

- CJ 315 - Principles of Security Credits: 3
- CJ 464 - Security Management Credits: 3

Select one course from each of the five groupings:

- Group 1
  - CJ 201 - Criminology Credits: 3
  - CJ 302 - Criminal Law Credits: 3

## Group 2

- CJ 311 - Criminal Investigation Credits: 3
- CJ 408 - White-Collar and Corporate Crime Credits: 3

## Group 3

- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 163 - Computer Science II Credits: 4

## Group 4

- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 333 - Database Management and Implementation Credits: 3
- CIS 358 - Information Assurance Credits: 3

## Group 5

- CIS 237 - Introduction to Network Management Credits: 3
- CIS 337 - Network Systems Management Credits: 3
- CIS 457 - Data Communications Credits: 4

## Group 6

- CIS 430 - Computer and Cyber Forensics
- CIS 458 - System Security Credits: 3

Contact the School of Criminal Justice or the School of Computing and Information Systems for additional information.

## Information Systems Minor

### Requirements for a Minor in Information Systems

The following minor requires a minimum GPA of 2.0 to be approved.

- CIS 150 - Introduction to Computing Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 230 - Hardware and Software Credits: 3
- CIS 330 - Systems Analysis and Design Credits: 3
- CIS 333 - Database Management and Implementation Credits: 3
- CIS 337 - Network Systems Management Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3

Select one of the following:

- CIS 238 - Internet Media and Programming Credits: 3
- CIS 253 - COBOL Credits: 4
- CIS 260 - Application Development in Visual Basic Credits: 4

## Information Technology Minor

### Requirements for a Minor in Information Technology

The following minor requires a minimum GPA of 2.0 to be approved. A minor in information technology must complete at least 24 hours as follows.

All of the following (18 hours)

- CIS 150 - Introduction to Computing Credits: 3
- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 230 - Hardware and Software Credits: 3
- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 237 - Introduction to Network Management Credits: 3
- CIS 339 - IT Project Management Credits: 3

Two electives selected from the following (6 hours)

- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 238 - Internet Media and Programming Credits: 3
- CIS 260 - Application Development in Visual Basic Credits: 4
- CIS 331 - Data Analysis Tools and Techniques Credits: 3
- CIS 338 - Wide Area Network Engineering Credits: 3

## Integrated Science - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/isci](http://www.gvsu.edu/isci)

### Integrated Science Major (elementary)

The integrated science major is designed for students seeking certification to teach at the elementary and/or middle school level. It provides the

student with broad exposure in all the sciences and emphasizes the connections between the scientific disciplines, their relationship with technology, and their relevance to society. In addition, a significant amount of time is dedicated to different teaching and learning styles, some of which are modeled in various courses. In order to be certified, students must complete this major with at least a 2.7 GPA, the elementary teaching minor, and the College of Education professional program.

Integrated science majors are prepared for teaching using National Science Standards guidelines for professional development of teachers. Our students learn essential science content through the perspectives and methods of inquiry, integrate knowledge of science, learning and pedagogy, and apply that knowledge to science teaching. Upon completion of this cohesive and integrated program, preservice teachers understand the importance of lifelong learning.

### Integrated Science Secondary Endorsement

Students who have declared or completed a teachable major and minor in a science discipline may complete additional courses to add an integrated science secondary endorsement to their secondary teaching certificate. The endorsement (obtained upon passing the Michigan Department of Education MDE Integrated Science Test) will certify teachers to teach general science, biology, chemistry, earth science and physics at the secondary level (grades 6-12).

### Associated Programs

#### College of Education

The integrated science program faculty collaborate with colleagues in the College of Education to place our students in classrooms with experienced science teachers. Our graduates have a unique combination of skills and experiences that are highly valued by most school districts.

#### Regional Math and Science Center

The science (SCI) designation describes courses or workshops that are interdisciplinary in nature and relate to more than one science and/or mathematics discipline. They are primarily for preservice and in-service school teachers. These courses are offered by the faculty in Grand Valley's science departments and/or in conjunction with the Regional Math and Science Center.

## Bachelor of Science in Integrated Science

### Integrated Science Secondary Endorsement

Students who have declared or completed a major and minor in a science discipline may complete additional courses for an integrated science secondary endorsement to their teaching certificate. The endorsement (obtained upon passing the Michigan Department of Education MDE Integrated Science Test) will be able to teach general science at the secondary level (grades 6-12). The Michigan Department of Education will allow teachers with the integrated science secondary endorsement to teach biology, chemistry, earth science and physics at the secondary level once they have successfully passed the MDE subject area tests. Students interested in the integrated science secondary endorsement should contact the CLAS Advising Center to complete a planned program for the completion of the endorsement.

### Requirements for a Major in Integrated Science (elementary)

The integrated science major is designed for students seeking certification to teach at the elementary school level. It provides the preservice teacher broad exposure in all the sciences and emphasizes the connections among the scientific disciplines, their relationship with technology, and their relevance to society. In order to be certified, students must complete this major and the elementary teaching minor with at least a 2.7 GPA in each. Further, students must have an overall GPA of at least 2.7. Students are advised to take the MDE subject test after they have completed the major with a 2.7 GPA. Students seeking elementary teaching certification should review the integrated science major in the Grand Valley State University Undergraduate and Graduate Catalog.

## International Business

### Major Requirements

#### 1. Science

- SCI 319 - Science in Elementary Education Credits: 2
- SCI 336 - Ecology for K-8 Pre-Service Teachers Credits: 4

#### 2. Earth and Space Sciences

- GEO 201 - The Geosphere for K-8 Pre-Service Teachers Credits: 4
- GEO 202 - Hydrosphere for Teachers Credits: 4
- GEO 203 - Weather and Climate for Pre-Service Teachers Credits: 3
- PHY 205 - Astronomy for K-8 Pre-Service Teachers Credits: 2

#### 3. Life Science

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- BIO 205 - Genetics for K-8 Pre-Service Teachers Credits: 2

#### 4. Physical and Chemical Sciences

- CHM 109 - Introductory Chemistry Credits: 4 **OR** CHM 201 - Introduction to Chemical Sciences Credits: 4
- PHY 201 - Inquiry: The Mechanical and Thermal World Credits: 4
- PHY 202 - Physics for K-8 Teachers, Motion, Energy, and Forces Credits: 2
- PHY 203 - Physics for K-8 Teachers, Light, Sound, and Electromagnetism Credits: 2

#### 5. Capstone

- SCI 495 - Teaching Science in the 21st Century Credits: 3

### Suggested Order of Coursework for a Major in Integrated Science

#### First Year

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4  
**OR** CHM 201 - Introduction to Chemical Sciences Credits: 4

#### Second Year

- BIO 205 - Genetics for K-8 Pre-Service Teachers Credits: 2
- GEO 203 - Weather and Climate for Pre-Service Teachers Credits: 3
- PHY 201 - Inquiry: The Mechanical and Thermal World Credits: 4

#### Third Year

- GEO 201 - The Geosphere for K-8 Pre-Service Teachers Credits: 4
- GEO 202 - Hydrosphere for Teachers Credits: 4
- PHY 202 - Physics for K-8 Teachers, Motion, Energy, and Forces Credits: 2
- PHY 203 - Physics for K-8 Teachers, Light, Sound, and Electromagnetism Credits: 2

#### Fourth Year

- PHY 205 - Astronomy for K-8 Pre-Service Teachers Credits: 2
- SCI 319 - Science in Elementary Education Credits: 2
- SCI 336 - Ecology for K-8 Pre-Service Teachers Credits: 4
- SCI 495 - Teaching Science in the 21st Century Credits: 3

## International Business - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

**Website:** [www.gvsu.edu/seidman](http://www.gvsu.edu/seidman)

A major in international business develops a student's ability to meet the challenges of the global business environment. The major trains students to identify and develop appropriate solutions to problems that are unique to doing business internationally. The international business major provides students with a strong grounding in international aspects of business by offering upper-level courses in international management, marketing, finance, accounting, and economics. An important component of the international business major is the requirement that students complete coursework in nonbusiness international culture and foreign languages, and participate in a study abroad program.

Students who pursue the international business major are required to complete a second Seidman major in a functional discipline (such as finance, marketing, accounting, etc.) and a minor in a foreign language or demonstrated proficiency in a foreign language, **AND** they are required to participate in a Grand Valley approved study abroad experience. For students with F1 visas, certain program requirement substitutions may be made. Students should contact the Seidman Undergraduate Student Services Office early in their program for a suggested pattern of coursework.

## Bachelor of Business Administration in International Business

### Requirements for the B.B.A.

#### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

#### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND** ECO 211 - Introductory Microeconomics Credits: 3
- OR** ECO 200 - Business Economics Credits: 3
- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3

- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

#### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

#### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

#### Requirements for a Major in International Business

International business majors must complete all requirements for the B.B.A. degree, plus the specific requirements for the major noted as follows.

#### Background Component

All courses from the following group:

- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

#### International Business Component

Four courses from the following group:

- ACC 330 - International Accounting Credits: 3
- ECO 369 - International Economic Issues Credits: 3
- FIN 429 - International Financial Management Credits: 3
- MGT 433 - International Human Resource Management Credits: 3
- MGT 466 - International Management and Multinational Corporations Credits: 3
- MKT 359 - Multinational Marketing Credits: 3

One course from the following group:

- ECO 349 - Emerging Markets Issues Credits: 3
- ECO 365 - Comparative Economic Systems Credits: 3
- PLS 315 - International Political Economy Credits: 3

#### Cultural Component

Students must take six hours of course credit that may be completed by taking EITHER of the following options.

##### Option A

Take two courses from the following:

- BUS 301 - International Business and Culture Credits: 3
- EAS 201 - East Asia in the Contemporary World Credits: 3
- GPY 220 - Cultural Geography Credits: 3
- GPY 235 - Geography for a Changing World Credits: 3
- GPY 350 - Geopolitics, Energy and Environment of Russia and Central Eurasia Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- GPY 355 - Geography of Southwest Asia (The Middle East). Credits: 3
- LAS 210 - Exploring Latin America Credits: 3
- PLS 211 - International Relations Credits: 3
- PLS 221 - Government and Politics of Western Europe Credits: 3
- PLS 283 - Chinese Politics and U.S.-China Relations Credits: 3
- PLS 327 - Politics of Developing Countries Credits: 3
- RST 225 - Introduction to Russian Culture Credits: 3

Other courses in a variety of disciplines may be used to fulfill this group as approved by the advisor.

##### Option B

At least six hours of international internship credit. This option is highly recommended.

## International Business Minor

### Requirements for a Minor in International Business

Eligible business majors who elect to complete one of the business minors may be required to extend their degree programs beyond the minimum 120-semester hour university requirement.

The undergraduate minor program in international business is for both business and nonbusiness students with the exception of those majoring in international business and general business. The minor consists of 18 credit hours (six courses).

#### Required Courses

- ECO 210 - Introductory Macroeconomics Credits: 3
- MGT 303 - International Business and Culture Credits: 3

Three courses from the following list:

- ACC 330 - International Accounting Credits: 3
- ECO 349 - Emerging Markets Issues Credits: 3
- ECO 365 - Comparative Economic Systems Credits: 3
- ECO 369 - International Economic Issues Credits: 3
- FIN 429 - International Financial Management Credits: 3

- MGT 466 - International Management and Multinational Corporations Credits: 3
- MKT 359 - Multinational Marketing Credits: 3

#### Additional Course

And one course from the international business major cultural component requirement, or a three-credit international internship. Students majoring in any business discipline or economics must select an additional cultures or international business course. Students must achieve a cumulative 2.5 GPA in these courses to receive the international business minor designation. Students must complete all prerequisite courses before enrolling in the international business minor courses. Courses may not be taken credit/no credit.

## Intercultural Training Certificate

The intercultural training certificate is an experiential academic option, and students who complete the certificate will gain a skill set that will foster their interactions and increase their comfort with different cultural groups in both their personal and professional lives. The certificate is 12 credits.

#### ITC Certificate Program

The official university transcript will reflect completion of the courses and contain the phrase, “completed certificate program in intercultural training.” In addition, the student will receive a frameable certificate from the university.

#### Certificate Requirements

Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. To complete the certificate, students must successfully complete the three required courses and two electives, from the list of approved ITC electives. Students must achieve a grade of C (not C-) or better in all required courses to receive the ITC certificate designation. In addition, students must declare their intent to obtain the certificate prior to enrollment in ITC 490, by completing an application for secondary admission. The application is available on the ITC website at [www.gvsu.edu/itc](http://www.gvsu.edu/itc).

#### Required Courses

- ITC 100 - Introduction to Intercultural Competence Credits: 3
- ITC 490 - Practicum: Intercultural Learning Experience Credits: 2 to 6
- ITC 495 - Culminating Seminar in Intercultural Competence Credits: 3

#### Electives

Students take two courses from a list of approved electives - primarily from the existing curriculum in various disciplines and majors. The electives allow students to “customize” their certificates by taking courses that are related to their majors or interests. The list of potential electives is available on the ITC website ([www.gvsu.edu/itc](http://www.gvsu.edu/itc)). Electives may be taken prior to or concurrent with ITC 100 or ITC 490, and before ITC 495.

## International Relations - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/polisci/ir](http://www.gvsu.edu/polisci/ir)

Global communications, technological advances, and burgeoning international trade and investment have increased the frequency and complexity of international relations. As globalization increases, the potential for international cooperation and conflict expands as well. The international relations program at Grand Valley State University provides

## International Relations

students with the opportunity to gain a broad base of knowledge about the history, economics, and politics of interaction among states and non-state actors. Students in the international relations program examine the sources of tension that create conflict among nations and societies, study globalization and interdependence, and learn about the ways in which transnational movements, international organizations, and public diplomacy can promote international cooperation.

International relations is an interdisciplinary program that includes coursework in political science, history, economics, business, geography, and foreign culture. As part of their studies, students are encouraged to become proficient in a foreign language and to study abroad. The Capstone course in international relations allows students to bring together the threads of knowledge they have gathered in interdisciplinary coursework and gives them a chance to pursue independent research on an international relations topic of their choice.

### Study Abroad ([www.gvsu.edu/studyabroad](http://www.gvsu.edu/studyabroad))

Students in the international relations program are strongly encouraged to take advantage of opportunities to study abroad. Grand Valley has institutional partnership agreements with universities in Australia, China, England, France, Ghana, Hungary, India, Japan, Mexico, Norway, Poland, and Turkey. In addition, students may enroll in many other universities worldwide for academic credit. Appropriate courses taken abroad can be credited toward the requirements for the major or minor. Students are encouraged to study the language and culture of a select geographic area as a component of their degree program, and should consider selecting a foreign language or area studies minor. Students are strongly advised to consult with the staff of the Padnos International Center and the international relations program coordinator before enrolling in study abroad programs.

### Internships

In addition to classroom work, students participate in a variety of internship opportunities, including working for local, national, and international government, business, and nonprofit organizations. In recent years, students have pursued internships in Lansing; Washington, D.C.; and overseas, including placements at the Voice of America, Peace Corps, International Red Cross, United Nations, and U.S. Embassies abroad.

Students can earn up to six credits in the internship program. The emphasis of the program is on broadening students' experience and knowledge about international relations through a practical involvement that is firmly founded on and tied to strong academic curricula. GVSU international relations majors have access to GVSU's Laker Jobs site. To get started, visit the internships link at [www.gvsu.edu/polisci/ir/](http://www.gvsu.edu/polisci/ir/).

IR students also have an opportunity to perform an internship and learn in Washington, D.C., through our GV in DC program, a partnership program with The Washington Center. For information on the GV in DC program, visit [www.gvsu.edu/gvdc/](http://www.gvsu.edu/gvdc/).

Professor Polly Diven, the IR program coordinator also serves as internship advisor. She can be reached at [divenp@gvsu.edu](mailto:divenp@gvsu.edu).

### Honors Organization

Pi Sigma Alpha, the National Political Science Honor Society, was established at the University of Texas in 1920. There are currently 621 chapters of Pi Sigma Alpha around the United States, including the Kappa Phi chapter at Grand Valley State University. [www.pisigmaalpha.org](http://www.pisigmaalpha.org)

Initiation into Pi Sigma Alpha is a prestigious award for upper division students who have demonstrated consistent excellence in political science and international relations. Initiation into Pi Sigma Alpha also establishes one's eligibility to participate in Pi Sigma Alpha scholarship and internship grant programs, and to publish research in the Pi Sigma Alpha Undergraduate Journal of Politics. For information about eligibility requirements and campus activities contact Paul J. Cornish, Advisor

to the Kappa Phi chapter of Pi Sigma Alpha at (616) 331-3502 or [cornishp@gvsu.edu](mailto:cornishp@gvsu.edu).

### International House

Located in the Murray Living Center, the International House is a living and learning community for international students, international relations majors, and other related majors including international business, political science and modern languages. A variety of international programming is offered to enhance the academic curriculum, including guest speakers and films. IR students are encouraged to consider this option for housing on campus.

## Bachelor of Arts in International Relations

### Requirements for a Major in International Relations

The international relations major leads to a B.A. degree. Students must demonstrate fourth-semester proficiency in a foreign language and are strongly encouraged to undertake additional language study.

Students majoring in international relations are required to complete at least 36 credit hours, including the major requirements listed as follows. The remaining 15 hours should be selected from the list of international relations course electives as follows and must include a minimum of three hours at the 300-level or above in each of the first three categories: economics and business, geography and history, and political science. Students should not regard this list as definitive. With the permission of the program coordinator, study abroad courses, internship credits, and upper-level GVSU courses not included in this list can be used as electives for the international relations major. These choices should be made in consultation with an advisor and approved by the program coordinator.

### Core Requirements

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- GPY 235 - Geography for a Changing World Credits: 3
- PLS 211 - International Relations Credits: 3
- PLS 312 - U.S. Foreign Policy Credits: 3
- HST 317 - History of American Foreign Relations Credits: 3
- IR 495 - Seminar in International Relations (Capstone) Credits: 3

### International Relations Course Electives

A total of 15 hours must be completed.

#### Business and Economics Courses

Choose a minimum of one course at the 300-level or above.

- ECO 349 - Emerging Markets Issues Credits: 3
- ECO 365 - Comparative Economic Systems Credits: 3
- ECO 369 - International Economic Issues Credits: 3
- FIN 429 - International Financial Management Credits: 3
- HTM 202 - International Tourism Credits: 3
- MGT 303 - International Business and Culture Credits: 3
- MGT 466 - International Management and Multinational Corporations Credits: 3
- MKT 359 - Multinational Marketing Credits: 3

#### Geography and History Courses

Choose a minimum of one course at the 300-level or above.

- GPY 350 - Geopolitics, Energy and Environment of Russia and Central Eurasia Credits: 3
- GPY 351 - Geography of Africa Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- GPY 354 - Geography and Globalization of Asia Credits: 3
- GPY 355 - Geography of Southwest Asia (The Middle East). Credits: 3
- GPY 356 - The Geography, Culture and Land Use Management of Europe Credits: 3
- GPY 362 - Farmers, Crops, and Our Challenging Agricultural World Credits: 3

- GPY 412 - Global Environmental Change Credits: 3
- HST 211 - History of Islamic Civilization Credits: 3
- HST 230 - Latin America in World History Credits: 3
- HST 235 - Africa in World History Credits: 3
- HST 241 - A History of East Asia since 1800 Credits: 3
- HST 307 - United States since 1970 Credits: 3
- HST 310 - Cultural and Social Topics in Nonwestern History Credits: 3
- HST 331 - Modern Latin America Credits: 3
- HST 332 - Emergence of Modern India and South Asia Credits: 3
- HST 333 - Modern China Credits: 3
- HST 334 - The Making of the Caribbean Credits: 3
- HST 336 - Africa After 1870 Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 338 - Modern Middle East Credits: 3
- HST 339 - Modern Iran Credits: 3
- HST 343 - History of South Africa Credits: 3
- HST 375 - History of Mexico Credits: 3
- HST 377 - History of Warfare Credits: 3
- HST 386 - 20th Century Europe Credits: 3
- HST 389 - Russian History Credits: 3
- HST 390 - Soviet History Credits: 3
- LAS 374 - Revolution in the Americas Credits: 3

#### Political Science Courses

Choose a minimum of one course at the 300 level or above.

- AAA 300 - US-Africa Relations Credits: 3
- AAA 341 - Civil Conflicts in Africa Credits: 3
- LAS 320 - Model Organization of American States Credits: 3
- MES 370 - Contemporary Issues in the Middle East: The Model Arab League Credits: 3
- PLS 212 - Great Decisions Credits: 3
- PLS 221 - Government and Politics of Western Europe Credits: 3
- PLS 283 - Chinese Politics and U.S.-China Relations Credits: 3
- PLS 284 - Latin American Politics Credits: 3
- PLS 311 - International Conflict and Conflict Resolution Credits: 3
- PLS 313 - International Organization Credits: 3
- PLS 314 - International Law Credits: 3
- PLS 315 - International Political Economy Credits: 3
- PLS 316 - Human Rights in International Politics Credits: 3
- PLS 319 - African Politics Credits: 3
- PLS 320 - Comparative Politics of the Middle East Credits: 3
- PLS 321 - The European Union Credits: 3
- PLS 325 - Human Rights and Democracy in Russia and the Postcommunist World Credits: 3
- PLS 327 - Politics of Developing Countries Credits: 3
- PLS 339 - Democracy and the Authoritarian Challenge Credits: 3
- PLS 350 - Comparative Public Opinion Credits: 3
- SOC 350 - Family and Gender in the Developing World Credits: 3

#### Special Topics and Independent Study (optional)

- IR 380 - Special Topics in International Relations Credits: 1 to 3
- IR 399 - Independent Readings Credits: 1 to 3
- IR 490 - International Relations Internship Credits: 2 to 6
- IR 499 - Independent Research Credits: 1 to 3

#### Suggested Order of Coursework for a Major in International Relations

The flexibility in course selection makes it important for students to seek the advice of an International Relations faculty advisor when choosing courses to fit their specific needs and interests. No sample curriculum will be appropriate for everyone, although these general guidelines should be helpful to nearly everyone. It is also assumed that some counseling will take place to match the curriculum with career plans. We strongly recommend study abroad and an internship.

#### First Year Fall:

- WRT 150 or MTH 110 (basic skills)
- PLS 211 - International Relations PLS Credits: 3 (major requirement)
- Language 101 (1st of four-semester requirement)
- General education (Arts, history, science-two, or Phil/Lit)

#### First Year Winter:

- WRT 150 or MTH 110 (basic skills)
- GPY 235 - Geography for a Changing World Credits: 3 (major + general education Social Sciences + World Perspectives)
- Language 102 second semester (2nd of four-semester requirement)
- General education (Arts, history, science-two, or Phil/Lit)

#### Second Year Fall:

- ECO 210 - Introductory Macroeconomics ECO Credits: 3 (major requirement + general education social science)
- Language 201 (3rd of four-semester requirement)
- General education (Arts, history, science-two, or Phil/Lit)
- General education (math)

#### Second Year Winter:

- ECO 211 - Introductory Microeconomics ECO Credits: 3 (major requirement + general education Social Sciences)
- PLS 312 - US Foreign Policy PLS Credits: 3 (major requirement)
- Language 202 (4th of 4-semester requirement)
- General education (Arts, history, science-two, or Phil/Lit)
- General education (U.S. Diversity)

#### Third Year Fall and Winter — Study Abroad or On Campus:

- IR electives (15 hours total)
- General education (Arts, history, science-two, or Phil/Lit)
- General education issues course
- Continue language study
- Pursue minor if desired

#### Fourth Year Fall and Winter:

- HST 317 - History of American Foreign Relations HST Credits: 3 (major requirement)
- IR 495 - Seminar in International Relations (Capstone) IR Credits: 3 (major requirement)
- IR elective courses
- Other options:  
Internship  
Additional language instruction  
Complete minor

## International Relations Minor

### Requirements for a Minor in International Relations

Students minoring in international relations are required to complete at least 21 credit hours in the program, including PLS 211, either HST 317 or PLS 312, and at least one course each in the economics and business, history and foreign culture, and political science categories. At least nine elective credits should be taken at the 300-level or above.

- HST 317 - History of American Foreign Relations Credits: 3  
**OR** PLS 312 - U.S. Foreign Policy Credits: 3
- **AND** PLS 211 - International Relations Credits: 3

## Latin American and Latino/a Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/las](http://www.gvsu.edu/las)

Knowledge of Latin America and its people, including those in the United States, is an essential part of a liberal education today. Not only is the Latino population of West Michigan growing rapidly but Latinos now constitute the most populous ethnic group in the United States. In the meantime, U.S. economic, political, and cultural relations with our Latin

## Legal Studies

American neighbors -from Mexico and the Caribbean to Central and South America- continue to grow in importance.

### Study Abroad

A sister university agreement with the Universidad de las Américas in Puebla, México, provides Grand Valley students and faculty with opportunities for prolonged study abroad and opens the door to an exchange with Mexican students and faculty. New agreements with institutions in the Caribbean, Central, and South America are constantly being pursued. Consult the Padnos International Center or the LAS coordinator for information on international internships and other study abroad opportunities in Latin America.

## Latin American and Latino/a Studies Minor

### Requirements for a Minor in Latin American and Latino/a Studies

A total of 21 credits are needed to fulfill the Latin American and Latino/a Studies Minor. No more than two courses from any department other than LAS are counted toward the minor. There is no limit on the courses designated LAS that may apply to the minor.

#### Core Courses (totaling 10 credits)

- SPA 202 - Intermediate Spanish II: Language and Culture Credits: 4
- AND one of the following:**
- LAS 210 - Exploring Latin America Credits: 3
  - OR** LAS 220 - Introduction to Latino/a Studies Credits: 3
- AND one of the following:**
- LAS 330 - Colonial Latin America Credits: 3
  - OR** LAS 374 - Revolution in the Americas Credits: 3
  - OR** GPY 352 - Geography of Latin America Credits: 3

#### Additional Courses

Four of the following electives totaling at least 11 credits:

- AAA 302 - African Diaspora Credits: 3
- ANT 330 - Anthropology of Selected World Areas Credits: 3
- CJ 325 - Criminal Justice and Human Rights Credits: 3
- CJ 482 - Culture, Crime and Justice Credits: 3
- CFV 376 /LAS 376 - Latin American Cinema Credits: 3
- ENG 335 - Literature of American Minorities Credits: 3
- ENG 378 / LAS 378 /SPA 378 - Contemporary Latin American Literature Credits: 3
- ENS 361 /GPY 361 - People, Environment, and Development in the Amazon Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- HST 315 - Latinos: The Forging of Ethnic Identities Credits: 3
- HST 330 - Colonial Latin America Credits: 3
- HST 331 - Modern Latin America Credits: 3
- HST 334 - The Making of the Caribbean Credits: 3
- HST 372 - From Slavery to Freedom Credits: 3
- HST 375 /LAS 375 - History of Mexico Credits: 3
- LAS 210 - Exploring Latin America Credits: 3
- LAS 220 - Introduction to Latino/a Studies Credits: 3
- LAS 320 - Model Organization of American States Credits: 3
- LAS 325 - Human Rights in Latin America Credits: 3
- LAS 333 - Study Abroad - Latin America Credits: 1 to 6
- LAS 373 - Latinos/as in West Michigan Credits: 3
- LAS 380 - Special Topics in Latin American Studies Credits: 1 to 3
- LAS 399 - Independent Studies Credits: 1 to 3
- LAS 490 - Latin American Studies Internship Credits: 1 to 3
- PLS 284 - Latin American Politics Credits: 3
- SPA 304 - Spanish for Health Professionals Credits: 3
- OR** SPA 305 - Spanish for Law Enforcement Credits: 3
- OR** SPA 306 - Spanish for Business Credits: 3
- SPA 311 - Latin American Civilization and Culture I Credits: 3
- SPA 312 - Latin American Civilization and Culture II Credits: 3

- SPA 313 - U.S. Latino/a Civilization and Culture Credits: 3
- SPA 329 - Sociolinguistics of Spanish Credits: 3
- SPA 410 - Spanish American Narrative Credits: 3
- SPA 430 - U.S. Latino/a Literature Credits: 3
- SPA 460 - Women Authors Credits: 3 (only when focus is Latin American writers)
- SOC 322 - Sociology of Community Credits: 3

## Certificate in Latino/a Studies

The certificate in Latino/a studies is designed for students who are, or anticipate, working with people of Spanish-speaking Latin American or Caribbean heritage. It will serve both traditional and non-traditional students seeking a focused, interdisciplinary curriculum that increases their knowledge of the histories, demographics, and cultures of different Latino/a groups.

### Certificate Requirements

Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. To complete the certificate, students must successfully complete the two required courses and electives from the list as follows, totaling 15 credits. All credits for this certificate program must be earned at Grand Valley State University. Students may use credits from this certificate program for the Latin American and Latino/a studies minor.

#### Required (6 credits)

- LAS 220 - Introduction to Latino/a Studies Credits: 3
- LAS 373 - Latinos/as in West Michigan Credits: 3

#### Elective Courses (9 credits)

- CJ 325 - Criminal Justice and Human Rights Credits: 3
- CJ 482 - Culture, Crime and Justice Credits: 3
- ENG 335 - Literature of American Minorities Credits: 3
- HST 315 - Latinos: The Forging of Ethnic Identities Credits: 3
- HST 316 - U.S. Civil Rights Movement History Credits: 3
- LAS 210 - Exploring Latin America Credits: 3
- LAS 380 - Special Topics in Latin American Studies Credits: 1 to 3
- LAS 399 - Independent Studies Credits: 1 to 3
- LAS 490 - Latin American Studies Internship Credits: 1 to 3
- SOC 322 - Sociology of Community Credits: 3
- SPA 304 - Spanish for Health Professionals Credits: 3
- OR** SPA 305 - Spanish for Law Enforcement Credits: 3
- OR** SPA 306 - Spanish for Business Credits: 3
- SPA 313 - U.S. Latino/a Civilization and Culture Credits: 3
- SPA 430 - U.S. Latino/a Literature Credits: 3

## Legal Studies - Program Description

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

**Website:** [www.gvsu.edu/cj](http://www.gvsu.edu/cj)

The legal studies B.A./B.S. degrees are designed to prepare students for careers as paralegals by providing a liberal education and the practical skills needed for success in this field. These programs also provide graduates with skills and knowledge necessary for study at law schools and other graduate programs, including criminal justice, social justice, and related programs.

The B.A./B.S. in legal studies and the certificate in paralegal studies are approved by the American Bar Association (ABA). The legal studies program also offers a minor which is not approved by the ABA.

The legal studies program's mission is accomplished through courses which focus on

1. mastery of substantive knowledge critical to the legal profession, including principles of legal ethics and legal restrictions on the unauthorized practice of law;
2. critical thinking skills;
3. mastery of basic investigative and legal research techniques;
4. proficiency in oral and written communication; and
5. development of appropriate professional behavior and job-seeking skills.

Paralegals perform substantive legal work under the supervision of an attorney. Paralegals work in a variety of employment settings, including law firms, corporations, government entities, and non-profit associations and their specific job titles vary. Their job titles may include titles such as legal assistant, contract administrator, claims specialist, or other titles indicating the nature of the legal work they perform. While paralegals play an important role in the delivery of legal services, they are not permitted to practice law, which means they cannot give legal advice, represent a client in court, establish a fee, or accept a case on behalf of a law firm. The School of Criminal Justice administers the major in legal studies. Some courses can be applied to both a criminal justice and a legal studies major. Check with your advisor for possible selections.

#### Legal Studies Advisory Board

The Legal Studies Advisory Board consists of attorneys and paralegals representing a broad cross section of employers, including small and large law firms, the courts, and public sector legal departments. The Advisory Board plays an important role by giving guidance to the program on matters such as curriculum, internship and employment opportunities, and trends in the legal field.

#### Legal Education Admission Program (LEAP)

The Grand Valley School of Criminal Justice and the Michigan State University College of Law have partnered to offer a 3+3 program called LEAP which provides legal studies majors with the opportunity to earn a B.S. or B.A. and a Juris Doctor (J.D.) in approximately six years of study.

## Bachelor of Arts or Bachelor of Science in Legal Studies

Students seeking a bachelor's degree in legal studies must complete the general education requirements of the university. Students must also meet the degree requirements i.e., third-semester proficiency in a foreign language to earn a B.A. for legal studies, or CIS 150, CJ 300 and STA 215 to earn a B.S. The bachelor's degrees in legal studies are approved by the American Bar Association.

Although most courses taken at other colleges and universities may be accepted for full credit, only a limited number will be counted toward the major. Students must take at least two-thirds of the credits constituting the major at Grand Valley State University. In addition, at least ten credits of legal specialty courses must be taken through traditional classroom instruction.

#### Requirements for a Major in Legal Studies

A minimum of 36 credit hours is required.

All majors must take the following core courses:

- LS 201 - Introduction to Law Credits: 3
- LS 324 - Legal Research and Writing Credits: 3
- LS 420 - Property and Probate Law Credits: 3
- LS 422 - Commercial Law Credits: 3
- LS 426 - Civil Litigation I Credits: 3
- LS 428 - Civil Litigation II Credits: 3
- LS 490 - Legal Studies Internship Credits: 3 to 6
- LS 495 - Legal Thought (Capstone) Credits: 3

In addition, all majors must take:

- ACC 212 - Principles of Financial Accounting Credits: 3
- CIS 150 - Introduction to Computing Credits: 3 (included as part of degree requirement for B.S. degree)

And two of the following courses for B.A. candidates or three of the following courses for B.S. candidates:

- CJ 302 - Criminal Law Credits: 3
- CJ 305 - Constitutional Rights and Civil Liberties Credits: 3
- LS 350 - Family Law Credits: 3
- LS 370 - Women and the Law Credits: 3
- LS 380 - Special Topics in Legal Studies Credits: 1 to 4
- LS 399 - Independent Reading in Legal Studies Credits: 1 to 3
- LS 499 - Independent Study and Research Credits: 1 to 3
- MGT 334 - Employment and Labor Law Credits: 3
- PLS 307 - American Constitutional Law II Credits: 3

#### Suggested Order of Coursework for a Major in Legal Studies

Please visit the website of the College of Community and Public Service Advising Center at [www.gvsu.edu/ccpsadvising/](http://www.gvsu.edu/ccpsadvising/) for a four-year curriculum plan for the legal studies major. Taking courses in the sequence recommended in the curriculum plan for legal studies will help you avoid delays in completing the legal studies degree.

## Legal Studies Minor

The legal studies minor is open to students from any major. It is appropriate for students who have a general interest in law or for students considering law school or other graduate study in law. It is also appropriate for students who are pursuing a career that has a significant connection to law and legal matters and who wish to deepen their understanding of the legal system. The legal studies minor is not intended to prepare students to work as paralegals and it is not approved by the American Bar Association. Students intending to work as paralegals should choose the legal studies major.

#### Requirements for a Minor in Legal Studies

Minors must complete 21 credit hours, including:

- LS 201 - Introduction to Law Credits: 3
- LS 324 - Legal Research and Writing Credits: 3
- LS 420 - Property and Probate Law Credits: 3
- LS 422 - Commercial Law Credits: 3
- LS 426 - Civil Litigation I Credits: 3
- LS 428 - Civil Litigation II Credits: 3
- LS 490 - Legal Studies Internship Credits: 3 to 6 **OR** LS 495 - Legal Thought (Capstone) Credits: 3

## Certificate in Paralegal Studies

Students seeking a certificate in paralegal studies must complete 30 credit hours. Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. Students who have completed a bachelor's degree at another institution with an overall GPA of 2.7 or higher may earn this certificate by completing the course requirements listed as follows. A maximum of six credits can be transferred from another institution. In addition, at least ten credits of legal specialty courses must be taken through traditional classroom instruction. The certificate in paralegal studies is approved by the American Bar Association.

#### Requirements for a Certificate in Paralegal Studies

A minimum of 30 credit hours is required, including the following core courses:

- LS 201 - Introduction to Law Credits: 3
- LS 324 - Legal Research and Writing Credits: 3
- LS 420 - Property and Probate Law Credits: 3
- LS 422 - Commercial Law Credits: 3

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- LS 426 - Civil Litigation I Credits: 3
- LS 428 - Civil Litigation II Credits: 3
- LS 490 - Legal Studies Internship Credits: 3 to 6
- CIS 150 - Introduction to Computing Credits: 3

In addition, two of the following courses:

- CJ 302 - Criminal Law Credits: 3
- CJ 305 - Constitutional Rights and Civil Liberties Credits: 3
- LS 350 - Family Law Credits: 3
- LS 370 - Women and the Law Credits: 3
- LS 380 - Special Topics in Legal Studies Credits: 1 to 4
- LS 399 - Independent Reading in Legal Studies Credits: 1 to 3
- LS 499 - Independent Study and Research Credits: 1 to 3
- MGT 334 - Employment and Labor Law Credits: 3

### Suggested Order of Coursework

Please visit the website of the College of Community and Public Service Advising Center at [www.gvsu.edu/ccpsadvising/](http://www.gvsu.edu/ccpsadvising/) for a curriculum plan for the certificate in paralegal studies. Taking courses in the sequence recommended in the curriculum plan will help you avoid delays in completing the certificate.

## Legal Education Admission Program (LEAP), Legal Studies

Students who are accepted into the Grand Valley School of Criminal Justice and Michigan State College of Law (MSUCL) 3+3 program called LEAP complete a minimum of 91 credits comprising the required undergraduate courses in their first three years of study at Grand Valley. This includes all university-level requirements as well as the requirements for the legal studies major. Upon admission to the law school, legal studies students complete their undergraduate electives with law school courses. Up to 29 credits of MSUCL work in which the student has earned a 2.0 or above will be accepted. The B.S. or B.A. will be awarded upon satisfactory completion of the number of credits and requirements necessary for the undergraduate program.

LEAP is open only to those students who matriculate as first-year students at Grand Valley. Students may apply any time prior to their senior year for consideration under the program. A joint committee that is comprised of faculty from both institutions will admit students to the LEAP program on the basis of undergraduate record, ACT scores and other information deemed relevant. In order to be eligible for consideration for final admission to MSUCL, students enrolled in the 3+3 program must have earned an aggregate Grand Valley grade point average of 3.6 or above, achieve an LSAT score of 156 or above, and satisfy any other current MSUCL admission requirements.

### Suggested Order of Coursework

#### First Year

- A writing skills course
- One or two humanities/arts general education courses
- One or two science general education courses
- Electives (or foreign language)
- ACC 212 - Principles of Financial Accounting Credits: 3
- LS 201 - Introduction to Law Credits: 3
- LS 426 - Civil Litigation I Credits: 3

#### Second Year

- Three or four legal studies courses (such as LS 324, LS 428, and LS 420)
- CJ 300 and STA 215 (B.S. degree)
- One or two general education courses
- Electives or foreign language
- Additional writing skills if needed

#### Third Year

- Two or three legal studies courses at 400-level (such as LS 420 and LS 422)

- Completion of general education courses
- LS 490 - Legal Studies Internship Credits: 3 to 6
- LS 495 - Legal Thought (Capstone) Credits: 3

## Undergraduate Certificate in Liberal Education and Professional Skills

A certificate in liberal education and professional skills (LEPS) provides students with declared liberal arts and interdisciplinary majors an opportunity to develop workplace-related skills, knowledge, and competencies beyond those they already acquire in the coursework toward their degree. Additionally, the program's curriculum encourages students to reflect on career paths in light of their liberal education and synthesize newly acquired professional skills in an applied, problem-solving context. A LEPS certificate indicates that students have acquired additional experience and skills related to:

- Workplace writing
- Professional speaking
- Financial literacy
- Technological literacy
- Project management
- Team-based problem solving

### Admission Requirements

Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree.

### Certificate Requirements

In order to complete the certificate, select a total of 12 credits from a list of required and elective courses. For elective courses, students must select one course from each of the two groups of electives.

#### Required Courses (6 credits)

- IDS 400 - Liberal Education and Problem Solving in the Workplace Credits: 2
- LIB 382 - Leadership Portfolio Development Credits: 1
- WRT 350 - Business Communication Credits: 3

#### Elective Courses (6 credits)

##### Group 1: Technological Literacy (select one course)

- CIS 150 - Introduction to Computing Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3

##### Group 2: Financial Literacy (select one course)

- ECO 200 - Business Economics Credits: 3
- ACC 212 - Principles of Financial Accounting Credits: 3
- Cocurricular Programming

Students pursuing the LEPS certificate are strongly encouraged to participate in the Brooks Professional Series, which provides additional professionalization activities related to networking, career exploration, and the job search. More information about this cocurricular programming is available from the Office of Integrative Learning and Advising, 133 LMH, (616) 331-4321.

## Liberal Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/liberalstudies](http://www.gvsu.edu/liberalstudies)

Students may choose a Bachelor of Arts (B.A.) or a Bachelor of Science (B.S.) degree. The major provides an option in which students can pursue interdisciplinary studies and can reach across disciplinary fields to develop expertise in specified areas of focus. Students begin with core courses and

work with an academic advisor to develop an individualized study plan with a focus area based on academic and career goals. Students may also elect to do an interdisciplinary emphasis in leadership. Liberal Studies is appropriate as a major for students who wish to:

- Organize their studies around problems, issues, and themes rather than around the traditional disciplines; for example, the relationship between poverty and society, community organization, and/or local music cultures and activism.
- Focus on a particular interdisciplinary area of study; for example, cultural studies, American studies, sustainability studies, gender justice, leadership studies, and more.
- Concentrate simultaneously on a general education and a particular academic discipline or career field.

### Advising

Prospective majors should contact the Brooks College Advising Center to make an appointment with an advisor: (616) 331-8200 or [brooksadvising@gvsu.edu](mailto:brooksadvising@gvsu.edu). Substantial information, forms, guidance, and resources are also available on the departmental website at [www.gvsu.edu/liberalstudies/](http://www.gvsu.edu/liberalstudies/).

### Honors Organizations

Alpha Iota Sigma is the academic honor society for interdisciplinary studies. The organization recognizes the academic achievements of students and encourages and supports scholarship and excellence of liberal studies students at the undergraduate level.

### Liberal Studies in Holland

The Liberal Studies Department, in partnership with continuing education and Grand Rapids Community College, now offer an adult degree completion program through the Meijer Campus in Holland. See the website, [www.gvsu.edu/holland/](http://www.gvsu.edu/holland/) for more information.

### Liberal Studies in Muskegon

Muskegon Community College and Grand Valley State University have collaborated to provide a degree completion program at one convenient location. After completion of an Associate of Science and Arts or the MTA/MACRAO program (plus selected foundation courses) at Muskegon Community College, students will begin degree completion courses through Grand Valley State University.

Grand Valley State University courses will be offered in a cohort fashion. Aside from the required core courses in the liberal studies major, students will choose between courses specific to organizations and leadership. Students will customize remaining coursework to coincide with their individual needs and interests. See [www.gvsu.edu/muskegon](http://www.gvsu.edu/muskegon) for more information.

### Liberal Studies in Traverse City

The Liberal Studies Department, in partnership with continuing education and Northwestern Michigan College, now offer an adult degree completion program in Traverse City. Students design a program that suits their specific interests, talents, and career goals. Working closely with a faculty advisor, students will develop a major area of study based on a specific theme, issue, problem, or career interest. The Traverse City program provides the liberal studies core courses and a selection of electives that may apply to your emphasis area. Students will combine coursework transferred from NMC, other community colleges, or four year institutions to complete the degree requirements.

## Bachelor of Arts or Bachelor of Science in Liberal Studies

Students who choose the liberal studies major must each individually design their own study plan and area of focus. Study plan forms and sample areas of focus are located on the departmental website under Advising Resources for Students. The Bachelor of Science degree in liberal studies consists of 56 credits; the Bachelor of Arts degree consists of up to 59 credits. Credits are distributed as follows:

- The core (Credits: 18)
- B.S. or B.A. requirements (Credits: 9)
- Area of focus (Credits: 18, of which 15 need to be at the 300-level or above);  
**OR** emphasis in leadership (Credits: 18, see the following list for courses)
- Contextual electives (Credits: 9)
- Internship (Credits: minimum 2) or Practicum (Credits: minimum 2)
- Senior Seminar (Credits: 3)

### Requirements for a Major in Liberal Studies

#### The Core (18 credits)

All majors are required to take six core courses that introduce them to the basic principles of liberal education.

- LIB 100 - Reflect, Connect, Engage Credits: 3
- LIB 201 - Diversity in the United States Credits: 3
- LIB 311 - Meaning: The Humanities Resource Credits: 3  
**OR** LIB 312 - Dialogue, Integration, and Action Credits: 3
- LIB 301 - Interdisciplinary Research Methods Credits: 3
- LIB 400 - Global Visionary Thinkers Credits: 3  
**OR** LIB 401 - Visionary Thinkers in the American Mosaic Credits: 3  
**OR** WGS / LIB 402 - Feminist Visionary Thinkers Credits: 3

At least one ethics course from the following list:

- BIO 328 - Biomedical Ethics Credits: 3
- BIO 338 - Environmental Ethics Credits: 3
- COM 438 - Communication Ethics Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MKT 375 - Marketing Ethics Credits: 3
- PHI 102 - Ethics Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3

#### Bachelor of Science/Bachelor of Arts (6 credits)

The Bachelor of Arts degree requires the completion of a third semester of language proficiency.

The Bachelor of Science degree requires the completion of the following courses (6 credits):

- STA 215 - Introductory Applied Statistics Credits: 3
- LIB 301 - Interdisciplinary Research Methods Credits: 3 (also required in the core)

**AND** one of the following courses relevant to area of focus or emphasis Credits: 3

- AHS 301 - Introduction to Health Care Research Credits: 3
- HST 290 - Research Methods in History Credits: 3
- PLS 300 - Political Analysis Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
- STA 301 - Questionnaire Design and Execution Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- STA 318 - Statistical Computing Credits: 3
- STA 340 - Statistics in the Media Credits: 3
- STA 345 - Statistics in Sports Credits: 3

#### Area of Focus OR Emphasis in Leadership (18 credits)

##### Area of Focus (credits: 18)

Liberal studies students work in consultation with their advisors to develop an individualized area of focus comprised of six or more courses drawn from the whole Grand Valley curriculum. At least 15 of the 18 credits in the area of focus must be at the 300 level or above. Typically, areas of focus are organized around either a major issue in human life or an interdisciplinary area of study. A student may consider concentrating study within an upper-level issues area to complete an area of focus in globalization, human rights, health, innovation, information and technology, sustainability, or identity. Other recent areas of focus in the program include, social relations, gender justice, American studies, business and society, peace studies, oppression and human rights, scientific culture and the humanities, cultural studies, business and

## Management

economics, humanities, technical and scientific communication, political economy, childhood development and literature, and management and society.

Emphasis in Leadership (credits: 18)

Liberal studies majors may elect to do their emphasis in leadership by taking 18 credits in coursework that develops leadership competencies. It provides the basis for long-term personal and professional growth through studying the principles and practices of engaged leadership.

Required for emphasis:

- LIB 341 - Leadership for Social Change Credits: 3
- 12 credits from the following list of courses
- An additional three credits from either the approved list  
**OR** an advisor approved course

The following courses can count toward the leadership emphasis:

- AHS 340 - Health Care Management Credits: 3
- COM 301 - Interpersonal Communication Credits: 3
- COM 302 - Small Group Communication Credits: 3
- LIB 310 - Creativity Credits: 3
- LIB 314 - Life Journeys Credits: 3
- LIB 331 - Person and Profession Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 345 - Team Building Credits: 3
- MGT 355 - The Diversified Workforce Credits: 3
- PA 335 - Grant Writing Credits: 3
- PA 360 - Voluntarism and the Nonprofit Sector Credits: 3
- PA 390 - Leadership Dynamics Credits: 3
- PA 420 - Organization Theory and Dynamics Credits: 3
- WRT 350 - Business Communication Credits: 3

The Contextual Electives (credits: 9)

The program also emphasizes the importance of integration in education, of seeing how things fit together, including the integration of liberal and career studies. To these ends, all majors are required to select a body of at least three elective courses. Students may select their electives from across the entire Grand Valley curriculum. Students could consider structuring their elective as a career component to their study plan, including areas such as business, computer science, and international study.

The Senior Seminar and Internship/Practicum (credits: 5 or more)

The required internship/practicum and senior seminar provide opportunities for students to apply theoretical knowledge to life issues outside the classroom and to synthesize the components of their major. LIB 490 or LIB 491, the internship or practicum, allows students to put into practice their ideas and explore the applications of their focus of study. Guidelines for constructing an internship or practicum are on the departmental website under Advising Resources for Students. LIB 495, the Senior Seminar or Capstone, asks students completing their programs to prepare and share their senior theses in which they reconsider the central issues they have engaged in the major.

- LIB 490 - Internship Credits: 1 to 6  
**OR** LIB 491 - Practicum Credits: 1 to 6
- LIB 495 - Senior Seminar (Capstone) Credits: 3

Admission to the Liberal Studies Major and Submission of the Study Plan

To be admitted to the major, students must consult with an advisor and prepare an approved study plan that lists the courses included in the emphasis or focus area and the electives. See departmental website for sample study plans and areas of focus. Study plans are submitted to the chair for review and approval. Changes in study plans must be made in consultation with advisors and approved by the chair.

## Management - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

The management program provides students with a balance of technical and interpersonal skills required to be effective managers and to lead others in a world of constant change and intense competition. This program offers three majors and an emphasis.

### General Management

This major is recommended if you are interested in more diverse areas of management. It allows for combining interests in areas such as human resource management, management information systems and operations management by selecting from a range of courses.

### Human Resources

This major emphasizes the management of the relationship between an organization and its employees. Business firms need Human Resource specialists who are capable of helping position the organization strategically through the design and administration of policies dealing with diversity and equal opportunity, recruiting and selection, training, performance appraisal, compensation, benefits, discipline, employee rights, and labor negotiations. Curriculum is focused on organizational efficiency and effectiveness.

### Operations Management

This major is designed to prepare you in the technical and strategic aspects of producing goods and services. Operations management involves the application of managerial, quantitative, and computer skills to areas of lean, six-sigma, ERP, inventory management, forecasting and scheduling, with the goal of giving students the tools to effectively manage service and manufacturing operations. (SAP, the enterprise resource planning (ERP) software, and other software packages are integrated into the operations management program).

### Management Information Systems

The management information systems emphasis provides a combination of technical and managerial skills that prepare you to interpret end-user business needs and translate them into effective technology based solutions. Information Systems (IS) are the backbone of most business organizations. An emphasis in MIS deals with the application of technology to support the operational activities of an organization and the information necessary to execute those activities. Our Enterprise Resource Planning (ERP) Initiative uses the world's leading ERP software to expose you to real-world business processes, problems and solutions. People who understand the organization's business processes, as well as the technical, environment are in great demand.

## Bachelor of Business Administration in Management

Requirements for the B.B.A.

Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3  
**AND** ECO 211 - Introductory Microeconomics Credits: 3

**OR** ECO 200 - Business Economics Credits: 3

- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

### Requirements for an Emphasis in Management Information Systems

The MIS emphasis provides students with the appropriate knowledge and skills to define, design and develop management information systems in modern businesses. In addition, it provides them with specialized skills in the area of enterprise resource planning systems. This specialization provides a strong technical background, but emphasizes the business process knowledge and analytical skills necessary to successfully plan and implement such systems.

### Required Courses

Business core:

- CIS 150 - Introduction to Computing Credits: 3
- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 333 - Database Management and Implementation Credits: 3
- MGT 351 - Enterprise Information Systems Credits: 3
- MGT 371 - Systems Analyses and Design Credits: 3
- MGT 471 - Enterprise Systems Configuration Credits: 3
- MGT 475 - Customized ERP Solutions Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- MTH 122 - College Algebra Credits: 3

Quantitative group - choose one:

- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

### Electives

One of the following:

- MGT 350 - Principles of Electronic Commerce Credits: 3
- MGT 360 - Business Process Redesign Credits: 3

## Management Minor

### Requirements for a Minor in Management

The undergraduate management minor is an 18-credit-hour program open to all students except management majors. This minor provides students with a foundation in behavioral management, human resources and

employment law, ethical and societal issues, and cultural diversity. The minor consists of four required courses and two electives.

### The Four Required Courses

- MGT 331 - Concepts of Management Credits: 3
- MGT 333 - Human Resource Management Credits: 3
- **OR** MGT 334 - Employment and Labor Law Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MGT 355 - The Diversified Workforce Credits: 3
- **OR** MGT 466 - International Management and Multinational Corporations Credits: 3

### In Addition

In addition to the four required courses, students must complete two electives from 300 and 400-level courses in management. Students can, if they choose, select one of the paired required courses as an elective. However, the same course cannot count as a required and an elective course. Students majoring in a business discipline other than management (i.e., accounting, finance, marketing) who choose a management minor must select as elective two upper-level management courses that are not part of the business core. Students must achieve a cumulative 2.5 GPA in these courses to receive the management minor designation. Courses cannot be taken on a credit/no credit basis.

## Marketing - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

A major in marketing gives students appropriate knowledge and skills to understand the function of marketing in the firm and in society. Marketing is the appropriate major for students interested in careers in selling, direct selling, retailing, new product development, product and brand management, promotion, advertising, distribution strategy, supply chain management, marketing research, consumer behavior, sales management, e-commerce, business to business, logistics, purchasing, market strategy planning, customer relations, distributor relations, and many other related fields.

## Bachelor of Business Administration in Marketing

### Requirements for the B.B.A.

#### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

#### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**
- ECO 211 - Introductory Microeconomics Credits: 3

**OR** ECO 200 - Business Economics Credits: 3

- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3

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- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

### Requirements for a Major in Marketing

This 18-credit-hour emphasis is very application-oriented and stresses interaction with many leading regional business organizations.

### Required Courses

Business core:

- CIS 150 - Introduction to Computing Credits: 3
- MKT 351 - Consumer Behavior Credits: 3
- MKT 352 - Marketing Research Credits: 3
- MKT 451 - Marketing Strategy Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- Three additional marketing electives at or above the 300-level.

Quantitative group - choose one:

- MGT 361 - Management Science Credits: 3
- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3

### Sales

This emphasis is designed to provide students interested in sales the appropriate knowledge and skills necessary to become a professional sales person. The focus of the emphasis is directed towards the utilization of selling strategies and skills necessary for the sales professionals in contemporary marketing organizations. Specific attention is directed towards business-to-business conditions and the relationships required of salespeople in these situations. Students with this emphasis obtain sales positions for business-to-business firms, including manufacturers, wholesalers, and retailers of goods and services.

### Required Courses

Business core:

- CIS 150 - Introduction to Computing Credits: 3
- MKT 351 - Consumer Behavior Credits: 3
- MKT 352 - Marketing Research Credits: 3
- MKT 353 - Marketing Negotiations Credits: 3
- MKT 356 - Professional Selling Credits: 3
- MKT 451 - Marketing Strategy Credits: 3
- MKT 456 - Sales Management Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Quantitative group - choose one:

- MGT 361 - Management Science Credits: 3
- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3

### Distribution and Logistics

The field of distribution and logistics focuses on designing and implementing the best strategy for companies to use in physically getting

goods to their customers in a way that maximizes customer service and minimizes total logistics costs. Attention is directed towards the strategic management of distribution assets, customer service, finished goods inventory control, transportation, warehousing and international distribution planning. Students graduating with a logistics background are employed in a number of industries, with strong demand nationally in the auto industry, appliances industry, grocery industry, retail chain sector, wholesale sector, and each of the transportation modes.

Business core:

- CIS 150 - Introduction to Computing Credits: 3
- MKT 351 - Consumer Behavior Credits: 3
- MKT 352 - Marketing Research Credits: 3
- MKT 354 - Distribution Institutions and Logistics Credits: 3
- MKT 355 - International Logistics Credits: 3
- MKT 451 - Marketing Strategy
- MKT 457 - Logistics and Transportation
- STA 215 - Introductory Applied Statistics Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3
- MGT 361 - Management Science Credits: 3

## Marketing Minor

### Requirements for a Minor in Marketing

The undergraduate marketing minor is an 18-credit-hour program open to all students except marketing majors. The minor consists of five required courses and one elective. In addition to the five courses, students must complete one elective from 300 and 400 level courses in marketing (may not use MKT 490 or MKT 499 for this requirement). Students must achieve a cumulative 2.5 GPA in these courses to receive the marketing minor designation. Courses cannot be taken on a credit/no credit basis.

The five required marketing courses:

- MKT 350 - Marketing Management Credits: 3
- MKT 351 - Consumer Behavior Credits: 3
- \*MKT 352 - Marketing Research Credits: 3  
\*Requires prerequisite STA 215
- MKT 375 - Marketing Ethics Credits: 3
- MKT 451 - Marketing Strategy Credits: 3

## Mathematics - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/math](http://www.gvsu.edu/math)

### Degrees Offered

B.S., B.A., in mathematics; minors in mathematics. Teaching certification in both major (elementary and secondary) and minor (elementary and secondary). The mathematics major is offered within the Department of Mathematics. Options within the major lead to mathematical careers in government, industry, and elementary and secondary teaching. Students also gain a broad mathematical background that prepares them for graduate studies in the mathematical sciences. It is strongly recommended that all students interested in mathematics as a major discuss career plans with one or more members of the department and obtain an advisor in the department as soon as possible.

### Honors Organization

Pi Mu Epsilon (PME) is the National Honorary Mathematics Society. To be nominated for membership in Pi Mu Epsilon a student must possess an overall GPA of at least 3.3 and a mathematics GPA of at least 3.3, and have completed 18 credit hours of mathematics courses toward the mathematics major. At least nine of these credit hours must have been

taken at Grand Valley State University and consist of mathematics courses at the level of MTH 203 (Calculus III) or higher that count toward our mathematics major.

### Study Abroad

Since 2011, the Department of Mathematics has sponsored a study abroad program in Tanzania for students interested in mathematics education. In addition, many study abroad programs offer mathematics courses that can be approved by the department for mathematics credit. Contact the Padnos International Center or the Department of Mathematics for more information.

### Internship Program

This program enables juniors and seniors with jobs involving mathematics to earn credit for academic work related to the technical skills required in performing the job. Contact the department for further information.

### Mathematics Placement Information

Your initial mathematics placement is based on your mathematics subscore on the ACT or SAT exam. There are four possible placements:

- Ready for MTH 097: You may enroll in MTH 097.
- Ready for MTH 110: You may enroll in MTH 097 or MTH 110.
- Ready for Courses Requiring Introductory Mathematics: You may enroll in most courses in the general education Mathematical Sciences Foundations category (including CIS 160, GPY 200, PHI 103, STA 215, and MTH 122, 125, 131, and 221).
- Ready for Courses Requiring Advanced Mathematics: You may enroll in any of the courses in the general education Mathematical Sciences Foundations category, including MTH 201 (calculus).

Mathematics proficiency testing is available to change your placement. Testing is recommended for the following situations:

- You believe that your placement is not appropriate for your math level because your ACT or SAT score does not correctly represent your mathematics preparation.
- Your major is engineering, mathematics, physics, chemistry, biology, physical therapy, or any health science, and you do not have the advanced initial placement.
- Your initial mathematics placement is Introductory and you believe that you are ready for MTH 201 (Calculus). In this case, you should attempt the MTH 122 and MTH 123 proficiency tests.
- Your initial placement is MTH 097 and you believe your algebra skills are strong enough to either start in MTH 110 or waive MTH 110. You should attempt the MTH 110 test.

Three proficiency tests are available. There are proficiency tests for MTH 110 (Intermediate Algebra), MTH 122 (College Algebra), and MTH 123 (Trigonometry). Testing is free, and results are available immediately.

**Directions for Completing an Online Proficiency Test:** Proficiency tests should be completed at least 48 hours prior to your attendance at new student orientation so that the information can be used to register you for the appropriate course.

- Before completing a test, we recommend that you prepare with our practice tests: [gvsu.edu/math/mathematics-placement-11.htm](http://gvsu.edu/math/mathematics-placement-11.htm)
- This video will show you how to take one of our tests online: [gvsu.edu/s/jq](http://gvsu.edu/s/jq)
- If you choose to complete a proficiency test, go online to [gvsu.edu/s/jk](http://gvsu.edu/s/jk)

Log in with your GVSU login and password. When you log in, you will see six tests—two for each course. The MTH 110 tests have 50 questions and a 60-minute time limit. The other tests have 20 questions and a 30-minute time limit. To pass, you need the following scores:

- MTH 110: 34 correct to change your placement from MTH 110 to Introductory; 20 correct to change your placement from MTH 097 to MTH 110.
- MTH 122 and 123: Each test requires 12 correct to pass.

You may attempt each of the six tests once.

## Bachelor of Arts or Bachelor of Science in Mathematics

Requirements for a Major in Mathematics (not for teacher certification)

Students planning a major in mathematics not seeking teacher certification must complete the following:

### Mathematics Core Requirements

All mathematics majors must complete the following courses:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- MTH 350 - Modern Algebra I Credits: 3
- MTH 495 - The Nature of Modern Mathematics (Capstone) Credits: 3

**OR** MTH 496 - Senior Thesis (Capstone) Credits: 3

### Additional Mathematics Course Requirements

All mathematics majors not seeking teacher certification must also complete the requirements listed in (a) - (c).

a. Required mathematics courses:

- MTH 203 - Calculus III Credits: 4
- MTH 408 - Advanced Calculus I Credits: 3

b. One of the following upper-level two-course sequences:

#### Modern Algebra

- MTH 350 - Modern Algebra I Credits: 3
- MTH 450 - Modern Algebra II Credits: 3

#### Advanced Calculus

- MTH 408 - Advanced Calculus I Credits: 3
- MTH 409 - Advanced Calculus II Credits: 3

#### Geometry

- MTH 331 - Euclidean Geometry Credits: 3
- MTH 431 - Non-Euclidean Geometry Credits: 3

#### Analysis with Applications in Sciences

- MTH 300 - Vector Analysis Credits: 3
- MTH 401 - Mathematics for the Physical Sciences Credits: 4

#### Linear Algebra and Applications

- MTH 327 - Linear Algebra II Credits: 3
- MTH 360 - Operations Research Credits: 3

#### Connections to the Physical Sciences

- MTH 304 - Analysis of Differential Equations Credits: 3
- MTH 401 - Mathematics for the Physical Sciences Credits: 4

#### Complex Analysis and Applications

- MTH 304 - Analysis of Differential Equations Credits: 3
- MTH 402 - Complex Variables Credits: 3

#### Applied Mathematics

- MTH 304 - Analysis of Differential Equations Credits: 3
- MTH 405 - Numerical Analysis Credits: 3

#### Analysis and Topology

- MTH 408 - Advanced Calculus I Credits: 3
- MTH 441 - Topology Credits: 3

c. Additional course(s) from the following list for a total of 11 courses in mathematics:

- MTH 300 - Vector Analysis Credits: 3
- MTH 304 - Analysis of Differential Equations Credits: 3
- MTH 327 - Linear Algebra II Credits: 3
- MTH 331 - Euclidean Geometry Credits: 3
- MTH 315 - Discrete Mathematics Credits: 3
- MTH 360 - Operations Research Credits: 3
- MTH 401 - Mathematics for the Physical Sciences Credits: 4
- MTH 402 - Complex Variables Credits: 3
- MTH 405 - Numerical Analysis Credits: 3
- MTH 409 - Advanced Calculus II Credits: 3
- MTH 431 - Non-Euclidean Geometry Credits: 3

## Mathematics

- MTH 441 - Topology Credits: 3
- MTH 450 - Modern Algebra II Credits: 3
- MTH 465 - Automata and Theory of Computation Credits: 3

### Mathematics Cognate Requirements

All mathematics majors not seeking teacher certification must complete the following requirements to satisfy the mathematics cognate requirements:

- CIS 160 - Programming with Visual Basic Credits: 3
  - **OR** CIS 161 - Computational Science Credits: 3
  - **OR** CIS 162 - Computer Science I Credits: 4
  - **OR** CIS 261 - Structured Programming in C Credits: 3
  - STA 312 - Probability and Statistics Credits: 3
- AND** one course from the following
- BIO 355 - Human Genetics Credits: 3
  - BIO 375 - Genetics Credits: 3
  - CHM 351 - Introduction to Physical Chemistry Credits: 3
  - CMB 351 - Bioinformatics: Tools and Techniques for Life Scientists Credits: 3
  - CMB 452 - Computational Biology Credits: 3
  - ECO 342 - Strategic Games Credits: 3
  - ECO 400 - Econometrics and Forecasting Credits: 3
  - ECO 412 - Applied Mathematical Economics Credits: 3
  - GEO 470 - Geophysics Credits: 4
  - HSC 201 - The Scientific Revolution Credits: 3
  - PHI 203 - Intermediate Logic Credits: 3
  - PHY 230 - Principles of Physics I Credits: 5
  - PSY 300 - Research Methods in Psychology Credits: 3
  - STA 314 - Statistical Quality Methods Credits: 3
  - STA 412 - Mathematical Statistics I Credits: 4

### B.S. and B.A. Degree Program Requirements

Completion of MTH 201, 202, and STA 312 satisfies the B.S. degree program requirements for all mathematics majors. Students completing a B.A. degree must complete these courses plus the foreign language requirement for a B.A.

### Preparation for Graduate Work in Mathematics

Majors who plan to complete graduate work in mathematics are encouraged to (1) take as many upper-division mathematics courses as possible from the courses listed in part (c); (2) in part (b), complete at least one of the two course upper level sequences in modern algebra or advanced calculus; (3) consult with their advisor about other courses that might be appropriate for their interests and about procedures for applying to graduate school; and (4) complete a B.A. degree by completing the third semester of French, German, or Russian.

### Requirements for a Major in Mathematics with Elementary Certification Emphasis

The mathematics major with elementary certification must be completed with a GPA of 2.7 for admission to the College of Education. Students planning a major in mathematics with elementary certification must complete the following:

### B.S. and B.A. Degree Program Requirements

Completion of MTH 201, 202, and STA 312 satisfies the B.S. degree program requirements for all mathematics majors. Students completing a B.A. degree must complete these courses plus the foreign language requirement for a B.A.

### Mathematics Core Requirements

All mathematics majors must complete the following courses:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- MTH 350 - Modern Algebra I Credits: 3

- MTH 495 - The Nature of Modern Mathematics (Capstone) Credits: 3
- **OR** MTH 496 - Senior Thesis (Capstone)

### Additional Mathematics Course Requirements

All mathematics majors seeking elementary certification must also complete the requirements listed as follows:

- MTH 322 - Geometry for Elementary Teachers Credits: 3
- MTH 323 - Probability and Statistics for Elementary Teachers Credits: 3
- MTH 324 - Algebra for Elementary Teachers Credits: 3
- MTH 331 - Euclidean Geometry Credits: 3
- MTH 315 - Discrete Mathematics Credits: 3

### Mathematics Cognate Requirements

All mathematics majors seeking elementary certification must complete the following requirements to satisfy the mathematics cognate requirements:

- STA 312 - Probability and Statistics Credits: 3

**AND** one course from the following:

- BIO 355 - Human Genetics Credits: 3
- BIO 375 - Genetics Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 161 - Computational Science Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 261 - Structured Programming in C Credits: 3
- CMB 351 - Bioinformatics: Tools and Techniques for Life Scientists Credits: 3
- CMB 452 - Computational Biology Credits: 3
- ECO 342 - Strategic Games Credits: 3
- ECO 400 - Econometrics and Forecasting Credits: 3
- ECO 412 - Applied Mathematical Economics Credits: 3
- GEO 470 - Geophysics Credits: 4
- HSC 201 - The Scientific Revolution Credits: 3
- PHI 203 - Intermediate Logic Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 230 - Principles of Physics I Credits: 5
- PSY 300 - Research Methods in Psychology Credits: 3
- SCI 226 - Integrated Physical Science for K-8 Teachers Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- STA 345 - Statistics in Sports Credits: 3
- STA 412 - Mathematical Statistics I Credits: 4

### College of Education Requirements

To be approved for student teaching, students must complete at least 24 credit hours in the major, including:

- MTH 210 - Communicating in Mathematics Credits: 4

**AND** at least two of:

- MTH 322 - Geometry for Elementary Teachers Credits: 3
- MTH 323 - Probability and Statistics for Elementary Teachers Credits: 3
- MTH 324 - Algebra for Elementary Teachers Credits: 3

In addition, students need to be aware of the College of Education requirements for admission to the elementary certification program.

### Requirements for a Major in Mathematics with Secondary Certification Emphasis

The mathematics major with secondary certification must be completed with a GPA of 2.7 for admission to the College of Education. Students planning a major in mathematics with secondary certification must complete the following:

### B.S. and B.A. Degree Program Requirements

Completion of MTH 201, 202, and STA 312 satisfies the B.S. degree program requirements for all mathematics majors. Students completing a B.A. degree must complete these courses plus the foreign language requirement for a B.A.

### Mathematics Core Requirements

All mathematics majors must complete the following courses:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- MTH 350 - Modern Algebra I Credits: 3
- MTH 495 - The Nature of Modern Mathematics (Capstone) Credits: 3
- **OR** MTH 496 - Senior Thesis (Capstone) Credits: 3

### Additional Mathematics Course Requirements

All mathematics majors seeking secondary certification must also complete the requirements listed as follows:

- MTH 203 - Calculus III Credits: 4
- MTH 229 - Mathematical Activities for Secondary Teachers Credits: 3
- MTH 329 - Teaching Middle Grades Mathematics Credits: 3
- MTH 331 - Euclidean Geometry Credits: 3
- MTH 315 - Discrete Mathematics Credits: 3

### Mathematics Elective Requirement

All mathematics majors seeking secondary certification must also complete one elective course from the following list. The elective course must be different than the Capstone course.

- MTH 300 - Vector Analysis Credits: 3
- MTH 304 - Analysis of Differential Equations Credits: 3
- MTH 327 - Linear Algebra II Credits: 3
- MTH 360 - Operations Research Credits: 3
- MTH 401 - Mathematics for the Physical Sciences Credits: 4
- MTH 402 - Complex Variables Credits: 3
- MTH 405 - Numerical Analysis Credits: 3
- MTH 408 - Advanced Calculus I Credits: 3
- MTH 409 - Advanced Calculus II Credits: 3
- MTH 431 - Non-Euclidean Geometry Credits: 3
- MTH 441 - Topology Credits: 3
- MTH 450 - Modern Algebra II Credits: 3
- MTH 465 - Automata and Theory of Computation Credits: 3
- MTH 495 - The Nature of Modern Mathematics (Capstone) Credits: 3
- MTH 496 - Senior Thesis (Capstone) Credits: 3

### Mathematics Cognate Requirements

All mathematics majors seeking secondary certification must also complete the following requirements to satisfy the mathematics cognate requirements:

- STA 312 - Probability and Statistics Credits: 3
- And one course from the following:
- BIO 355 - Human Genetics Credits: 3
- BIO 375 - Genetics Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 161 - Computational Science Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 261 - Structured Programming in C Credits: 3
- CMB 351 - Bioinformatics: Tools and Techniques for Life Scientists Credits: 3
- CMB 452 - Computational Biology Credits: 3
- ECO 342 - Strategic Games Credits: 3
- ECO 400 - Econometrics and Forecasting Credits: 3
- ECO 412 - Applied Mathematical Economics Credits: 3
- GEO 470 - Geophysics Credits: 4
- HSC 201 - The Scientific Revolution Credits: 3
- PHI 203 - Intermediate Logic Credits: 3
- PHY 230 - Principles of Physics I Credits: 5
- PSY 300 - Research Methods in Psychology Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- STA 345 - Statistics in Sports Credits: 3

- STA 412 - Mathematical Statistics I Credits: 4

### College of Education Requirements

To be approved for student teaching, students must complete at least 24 credit hours in the major, including:

- MTH 210 - Communicating in Mathematics Credits: 4
- MTH 229 - Mathematical Activities for Secondary Teachers Credits: 3
- MTH 331 - Euclidean Geometry Credits: 3

In addition, students need to be aware of the College of Education requirements for admission to the secondary certification program.

A student who has graduated from another accredited institution with a completed major or minor in mathematics and who now seeks only teaching certification in mathematics from Grand Valley must satisfy the following criteria:

- Transfer or complete at Grand Valley all mathematics and cognate courses required for the certification major or minor.
- A minimum cumulative GPA of 2.7 (on a 4.0 scale) in mathematics courses from the accredited institution.
- Completion of the College of Education requirements for certification.

### Suggested Order of Coursework for a Major in Mathematics

The following sample mathematics schedules assume the student is in contact with an advisor for appropriate general education requirements and has a strong mathematics background. Students who do not begin with MTH 201 will need to make appropriate changes.

#### Mathematics Majors (not for teacher certification)

##### First Year

- Appropriate courses in general education.
- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 4

##### Second Year

- Appropriate courses in general education
- Computer science cognate course
- Elective for the major
- MTH 203 - Calculus III Credits: 4
- MTH 227 - Linear Algebra I Credits: 3

##### Third Year

- Cognate courses in the major
- Appropriate courses in general education
- Elective for the major
- MTH 350 - Modern Algebra I Credits: 3
- STA 312 - Probability and Statistics Credits: 3

##### Fourth Year

- MTH 408 - Advanced Calculus I Credits: 3
- Elective course to complete a sequence
- Capstone course
- Appropriate courses for the major

#### Mathematics Major with Secondary Certification Emphasis

##### First Year

- Appropriate courses in general education
- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 4
- PSY 101 - Introductory Psychology Credits: 3

##### Second Year

- Appropriate courses in general education
- MTH 203 - Calculus III Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- MTH 229 - Mathematical Activities for Secondary Teachers Credits: 3
- MTH 329 - Teaching Middle Grades Mathematics Credits: 3

## Medical and Bioinformatics

### Third Year

- Elective in the major
- Student Assisting
- Cognate course for major
- Appropriate courses in general education
- MTH 331 - Euclidean Geometry Credits: 3
- EGR 345 - Dynamic System Modeling and Control Credits: 4
- STA 312 - Probability and Statistics Credits: 3

### Fourth Year

- Capstone course
- Student Teaching
- Appropriate courses in general education
- MTH 350 - Modern Algebra I Credits: 3

## Mathematics Major with Elementary Certification Emphasis

### First Year

- Appropriate course in general education
- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 4
- PSY 101 - Introductory Psychology Credits: 3

### Second Year

- Appropriate courses in general education
- MTH 227 - Linear Algebra I Credits: 3
- MTH 322 - Geometry for Elementary Teachers Credits: 3
- EGR 345 - Dynamic System Modeling and Control Credits: 4
- STA 312 - Probability and Statistics Credits: 3

### Third Year

- Student Assisting
- Cognate course for major
- Appropriate course in general education
- MTH 323 - Probability and Statistics for Elementary Teachers Credits: 3
- MTH 324 - Algebra for Elementary Teachers Credits: 3
- MTH 331 - Euclidean Geometry Credits: 3

### Fourth Year

- Capstone course
- Student Teaching
- Appropriate courses in general education
- MTH 350 - Modern Algebra I Credits: 3

## Mathematics Minor

### Requirements for a Minor in Mathematics

Students planning a minor in mathematics must complete the university requirements for a minor as identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog as well as the requirements listed as follows.

#### 1. Mathematics (not for teacher certification)

The noncertification mathematics minor requires a minimum GPA of 2.0 and 20 credit hours unduplicated in one's major. Credit in the following courses may not be applied: MTH 110, 122, 123, 125, 131, 221, 222, 223, 225, 307, 312, 322, 323, 324, 329, and STA 215. Credit in the following courses requires department approval to be applied to the minor: 380, 386, 387, 399, and 499.

The following courses must be completed:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 203 - Calculus III Credits: 4
- **OR** MTH 210 - Communicating in Mathematics Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- **OR** MTH 302 - Linear Algebra and Differential Equations Credits: 4
- At least two additional mathematics or statistics courses at the 300 to 400, level at least one of which is a mathematics course.

Note: Credit in only one of MTH 302 or MTH 304 may be applied toward this minor; credit in only one of MTH 227 or MTH 302 may be applied toward this minor.

#### 2. Mathematics (for secondary teacher certification)

The secondary teacher certification mathematics minor requires a minimum GPA of 2.7 and 20 credit hours unduplicated in one's major. Credit in the following courses may not be applied: MTH 110, 122, 123, 125, 131, 221, 222, 223, 225, 307, 312, and STA 215. Credit in the following courses requires department approval to be applied to the minor: MTH 380, 386, 387, 399, and 499.

The following courses must be completed:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- MTH 229 - Mathematical Activities for Secondary Teachers Credits: 3
- **OR** MTH 329 - Teaching Middle Grades Mathematics Credits: 3
- MTH 350 - Modern Algebra I Credits: 3
- MTH 331 - Euclidean Geometry Credits: 3
- STA 312 - Probability and Statistics Credits: 3

#### 3. Mathematics (for elementary teacher certification)

The elementary teacher certification mathematics minor requires a minimum GPA of 2.7 and 20 credit hours unduplicated in one's major. Credit in the following courses may not be applied: MTH 110, 122, 123, 125, 131, 221, 222, 223, 225, 307, 312, and STA 215. Credit in the following courses requires department approval to be applied to the minor: MTH 380, 386, 387, 399, and 499.

The following courses must be completed:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 4
- MTH 322 - Geometry for Elementary Teachers Credits: 3
- MTH 323 - Probability and Statistics for Elementary Teachers Credits: 3
- MTH 324 - Algebra for Elementary Teachers Credits: 3
- And one additional approved course

## Master of Science in Medical and Bioinformatics - Program Description

For additional information about opportunities your college offers, please refer to the Seymour and Esther Padnos College of Engineering and Computing section in this catalog.

**Website:** [www.gvsu.edu/grad/bioinfo](http://www.gvsu.edu/grad/bioinfo)

The Master of Science degree in medical and bioinformatics was developed in parallel with two other closely related M.S. programs, one in biostatistics and another in biotechnology. The curriculum for each of the three new programs is interdisciplinary, shares a common core, has a similar curriculum design, has a mandatory business/industry internship component, and can be characterized as a "professional science master's degree."

The professional science master's degree (PSM) is an innovative graduate degree to allow students to pursue advanced training in science and technology, while simultaneously developing workplace skills valued by employers. PSM programs consist of two years of academic training in an emerging interdisciplinary area, closely tied to the scientific workforce needs of business/industry, with an intensive internship experience. The medical and bioinformatics Master's of Science degree consists of 12 varied-credit courses (totaling 36 credit hours) and is located in downtown Grand Rapids (Pew Grand Rapids Campus) at the Cook-DeVos Center for Health Sciences.

### Curriculum Design

Each of the three professional science master's degree programs share courses common to all three programs, specific courses for critical content in each discipline, laboratory experiences essential for the development of requisite skill and knowledge sets, a common seminar series, a Capstone course and internships to provide essential hands-on learning in the field. All three programs are interdisciplinary, non-thesis, and involve both the university and its industry partners. All three programs emphasize teamwork, problem solving, communication, and scientific knowledge and technical skills. Each program is designed to integrate university coursework with business and industrial internships to better prepare students for the variety of career pathways associated with the life science and health science industries.

### Medical and Bioinformatics Laboratory

The Cook-DeVos Center for Health Sciences in downtown Grand Rapids contains a specifically designed medical and bioinformatics laboratory that supports the medical and bioinformatics program along with other professional science masters programs.

### Internships

A minimum of four credits of internship is a required component of the medical and bioinformatics program.

### School of CIS Mission

The mission of the School of Computing and Information Systems is to provide the GVSU student community with the intellectual foundations and experiences necessary to use information technology effectively in their chosen careers.

To enable students to attain this goal, the CIS faculty have two primary responsibilities. First, we will offer a solid conceptual foundation required for a career in information technology. Second, we will provide direct, experiential knowledge of technology necessary to be a productive user/producer of information technology.

To achieve these goals, we

- work continuously to keep our curriculum relevant to our mission;
- ensure that work-relevant experience is part of every class;
- establish and nurture industrial contacts;
- establish an integrated, supported co-op experience for CIS majors; and
- provide all students, regardless of their major interests, fundamental knowledge of computers and information processing.

### Admission to the Master's of Science in Medical and Bioinformatics Program

- U.S. students must have an overall undergraduate grade point average of at least 3.0 on a 4-point scale or a satisfactory score on the GRE or GMAT test. All international students must have a satisfactory score on the GRE or GMAT test, regardless of their undergraduate GPA.
- Submit a resume detailing work experiences and accomplishments.
- Submit a personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.
- Submit written recommendations from at least two individuals who are in positions to attest to the applicant's potential for successful completion of the program.
- Applicants must have a base of underlying knowledge relevant to graduate study in the medical informatics or bioinformatics fields. This can be demonstrated by previous academic study or work experience. Consultation with a program faculty advisor is necessary to verify appropriateness of work experience as a substitute for academic preparation. Candidates without sufficient relevant background experience may satisfy any deficiency with appropriate graduate or undergraduate courses, as recommended by a faculty advisor in the program and approved by the Medical and Bioinformatics Admissions Committee and the program director.

A medical and bioinformatics program Admissions Committee will determine admission to the program. Admission to the M.S. in medical and bioinformatics status may be full or conditional; conditional admission may be granted to applicants with deficiencies in their background. When identified deficiencies are satisfactorily met, the applicant will be granted full admission to the program. Applications for admission will be reviewed as they are submitted. All applications submitted by February 1 prior to the fall semester in which the applicant wishes to start the program will receive full consideration for one of the graduate assistantships.

## Master of Science in Medical and Bioinformatics

### Requirements for the M.S. in Medical and Bioinformatics

Overall requirements for the M.S. in medical and bioinformatics consist of 36 credits, with a cumulative GPA of 3.0. Consistent with Grand Valley policy, all courses must be completed within eight consecutive years from entry into the first graduate course. The specific course requirements include:

#### Four Common Core Courses (credits: 12)

- CMB 610 - Foundations of Biotechnology Credits: 3
- CIS 661 - Introduction to Medical and Bioinformatics Credits: 3
- PSM 650 - Ethics and Professionalism in Applied Science Credits: 3
- STA 610 - Applied Statistics for Health Professions Credits: 3  
OR STA 622 - Statistical Methods for Biologists Credits: 3

#### Seminar Course (credits: 2)

- PSM 662 - Seminar in Professional Science Practice Credits: 2

#### Five Directed Courses (credits: 15)

- CIS 635 - Knowledge Discovery and Data Mining Credits: 3
- CIS 660 - Information Management and Science Credits: 3
- CIS 671 - Information Visualization Credits: 3

Choose either Group 1 or Group 2: (two-course sequence)

#### Group 1

- CIS 677 - High-performance Computing Credits: 3
- CIS 678 - Machine Learning Credits: 3

#### Group 2

- CIS 665 - Clinical Information Systems Credits: 3

Select one:

- PA 630 - Health Administration and Service Credits: 3
- PA 635 - Hospital Organization and Management Credits: 3

#### Internship (credits: 4)

- PSM 691 - Internship Credits: 1 to 9

#### Capstone Course (Credits: 3)

- CIS 691 - Medical and Bioinformatics Capstone Credits: 3

## Medical Dosimetry - Program Description

For additional information about opportunities your college offers, please refer to the College of Health Professions section of this catalog.

**Website:** [www.gvsu.edu/grad/dosimetry](http://www.gvsu.edu/grad/dosimetry)

### Degree Offered

Master of Science in medical dosimetry

A medical dosimetrist is a key member of the radiation oncology team who has knowledge of the overall characteristics and clinical relevance of radiation oncology treatment machines and equipment and has the education and expertise necessary to generate radiation dose distributions and dose calculations in collaboration with medical physicists, radiation therapists, and radiation oncologists. The medical dosimetrist uses computer software to design radiation plans to treat both cancerous and benign diseases using external x-ray beams and internal radiation sources. Dosimetrists seek to minimize radiation exposure to healthy structures yet deliberately deliver a high dose of radiation to target structures. They work

## Medical Dosimetry

closely with physicians, therapists, and physicists to ensure a high-quality treatment and patient care.

### Grand Valley State University Medical Dosimetry

The program awards the degree Master of Science in medical dosimetry following completion of a 12-month (three term) curriculum of professional studies. There is a part time option available for students currently holding professional clinical appointments. Students begin the professional curriculum after they have been admitted into the program (see Application Procedures). During the professional curriculum, students engage in coursework including human anatomy, sectional anatomy, physiology, clinical applications, pathophysiology, physics, medical physics, medical dosimetry procedures, professional issues, and research methods. The curriculum combines traditional classroom sessions with Web-based instruction, case studies, and problem-based learning (PBL) to provide students with the knowledge, critical thinking skills, and clinical acumen to become practicing clinical medical dosimetrists upon graduation. Students spend all three semesters completing rotations in a practicing medical dosimetry clinical education center. Clinical education varies from 3-4 days per week and may be scheduled at some distance from the university. As part of the master's degree curriculum, students must complete a research project, thesis, or in-depth case study. Students are encouraged to submit their research to a national forum upon completion.

GVSU also offers a B.S. degree in allied health sciences-predosimetry emphasis, which prepares students by meeting all prerequisites for the M.S. in medical dosimetry. All applicants must meet the prerequisites and criteria for admission to the M.S. program, realizing that some bring with them a wealth of life and career experience that enriches the diversity of the program.

#### Accreditation Statement

The Grand Valley State University medical dosimetry program has applied for recognition by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The program adheres to JRCERT standards. Students have the right to notify the JRCERT if they believe the university is not adhering to these standards. The JRCERT is at 20 N. Wacker Dr., Suite 2850, Chicago, IL 60606-3182, phone (312) 704-5300 ([www.jrcert.org](http://www.jrcert.org)). This accreditation meets eligibility requirements for program graduates to sit for the national Medical Dosimetrist Certification Board (MDCB) examination which, upon successful completion, confers the title certified medical dosimetrist (CMD) upon candidates after graduation.

#### Application Procedures

Admission to the medical dosimetry program is competitive. Application can be made through the GVSU graduate admission website at [wwwtest.gvsu.edu/grad/dosimetry/](http://wwwtest.gvsu.edu/grad/dosimetry/). Students must complete or submit a plan for completion of all of prerequisite and undergraduate degree requirements by the application deadline, which is March 1st each year. Applicants submitting a plan for completion of prerequisites who are selected will receive conditional letters of admission, which convert to full admission upon successful completion of the entire plan for completion prior to the start of the program. A plan for completion is submitted as an additional page to the application. There is not a form for this document.

High school seniors interested in medical dosimetry must complete an undergraduate application to Grand Valley State University at [www.gvsu.edu/admissions/undergraduate/index.cfm/](http://www.gvsu.edu/admissions/undergraduate/index.cfm/). During their freshman year, they will begin their pre-professional studies and declare a major. The most common majors for students admitted to the program from Grand Valley are biomedical science, mathematics, physics, or allied health sciences-pre-medical dosimetry emphasis through the College of Health Professions. If students in math, physics, biomedical science, or other suitable majors wish to pursue the M.S. in Medical Dosimetry degree, they need only follow the predosimetry emphasis curriculum with

second admission to predosimetry emphasis while still fulfilling their original major requirements.

Undergraduate transfer students must also complete an undergraduate application to Grand Valley State University at [www.gvsu.edu/admissions/undergraduate/index.cfm/](http://www.gvsu.edu/admissions/undergraduate/index.cfm/). We strongly encourage students to transfer to Grand Valley by the beginning of their junior year to ensure completion of their undergraduate degree and pre-professional requirements. Transfer students should consult with an advisor from the Grand Valley College of Health Professions before entering Grand Valley or very soon thereafter, in addition to their assigned undergraduate advisor based upon the major declared.

#### Admission to the Master of Science in Medical Dosimetry

- **Academic achievement.** A minimum grade of C must be attained in all prerequisite coursework. Applicants must demonstrate a minimum 3.0 GPA in the prerequisite coursework and in their last 60 hours of coursework to be considered for admission. All prerequisite coursework and a bachelor's degree are required prior to admission to the program.
- **Health care experience.** Documentation of minimum of 16 hours volunteer or paid or 2-3 hours job shadow
- **References.** Two recommendations from health professionals must be submitted on university recommended forms located within the application. Separate letters from references are NOT required. Only TWO references will be accepted.
- **Writing samples.** Satisfactory individual writing samples are required of all final applicants.
- **Prerequisites.** The following courses or their equivalents must be completed prior to admission:
  - BMS 250 Anatomy and Physiology I
  - BMS 251 Anatomy and Physiology II
  - PHY 220 General Physics I with Lab
  - PHY 221 General Physics II with Lab
  - RI 401 Computer Applications
  - RIS 441 Sectional Anatomy
  - RIS 320 Principles of Radiographic Imaging
  - RIT 322 Radiation Biology
  - RIS 458 Neoplastic Pathophysiology
  - RIT 330 Principles and Practices of Radiation Therapy I
  - RIT 331 Principles and Practices of Radiation Therapy I Lab
- The following course is recommended:
  - MTH 201 Calculus I
- Foreign-born applicants should be able to communicate well in English. Minimal scores of TOEFL 600 or equivalent internet or paper based TOEFL are expected.
- **International students** whose first language is not English must submit the following:
  - a. Original or certified original international transcripts
  - b. Official transcript credential evaluation e.g., World Education Services (WES), Educational Credential Evaluators (ECE)
  - c. Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) scores. The minimum TOEFL score is 600 written or 100 Internet-based (no single subsection score less than 22) and the minimum IELTS score is 7.5.
  - d. Completion of 30 hours of higher education coursework taken at an established and accredited U.S. institution which must be completed by the time of application

#### Selection Factors

Grand Valley State University is an affirmative action/equal opportunity institution. It encourages diversity and provides equal opportunity in education, employment, all of its programs, and the use of its facilities. Applicants are considered without regard to age, color, disability, familial status, height, marital status, national origin, political affiliation, race, religion, sex/gender, sexual orientation, veteran status, or weight.

Motivational factors, life experiences, patient care experience, maturity, and personal characteristics as assessed in personal interviews and recommendations are important factors in the selection process. An applicant's academic record is important as an indicator of ability to succeed in an intensive and rigorous medical curriculum.

Specific selection criteria:

- Academic grade point average from prerequisite courses
- Academic grade point average from last two calendar years in college or university
- Interview/writing assessment completed on-site at the College of Health Professions
- Health care experience-minimum of 16 hours volunteer or paid or 2-3 hours job shadow
- Recommendations
- Additional leadership considerations

### Degree Requirements

Demonstration of completion of the 37 credits in the professional curriculum is required for the student to be granted the M.S. in Medical Dosimetry degree. General graduate academic policies and regulations can be found elsewhere in this catalog or in the Grand Valley State University graduate bulletin.

In addition, for each RMD course or a discrete unit of instruction in the professional curriculum, a minimum proficiency level of 80 percent on all evaluations as described in each course syllabus is required. A minimum grade of B- or higher is required for passing all RMD courses. In addition, the GPA must never drop below 3.0 in any semester or the student may be placed on academic probation or dismissed from the program.

### Professional Conduct

The program also subscribes to a belief in continual advancement during the course of professional study in a compilation of abilities. Interpersonal skills, communication skills, responsibility, and professionalism, among others, are identified as being crucial for success in the profession. Advancement in skill and behavior applicable to such abilities is expected during the professional curriculum. Clinical evaluation includes measurement of affective skills which must continually be met through the clinical advising program for students to continue in clinical education courses. Failure to achieve adequate progress in the clinical advising program will result in a failing grade being issued for that course. All students in the program are expected to comply with the ethical principles that embody the practice of medicine and the medical dosimetry profession. Community service is also expected as is professional scholarship achievements while enrolled in the program.

Criminal background checks and drug screening is required prior to admission into the program. After enrollment, some clinical education centers require additional criminal background checks and drug screenings. These requirements for attendance at clinical education centers are carried out by the GVSU Compliance Office. Positive findings for any compliance office request may negatively impact the educational process at GVSU or future credentialing as a medical dosimetrist. The costs of these evaluations or any other required clinical placement evaluations are the responsibility of the applicant or student.

## Master of Science in Medical Dosimetry

For additional information about opportunities your college offers, please refer to the College of Health Professions section of this catalog.

**Website:** [www.gvsu.edu/grad/dosimetry](http://www.gvsu.edu/grad/dosimetry)

### Program Curriculum

The following courses comprise the medical dosimetry program:

#### Fall - 1st Semester

- \*STA 610 - Applied Statistics for Health Professions Credits: 3
- \*RMD 630 - Medical Dosimetry I Credits: 3
- \*RMD 631 - Medical Dosimetry I Laboratory Credits: 1

- \*RMD 693 - Medical Dosimetry Research Project Credits: 1 to 3 \*\*  
**OR** \* RMD 695 - Medical Dosimetry Thesis Credits: 1 to 3\*\*
- RMD 661 - Medical Dosimetry Clinical Education I Credits: 1 to 3  
**Total 11-13 credits**

#### Winter - 2nd semester

- \*PH 510 - Public Health Epidemiology Credits: 3
- \*RMD 632 - Medical Dosimetry II Credits: 3
- \*RMD 633 - Medical Dosimetry II Laboratory Credits: 1
- \*RMD 693 - Medical Dosimetry Research Project Credits: 1 to 3 \*\*  
**OR** \* RMD 695 - Medical Dosimetry Thesis Credits: 1 to 3\*\*
- RMD 662 - Medical Dosimetry Clinical Education II Credits: 1 to 4  
**Total 12-14 credits**

#### Spring/Summer - 3rd Semester

- RMD 663 - Medical Dosimetry Clinical Education III Credits: 1 to 4
- \*RMD 670 - Professional Issues in Medical Dosimetry Credits: 3
- \*PH 525 - Quantitative Research Methods in Public Health Credits: 3
- \*RMD 693 - Medical Dosimetry Research Project Credits: 1 to 3 \*\*  
**OR** \* RMD 695 - Medical Dosimetry Thesis Credits: 1 to 3 \*\*

#### **Total 11-13 credits**

**Total: 37 credits**

Elective: \*RMD 696 - Continuation of Master's Project or Thesis Research Credits: 1 to 6

\*Hybrid courses

**Note:** Clinical courses are not available in hybrid format since students are required to attend the assigned clinical setting for the competency based component of the program.

\*\* Project and thesis courses may be taken at variable credit per semester of one to three credits for a required total during the program of six credits. RMD 696 - Medical Dosimetry Thesis Continuous Enrollment may be required if the student does not successfully complete RMD 695 - Medical Dosimetry Thesis course.

## Medical Laboratory Science - Program Description

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

### Degree Offered

B.S. in medical laboratory science.

**Website:** [www.gvsu.edu/mls](http://www.gvsu.edu/mls)

### Accreditation

The medical laboratory science program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences; 5600 N. River Road; Suite 720; Rosemont, IL 60018.

Medical laboratory scientists perform complex analyses in order to develop data on the blood, tissues, and fluids of the human body. These laboratory tests play an important role in the detection, diagnosis, and treatment of many diseases. Medical laboratory scientists work in conjunction with pathologists and other physicians or scientists who specialize in clinical chemistry, microbiology, hematology, and other biological sciences.

Medical laboratory scientists are held accountable for accurate results. They establish and monitor quality assurance and quality improvement programs and design or modify procedures as necessary. Tests and procedures performed by medical laboratory scientists' focus on the major areas of hematology, microbiology, immunology, clinical chemistry, transfusion medicine, and urinalysis.

Medical laboratory science students will spend five semesters completing their general education and prerequisite science courses, followed by three semesters of professional courses. Application for admission into the medical laboratory science program occurs one year prior to the beginning

## Middle East Studies

of winter semester admission. Students with an earned baccalaureate degree who have completed appropriate prerequisite courses may also apply for admission.

After successful admission to the program, students complete three semesters of professional coursework which includes classes at the Cook-DeVos Center for Health Sciences and clinical rotation through an affiliated hospital laboratory. During this time, students integrate the theories of clinical medicine with the practice of clinical laboratory procedures. The students first learn basic theories and skills in hematology, clinical chemistry, immunology, transfusion medicine and microbiology, and then progress through advanced courses in these areas. Students will learn to apply the knowledge and technical skills taught in the classroom.

At the completion of the medical laboratory science program, students will be awarded a Bachelor of Science (B.S.) degree from Grand Valley State University in medical laboratory science and will be eligible to sit for the national certification exam. Granting of the baccalaureate degree is not contingent on passing the national Board of Certification (BOC) exam.

### Admission to the Medical Laboratory Science Program

Admission to the medical laboratory science program will be competitive, requiring completion of a secondary application. Applications are due February 15 of the sophomore year. Late applications will be considered assuming requirements are met and space is available in the program.

Applicants must meet the following criteria:

1. Academic achievement. Students must have a minimum overall GPA of 2.8 and a science GPA of 2.8 or above. Completion of BMS 208, BIO 120, CHM 109, and completion of 45 semester hours of credit.
2. Communication and interpersonal skills.
3. Recommendations. Three recommendations must be submitted on university forms—one from a chemistry faculty, one from a science laboratory faculty, and the third source is the choice of the applicant.
4. Additional activities. Additional educational, professional, leadership, scholarly, and volunteer activities are valued and should be documented.
5. Students should be aware that prior to the beginning of their clinical courses, they must complete comprehensive health compliance obligations including but not limited to a criminal background check and drug screening. It is the responsibility of the student to comply. If there is a positive result, the clinical sites have the right to refuse a student's placement which may negatively impact a student's ability to progress in the Medical Laboratory Science program. In addition, individuals who have been charged with or convicted of a crime may not be eligible for national certification by the American Society for Clinical Pathology - Board of Certification. Students to whom this may apply are strongly advised to work with the ASCP-BOC for pre-application review of eligibility for certification from their website at [www.ascp.org/Board-of-Certification](http://www.ascp.org/Board-of-Certification). The ASCP-BOC contact information: Phone: (800) 267-2727; Fax: 312-541-4472.

## Bachelor of Science in Medical Laboratory Science

### Requirements for a Major in Medical Laboratory Science

#### General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

#### B.S. Course Requirements

- STA 215 - Introductory Applied Statistics Credits: 3
- AHS 301 - Introduction to Health Care Research Credits: 3  
OR BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3  
OR PSY 300 - Research Methods in Psychology Credits: 3
- BMS 290 - Human Physiology Credits: 3  
AND BMS 291 - Laboratory in Human Physiology Credits: 1

### Medical Laboratory Science Core Requirement

- AHS 100 - Medical Terminology Credits: 3
- MLS 102 - Introduction to Medical Laboratory Sciences Credits: 1
- BMS 208 - Human Anatomy Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3  
OR AHS 301 - Introduction to Health Care Research  
OR PSY 300 - Research Methods in Psychology Credits: 3
- BMS 410 - Immunology Credits: 3
- MLS 495 - Issues in Medical Laboratory Science Credits: 3

### Required Science Cognate Courses

There are 27 semester hours of required science cognate courses:

- BIO 120 - General Biology I Credits: 4
- BIO 355 - Human Genetics Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- CHM 231 - Introductory Organic Chemistry Credits: 4
- CHM 232 - Biological Chemistry Credits: 4
- PHY 200 - Physics for the Life Sciences Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3

### Professional Courses

There are 35 additional semester credits in professional courses:

- MLS 320 - General Laboratory Practice Credits: 2
- MLS 350 - Management for Laboratory Science Credits: 2
- MLS 370 - Diagnostic Microbiology I Credits: 4
- MLS 372 - Diagnostic Microbiology 2 Credits: 3
- MLS 373 - Diagnostic Microbiology II Laboratory Credits: 1
- MLS 410 - Clinical Immunoserology Credits: 3
- MLS 416 - Hematology Credits: 3
- MLS 417 - Clinical Hematology Laboratory Credits: 1
- MLS 422 - Clinical Chemistry Credits: 6
- MLS 450 - Clinical Practicum I Credits: 1
- MLS 460 - Advanced Clinical Science Credits: 5
- MLS 461 - Advanced Clinical Laboratory Credits: 2
- MLS 490 - Clinical Practicum II Credits: 5

## Middle East Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/mes](http://www.gvsu.edu/mes)

In the tradition of liberal education at Grand Valley State University, courses in this minor introduce students to the heritage, problems, and perspectives of Middle Eastern cultures, thus helping them to better understand their own culture. Michigan, for example, is home to the nation's largest Arab American community, half Christian, half Muslim, with substantial Jewish congregations.

The Middle East studies program focuses on the area stretching from Morocco in the west to Oman in the east, from Iran and Turkey in the north to Sudan in the south—a region inhabited by more than 350 million people. Not only does the history and art of this region form the basis of Western civilization, but the Middle East today is central to issues of global peace and prosperity. This area incorporates largely Muslim lands, but Christians and Jews have also made important contributions. All receive appropriate attention in this program.

Study abroad programs in Turkey and Oman are offered during spring term. There is a partnership program with the Middle East Technical University in Ankara, Turkey, where students may study for a semester or a full year. Students may also study in Tunisia and Turkey through COUNCIL programs. For more information, consult the Padnos

International Center (PIC) or the director of the Middle East studies program.

## Middle East Studies Minor

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

### Requirements for a Minor in Middle East Studies

Students minoring in Middle East studies must complete a minimum of 18–19 hours of coursework. Normally, this includes ten credits of core courses (including four credits of language) and nine credits of electives. Students entering the university competent in Arabic at the 202 level or higher will take one additional elective course, for a total of 18 credits. No more than two courses from any department other than Middle East studies can be counted toward the minor.

All minors are required to complete the following courses:

- ARA 202 - Intermediate Arabic II: Language and Culture Credits: 4
- HST 337 - The Age of Islamic Empire Credits: 3
- **OR** HST 338 - Modern Middle East Credits: 3
- MES 201 - Introduction to the Middle East Credits: 3

In addition to the preceding required courses:

Students with fourth-semester or higher competence in Hebrew, Persian, or Turkish may substitute that for the Arabic requirement but will likewise take one extra course from the list as follows.

Students will select three courses (nine credits) from the following list:

- ANT 330 - Anthropology of Selected World Areas Credits: 3
- ANT 350 - Archaeology of Mid-East Credits: 3
- ENG 303 - Studies in World Literature Credits: 3
- GPY 355 - Geography of Southwest Asia (The Middle East). Credits: 3
- HST 211 - History of Islamic Civilization Credits: 3
- HST 310 - Cultural and Social Topics in Nonwestern History Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 338 - Modern Middle East Credits: 3
- HST 339 - Modern Iran Credits: 3
- MES 202 - Arab Americans Credits: 3
- MES 333 - Study Abroad- Middle East Studies Credits: 1 to 6
- MES 350 - Islam: Scripture and Ritual Credits: 3
- MES 370 - Contemporary Issues in the Middle East: The Model Arab League Credits: 3
- MES 380 - Special Topics in Middle East Studies Credits: 3
- MES 399 - Independent Studies Credits: 1 to 3
- PLS 320 - Comparative Politics of the Middle East Credits: 3

## Modern Languages and Literatures - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/mll](http://www.gvsu.edu/mll)

The importance of foreign language study has never been more obvious than in today's global society. Leaders in business, government, and throughout the community are calling for increased awareness of the interrelatedness and interdependence of all nations and societies. One of the traditional barriers to understanding, and to the free flow of communication, has been a lack of informed citizens with competence in at least one foreign language. There is no better way to understand and appreciate cultures other than your own than to communicate with other peoples in their own language. What is more, the mastery of a foreign language inevitably improves your command of your native language. With such a high premium on communication skills in the world today, foreign language study is not a luxury; it is a necessity.

### Honors Societies

Pi Delta Phi (French), Delta Phi Alpha (German), Sigma Delta Pi (Spanish).

### Degree Requirements

A student working toward any B.A. degree must successfully complete the third semester course in a foreign language. The Department of Modern Languages and Literatures currently offers the following languages that fulfill this requirement: Arabic, Chinese, French, German, Italian, Japanese, Russian, and Spanish.

Transfer students who wish to major in a foreign language at Grand Valley must take a minimum of 12 credit hours of advanced-level coursework (300 or above) with the Department of Modern Languages and Literature at Grand Valley to qualify for a major. For transfer students who wish to minor in a foreign language, a minimum of six credit hours of advanced coursework (300 or above) with the Department of Modern Languages and Literature at Grand Valley is required. This requirement includes those who have graduated from other institutions and now seek teaching certification from Grand Valley.

Students seeking secondary certification in foreign languages must take the foreign language methods seminar, Education 331, in order to be certified. Students may also choose to enroll in foreign language and literature courses on a credit/no credit basis.

All French, German and Spanish majors and minors seeking teaching licensure must demonstrate oral proficiency at the advanced-low level (or higher) prior to enrolling in the College of Education. A study abroad experience is required for students seeking teaching licensure degrees (see individual program details).

The 380 special-topics courses are available in all foreign languages. The independent study and research courses in language programs within the Department of Modern Languages and Literatures are available to qualified students for independent study in areas not covered by the regular foreign language offerings.

### Placement in Language Courses

Students who have studied a foreign language in high school or who have practical knowledge of a foreign language that is offered by MLL must take a placement examination prior to enrolling for further study of that language. Students must enroll in the course in which they place on the examination. Instructors who determine that students are inappropriately enrolled may direct them to move to the appropriate level. Students can count one placement test per semester (only the first attempt).

Transfer students with prior college language study are not eligible to take the placement examination in that language, and must enroll in a course at the next appropriate level.

Students with non-college language learning may be able to earn college credit by achieving an appropriate score on an approved national test, such as Advanced Placement (see "Credit by Examination").

Native speakers are not eligible to take the placement exam, nor are they eligible to enroll in 100- or 200-level courses, except SPA 203. The students should talk to an advisor in the Department of Modern Languages and Literatures for proper placement.

### "150" Course

This course is designed for students who have sufficient prior study to make placement in 101 inappropriate. The 150 course includes a review of first semester language (101) and covers the same material as 102. Completion of the course with a grade of C or higher prepares students for 201.

### Foreign Language Resource Center (Laboratory)

The Language Resource Center offers access to state-of-the-art audio, video, and computer technologies. The LRC laboratories host 66 language-learning workstations, which are reserved exclusively for GVSU

## Movement Science

language students but closed to general campus use. All elementary and intermediate language courses require a minimum of 50 minutes a week of lab attendance. The audio-visual and computer resources are used to enrich many upper-division courses, too. Foreign language students can also access most of the LRC audio resources from their homes, or elsewhere, via the Internet. LRC equipment and software are being constantly updated and expanded. [marvin.mll.gvsu.edu/LRCWordpress](http://marvin.mll.gvsu.edu/LRCWordpress)

### Study Abroad

Grand Valley urges all students to seek study abroad experience. Foreign language majors and minors will make exceptional progress by combining study abroad with their formal coursework on the home campus.

Moreover, approved study experiences of varying lengths - summer, semester, or academic year - carry full academic credit for all participants, including non-majors. The many programs currently offered takes place during the summer and are led by a Grand Valley State University faculty member. Longer stays can be arranged, however, through Grand Valley's institutional ties with colleges and universities in most regions of the world.

For more information, students should contact the Padnos International Center at (616) 331-3898. [www.gvsu.edu/studyabroad](http://www.gvsu.edu/studyabroad)

Regular accompanied programs include:

**Chile:** Intensive Spanish language studies for fall and winter semesters or nine-week spring term at the University of BíoBío in Chillán, Chile.

**China:** Faculty-led Intensive Mandarin summer program in Nanjing; one or two semester programs at East China Normal University in Shanghai.

**Dominican Republic:** A faculty-led spring program in Santo Domingo. This program offers students the opportunity to expand their knowledge of the language and cultures of the Spanish-speaking world, while living in the oldest European settlement in the Americas.

**France:** A faculty-led summer school program in French language and culture located in Nice (southern France) and Paris.

**Germany:** A faculty-led summer program in German language and culture and a full semester exchange at our partner institute in Schwäbisch Gmünd, Germany; semester exchange (primarily for business students) in Mosbach/Bad Mergentheim.

**Japan:** A faculty-led spring program in Tokyo and Osaka; semester or full-year programs at the Japan Center for Michigan Universities in Hikone and Ritsumeikan Asia Pacific University in Beppu; and full-year exchange program with International Christian University of Tokyo.

**Jordan:** A faculty-led summer school program at the University of Jordan in Amman where students study colloquial Arabic and get immersed in Arabic culture.

**Mexico:** Intensive Spanish language studies for fall or winter semesters at the University of the Americas - Puebla, Puebla, Mexico.

**Oman/United Arab Emirates:** A faculty-led spring program in Oman and Dubai. This program will introduce students to the language, culture and business practices of Oman and the UAE (Dubai).

**Spain:** Intensive Spanish language studies (all levels) for fall, winter, or summer semesters at the University of Deusto in Bilbao, Spain.

**Taiwan:** Semester programs at National Taiwan Normal University in Taipei.

Arabic, Chinese, Italian, Japanese, and Russian Language Instruction

In addition to French, German, and Spanish, Grand Valley offers Arabic, Chinese, Italian, Japanese, and Russian courses of instruction to fulfill the B.A. requirement (201-level) and the 202-level, which fulfills a general education requirement, the language requirement for minors in Middle East studies (Arabic) and East Asian studies (Chinese and Japanese), as well as the Chinese Studies and International Relations major language

requirements. Arabic and Chinese offer a language minor program. A variety of language and culture courses at the 300-level are offered in Japanese.

## Movement Science - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/move-sci](http://www.gvsu.edu/move-sci)

### Mission

The Department of Movement Science is a multidisciplinary unit where faculty and students critically examine and apply scientific, clinical, educational, and cultural aspects of sport and movement to promote healthy living across the lifespan.

### Vision

The Movement Science Department aspires to be a center of excellence in the diverse study of sport and human movement. Faculty will adopt innovative teaching techniques, actively collaborate in scholarship, foster critical thinking and support experiential learning. With a dynamic, student-centered focus on success; faculty and students will excel as leaders in their profession.

### Values

**Innovative and diverse methods of teaching** - We promote multiple forms of content delivery through varied and innovative teaching techniques.

**Collaborative scholarly and creative activity** - We recognize that scholarly creative work is a high impact activity for students, and value the interaction between faculty and students in pursuing this form of inquiry.

**Physical literacy** - We value the ability, confidence, and desire to be physically active for a lifetime.

**Diversity and cultural competency** - We value diversity and inclusiveness in teaching, scholarship and service.

**Inclusive living-learning communities** - We value the opportunity for students to live in a "shared" community that allows for greater faculty and peer interaction and increases opportunities for coordinated activities and resources in a socially and academically supportive residential living environment.

**Experiential learning** - We promote experiential learning within our curricula. Students learn to apply knowledge by being immersed within the professional environment.

### Degrees Offered

B.S. in athletic training, B.S. in exercise science, and B.S. in physical education. The B.S. in physical education with a physical education major and emphasis in K-12 professional instruction, is required to seek Michigan K-12 teacher certification in physical education.

### Accreditation

The athletic training education program is accredited by the Commission on Accreditation of Athletic Training Education (C.A.A.T.E.).

The Department of Movement Science serves the diverse pre-professional needs of Grand Valley State University students who seek careers in athletic training, exercise science (clinical and health fitness instruction), K-12 physical education teaching, health education, and sport leadership. The department also supports the FIT program, (fitness, skill, and activity classes) for all Grand Valley State University students to gain the skill, confidence and desire to be physically active for a lifetime.

The major programs in the Department of Movement Science provide students with broad theoretical and conceptual foundations for professional preparation in athletic training, exercise science, and physical education. The programs are designed to encourage the

examination of philosophical, historical, psycho-social, scientific, ethical, and legal constructs of the professions. In addition, the programs provide opportunities for majors and minors to complete appropriate fieldwork, clinical, and internship experiences to fulfill program requirements.

The majors and minors in movement science are designed for the professional preparation in the areas of exercise science, athletic training, health education, physical education, and sport leadership. This professional preparation may lead to graduate study and/or the following career opportunities: physical education teacher, health education teacher, coaching, athletics programming, marketing and management, certified athletic trainer, exercise scientist, fitness/wellness instructor, health/fitness club administrator, intramural director, recreation leader, athletic official, camp administration, exercise physiologist, cardiac rehabilitation specialist, strength and conditioning specialist, personal trainer, outdoor-adventure activities programming, aquatics instructor, and corporate fitness administration.

## Bachelor of Science in Physical Education

The physical education K-12 professional instruction program is designed to prepare physical education professionals to promote quality physical education, lifelong skills and developmentally appropriate activities. As such, the faculty prepare future physical educators in a course of study that reflects a commitment to the National Association for Sport and Physical Education Standards.

### Requirements for a Major in Physical Education

Two emphasis areas are available for majors in physical education. Students seeking a major in physical education must select either the K-12 professional instruction or sport leadership emphasis. Students majoring in physical education K-12 professional instruction may obtain Michigan certification to teach physical education K-12. In addition, those seeking teacher certification must complete a teachable minor and a 39-credit professional education program from the College of Education (see the GVSU College of Education website for more information). Secondary admission to the College of Education requires at least a 2.7 GPA overall and in the major.

### Requirements for K-12 Professional Instruction Emphasis

#### 1. University Degree Requirements

Students in the physical education professional program must follow all general education requirements as defined by the Grand Valley State University Undergraduate and Graduate Catalog.

#### 2. B.S. Degree Requirements: Physical Education Major (credit hours: 10)

The following B.S. degree requirements must be completed for the major in physical education.

- BMS 202 - Anatomy and Physiology Credits: 4 (Gen. Ed. NS/B)
- MOV 304 - Introduction to Exercise Physiology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3 (Gen. Ed. CGE/A)

#### 3. K-12 Professional Instruction Foundational Courses (credit hours: 19)

- MOV 101 - Foundations of Human Movement Science Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2
- MOV 201 - Psychosocial Aspects of Physical Education and Sport Credits: 3
- **OR** MOV 202 - Social Cultural Dimensions of Sport Credits: 3
- MOV 300 - Kinesiology Credits: 3
- MOV 309 - Measurement and Evaluation Credits: 2
- MOV 310 - Motor Skill Development Credits: 3
- PED 401 - Organization and Administration of Physical Education and Sport (Capstone) Credits: 3 (SWS)

#### 4. Fitness, Skill, and Activity Courses (credit hours: 5)

Selected from FIT 100 through 179, one of which must be swimming. FIT 180 courses may be selected and substituted for this requirement. PED 214 and/or PED 215 may be substituted for the 100-180 level swimming requirement.

#### 5. Professional Instruction Emphasis Courses (credit hours: 24)

Physical education majors selecting the K-12 professional instruction emphasis must meet all requirements of the College of Education if they intend to pursue teacher certification. The K-12 emphasis may also be taken by students who do not intend to enter the College of Education. Students must take the following courses in addition to the core curriculum, B.S. degree requirements, and skills development activity courses:

- PED 200 - Rhythms and Dance K-12 Credits: 3
- PED 202 - Adapted Physical Education and Recreation Credits: 2
- PED 210 - Tumbling and Gymnastics, K-12 Credits: 3
- PED 220 - Individual Sports K-12 Credits: 3
- PED 230 - Team Sports K-12 Credits: 3
- PED 240 - Methods for Teaching Fitness Credits: 3
- PED 306 - Teaching Physical Education - Elementary Credits: 3
- PED 307 - Teaching Physical Education - Secondary Credits: 3

### Requirements for Sport Leadership Emphasis

#### 1. General University Degree Requirements

Students will complete the general university degree requirements as identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

Note: ECO 211 - Introductory Microeconomics Credits: 3 is suggested to fulfill a Social and Behavioral Sciences Foundations requirement.

#### 2. Sport Leadership Emphasis Requirements (credit hours: 50 to 56)

- ACC 212 - Principles of Financial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3
- COM 201 - Speech Credits: 3
- ECO 330 - Sports Economics Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MKT 350 - Marketing Management Credits: 3
- MOV 101 - Foundations of Human Movement Science Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2
- MOV 201 - Psychosocial Aspects of Physical Education and Sport Credits: 3
- MOV 202 - Social Cultural Dimensions of Sport Credits: 3
- PED 225 - Introduction to Sport Leadership Credits: 3
- PED 356 - Current Topics in Sport Leadership Credits: 3
- PED 376 - Sport Facility and Event Management Credits: 3
- PED 390 - Practicum in Sport Management Credits: 3
- PED 490 - Internship in Sport Management Credits: 6 to 12
- PED 495 - Administration in Sport Leadership Credits: 3 (Capstone) (SWS)

#### 3. B.S. Degree Requirements (credits: 10)

- BMS 202 - Anatomy and Physiology Credits: 4
- MKT 352 - Marketing Research Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### 4. Sport Leadership Electives (credits: 9)

Elect three of the following sport leadership elective courses.

- CAP 305 - Sports Promotion Credits: 3
- MGT 333 - Human Resource Management Credits: 3
- MGT 345 - Team Building Credits: 3
- MKT 351 - Consumer Behavior Credits: 3
- MKT 353 - Marketing Negotiations Credits: 3
- MKT 361 - Sports Marketing Credits: 3
- PA 335 - Grant Writing Credits: 3
- PA 375 - Public Budgeting and Finance Administration Credits: 3
- STA 345 - Statistics in Sports Credits: 3

## Physical Education

- WRT 381 - Writing and Sports Credits: 3

### Suggested Order of Coursework for a Major in Physical Education

Courses in the major and minor should be taken according to numerical sequence within the core curriculum, degree requirements, and emphasis areas. Attention should be paid to prerequisite requirements. Course progressions are designed so higher numbered material mastered in a lower numbered course is available to be expanded upon or applied during subsequent courses.

Course schedules are planned to expedite taking coursework in the recommended sequence.

- 100-level courses should be taken during the freshman year
- 200-level courses should be taken during the sophomore year
- 300-level courses should be taken during the junior year
- 400-level courses should be taken during the junior and senior years

### For the Core and Cognates

- BMS 202 - Anatomy and Physiology Credits: 4  
Note: BMS 202 must be taken before MOV 300 and MOV 304.
- MOV 309 - Measurement and Evaluation Credits: 2
- STA 215 - Introductory Applied Statistics Credits: 3  
Note: MTH 110 must be taken before STA 215.

### For K-12 Professional Instruction Emphasis

First Year:

- MOV 101 - Foundations of Human Movement Science Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2
- MOV 202 - Social Cultural Dimensions of Sport Credits: 3  
**OR** MOV 201 - Psychosocial Aspects of Physical Education and Sport Credits: 3
- PED 210 - Tumbling and Gymnastics, K-12 Credits: 3
- PED 200 - Rhythms and Dance K-12 Credits: 3
- PSY 101 - Introductory Psychology Credits: 3

Second Year:

- BMS 202 - Anatomy and Physiology Credits: 4
- EDF 315 - Diverse Perspectives on Education Credits: 3
- EDI 337 - Introduction to Learning and Assessment Credits: 3
- PED 202 - Adapted Physical Education and Recreation Credits: 2
- PED 220 - Individual Sports K-12 Credits: 3
- PED 230 - Team Sports K-12 Credits: 3
- STA 215 - Introductory Applied Statistics

Third Year:

- MOV 300 - Kinesiology Credits: 3
- MOV 309 - Measurement and Evaluation Credits: 2
- PED 240 - Methods for Teaching Fitness Credits: 3
- PSY 301 - Child Development Credits: 3
- PSY 325 - Educational Psychology Credits: 3

Fourth Year:

- MOV 304 - Introduction to Exercise Physiology Credits: 3
- MOV 310 - Motor Skill Development Credits: 3
- PED 306 - Teaching Physical Education - Elementary Credits: 3
- PED 307 - Teaching Physical Education - Secondary Credits: 3
- PED 401 - Organization and Administration of Physical Education and Sport (Capstone) Credits: 3
- EDS 379 - Universal Design for Learning: Secondary Credits: 3

Fifth Year:

- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDR 321 - Content Area Literacy Credits: 3
- EDI 331 - Methods and Strategies of Secondary Teaching Credits: 5
- EDT 370 - Technology in Education Credits: 3
- EDI 431 - Student Teaching, Secondary Credits: 8
- EDF 485 - The Context of Educational Issues Credits: 3

### For Sport Leadership Emphasis

Attention should be paid to prerequisite/corequisite requirements.

- MOV 202 and PED 225 must be completed before PED 356
- MTH 110 must be completed before STA 215
- STA 215 must be completed before COM 375 or MKT 352
- MOV 102 and PED 356 must be completed before PED 460
- PED 460 must be completed before PED 490
- PED 490 and PED 495 are to be taken concurrently during the final semester

First Year:

- COM 201 - Speech Credits: 3
- MOV 101 - Foundations of Human Movement Science Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

Second Year:

- ACC 212 - Principles of Financial Accounting Credits: 3
- BMS 202 - Anatomy and Physiology Credits: 4
- BUS 201 - Legal Environment for Business Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3 (suggested to fulfill Social and Behavioral Sciences Foundations course)
- MOV 201 - Psychosocial Aspects of Physical Education and Sport Credits: 3
- MOV 202 - Social Cultural Dimensions of Sport Credits: 3
- PED 225 - Introduction to Sport Leadership Credits: 3 (sport leadership elective)
- MOV 102 - First Aid, CPR and AED Credits: 2

Third Year:

- MGT 331 - Concepts of Management Credits: 3
- MKT 350 - Marketing Management Credits: 3
- PED 356 - Current Topics in Sport Leadership Credits: 3
- PED 376 - Sport Facility and Event Management Credits: 3
- PED 390 - Practicum in Sport Management Credits: 3

Fourth Year:

- MKT 352 - Marketing Research Credits: 3
- ECO 330 - Sports Economics Credits: 3

Final Semester:

- PED 490 - Internship in Sport Management Credits: 6 to 12
- PED 495 - Administration in Sport Leadership Credits: 3

## Physical Education Minor

### Requirements for a Teachable Minor in Secondary Physical Education (credit hours: 23)

Students seeking a teachable minor in physical education must complete:

- MOV 201 - Psychosocial Aspects of Physical Education and Sport Credits: 3  
**OR** MOV 202 - Social Cultural Dimensions of Sport Credits: 3
- MOV 300 - Kinesiology Credits: 3
- MOV 304 - Introduction to Exercise Physiology Credits: 3
- MOV 310 - Motor Skill Development Credits: 3
- PED 202 - Adapted Physical Education and Recreation Credits: 2
- PED 307 - Teaching Physical Education - Secondary Credits: 3

Plus, two additional courses from the following:

- PED 200 - Rhythms and Dance K-12 Credits: 3
- PED 210 - Tumbling and Gymnastics, K-12 Credits: 3
- PED 220 - Individual Sports K-12 Credits: 3
- PED 230 - Team Sports K-12 Credits: 3
- PED 240 - Methods for Teaching Fitness Credits: 3

## School Health Education Minor

### Requirements for a Minor in Secondary School Health Education

This 23-credit hour minor is approved by the State of Michigan for secondary education majors. This minor prepares school health education candidates to teach health education in grades 6–12. Students seeking a

teachable minor in school health education *must* complete the following requirements:

- BMS 105 - Basic Nutrition Credits: 3
- BMS 202 - Anatomy and Physiology Credits: 4
- BMS 222 - Introduction to Public Health Credits: 3  
**OR** BMS 223 - Infectious Human Diseases; Prevention and Control Credits: 3
- PED 206 - Self-Health and Wellness Credits: 2 (online)
- PED 270 - SHE: Curriculum and Program Evaluation Credits: 3
- PED 301 - Methods of Teaching Health Education Credits: 3
- SOC 252 - Sociology of Drug Use and Abuse Credits: 3
- PED 272 - Reproductive Health Education Credits: 2 (online)

## Certificate in Sport Coaching

The certificate in sport coaching provides prospective coaches with theoretical knowledge and practical experiences in accordance with the National Standards for Sport Coaches. The focused coursework stresses the importance of developing an athlete-centered coaching philosophy and a scientifically based understanding of current issues in sports medicine, motor learning and coaching theory. Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. Students completing the certificate in sport coaching will have a record of this accomplishment appear on their academic transcript.

### Requirements for a Certificate in Sport Coaching

- MOV 201 - Psychosocial Aspects of Physical Education and Sport Credits: 3
- MOV 217 - Modern Principles of Athletic Training Credits: 2
- MOV 218 - Modern Principles of Athletic Training Lab Credits: 1
- PED 355 - Current Topics in Coaching Credits: 3
- PED 360 - Practicum in Sport Coaching Credits: 3

## Multimedia Journalism - Program Description

For additional information about opportunities your college offers, please refer to the School of Communications website.

**Website:** [www.gvsu.edu/soc](http://www.gvsu.edu/soc)

The multimedia journalism program offers majors a broad-based education in which the study of journalism is grounded in the liberal arts. The emphasis on critical thinking and historical perspective embraces the fundamental principle that a free press and an informed citizenry are essential for the success of a representative democracy.

The program explores the complex changes in both traditional media and evolving Internet-based, multimedia delivery of news and information. It offers a range of instruction in journalism theory, practice, history, and criticism. Students are guided to develop a thorough background in multimedia reporting and production skills.

The multimedia journalism program prepares majors to enter the job market as professional journalists. It offers students the opportunity to develop gateway skills of reporting, writing and production in print, television, radio and online-based media. As news outlets become increasingly diversified, our graduates require a broad exposure in order to be competitive with the demands of a changing marketplace.

Students have the opportunity to develop depth through courses offered in related majors in the School of Communications, including film/video and photography. Multimedia journalism majors may also earn a minor in advertising and public relations. In addition, majors are encouraged to develop depth outside of journalism in related fields including the arts, computer science, economics, political science and sociology.

### Internships

Multimedia journalism majors are required to take one internship in a professional media setting and are encouraged to do additional internships as well. Most local media have a need for interns to help with a variety of formats: print, broadcast and online, such that students can find a variety of opportunities. Students may apply up to 15 internship credits toward graduation. Students are urged to work closely with departmental advisors to identify internships that best suit their interest and career ambitions.

## Bachelor of Arts or Bachelor of Science in Multimedia Journalism

### School of Communications Core (credits: 9)

All students majoring in the School of Communications must complete the following core courses, for a total of nine credits:

- COM 101 - Concepts of Communication - Credits: 3
- COM 295 - Communication Theory - Credits: 3

Select one of two:

- COM 201 - Speech Credits: 3
- OR** COM 215 - Story Making Credits: 3

Capstone requirement:

- COM 495 - Issues in Communication (Capstone) Credits: 3

All students majoring in the School of Communications must take COM 495 (three credits) during their senior year. This Capstone course offers a synthesis of ideas and theories about one or more current critical issues in communication.

### B.A. and B.S. Degree Requirements

All undergraduate programs in the School of Communications offer both the B.A. degree and the B.S. degree. All students selecting majors in the School of Communications must choose either the B.A. degree requirements or the B.S. degree requirements for a particular undergraduate program.

#### B.A. Degree Requirements

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

#### B.S. Degree Requirements

- COM 275 - Foundations of Communication Research Credits: 3
- COM 375 - Communication Research Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Multimedia Journalism Requirements (credits: 31 to 33)

- CMJ 184 - Television Media Production Credits: 3
- CMJ 236 - News in Society Credits: 3
- CMJ 256 - News Reporting Credits: 3
- CMJ 260 - Multimedia Journalism Workshop Credits: 3
- CMJ 284 - Broadcast News I Credits: 3
- CMJ 290 - Journalism History Credits: 3
- CMJ 310 - Advanced Reporting Techniques Credits: 3
- CMJ 316 - News Editing and Graphics Credits: 3
- CMJ 325 - Issues in Journalism Credits: 3
- CMJ 460 - Multimedia Reporting Credits: 3
- CMJ 490 - Internship Credits: 3

### Electives (credits: 6)

Students choose six credits from any of the following courses. Note that departmental advising will play an important role, as many students are likely to take additional credits in pursuit of skills and interests in line with their specific professional goals. To that end, the courses listed are organized to underscore that students will have the opportunity to specialize but will also have flexibility to explore areas of interest.

#### Print and Web-based Journalism

- CMJ 364 - Feature Journalism Credits: 3
- CMJ 365 - Advanced Editing Credits: 3
- CMJ 366 - Arts and Entertainment Journalism Credits: 3
- CMJ 390 - Technical Writing Credits: 3

## Music

- CMJ 481 - Investigative Reporting Credits: 3

### Electronic Journalism

- CMJ 265 - Introduction to Radio Credits: 3
- CMJ 320 - Advanced TV Studio Production Credits: 3
- CMJ 384 - Broadcast News II Credits: 3
- CMJ 484 - TV News Workshop Credits: 3
- CPH 272 - Digital Photography I Credits: 3

## Music - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/music](http://www.gvsu.edu/music)

The Department of Music, Theatre, and Dance offers curricula leading to the Bachelor of Arts in Music, Bachelor of Music, and Bachelor of Music Education degrees, as well as the Bachelor of Arts in Dance. Minors in Music and Dance are also offered. These degree programs provide personalized attention, career building opportunities, and professional and extensive training in the various idioms of music and dance. In the context of a broad liberal education that fosters critical thinking, creative problem solving, and cultural understanding, these degree programs prepare students well to answer the call of rewarding careers in music and dance.

Grand Valley State University is an accredited institutional member of the National Association of Schools of Music.

### Admission

In addition to formal admission to Grand Valley, each applicant wanting to major or minor in music is required to arrange for a personal audition with the music department. When considerable geographical distance or extreme hardship prevents a personal audition, the applicant may, with the permission of the department, submit an audio recording of an appropriate performance. Entering freshmen and transfer students will be required to take a theory placement exam on audition day. A student with two or more years of piano experience will also be required to take a keyboard musicianship placement exam.\* Audition appointments should be made at least one month in advance. Recommended audition repertoire and an application can be found at [www.gvsu.edu/music/](http://www.gvsu.edu/music/).

\*Students transferring from GRCC with a completed associate's degree in music will not need to complete the placement testing in theory or keyboard musicianship.

### Requirements for Major and Minor Programs

In addition to requirements outlined in the programs, all music majors must fulfill the department recital and Music Major Seminar attendance requirements, fulfill the keyboard musicianship requirements, and perform one or two faculty-approved recitals, as appropriate to the degree program selected. Music majors and minors should consult the music department student handbook for additional information and helpful suggestions.

Transfer students are required to complete a minimum of 30 hours at Grand Valley, which includes at least eight hours in applied music, three hours in major ensembles, and nine additional hours in music to be determined by the advisor. Any exceptions to these requirements are left to the discretion of the music department.

## Bachelor of Arts in Music

The B.A. degree provides a course of study for students interested in a liberal arts degree with a major in music. This degree, with its foreign language component, offers an appropriate background for prospective advanced-degree candidates who are preparing for careers in composition, technology, music history, music theory, jazz studies, library science, or independent studio teaching. It also works well for students who want to study music but are aiming at careers in other fields, and for students with double majors. There is sufficient flexibility within the B.A. to provide an opportunity for acquisition of those skills that are necessary in the current technological environment. The culmination event of the B.A. is a senior

project planned and carried out with the help of a faculty advisor. Students electing a B.A. in music must complete a minimum of 41 credit hours in music, planned with the approval of a faculty advisor in the department.

**MUS Credit Requirement:** 40-41

**Course requirements are as follows.**

### Requirements for a Major in Music

Major Ensembles (credits: 4)

Choose from the following. Each can be taken more than once for credit.

- MUS 101 - Grand Valley Singers Credits: 1
- MUS 102 - Concert Band Credits: 1
- MUS 103 - Grand Valley Symphony Orchestra Credits: 1
- MUS 104 - Chamber Music Ensembles Credits: .5
- MUS 105 - Grand Valley Jazz Ensemble Credits: 1
- MUS 107 - Grand Valley Marching Band Credits: 1
- MUS 108 - New Music Ensemble Credits: 1
- MUS 109 - Select Women's Ensemble Credits: 1
- MUS 110 - Collegium Musicum Credits: 1
- MUS 112 - Symphonic Wind Ensemble Credits: 1
- MUS 117 - Grand Valley University Arts Chorale Credits: 1
- MUS 118 - Varsity Men Credits: 1

Applied Music (credits: 4)

- MUS 141 - Private Instruction in Voice and Instruments – Freshman Credits: 1
- MUS 142 - Private Instruction in Voice and Instruments – Freshman Credits: 1
- MUS 241 - Private Instruction in Voice and Instruments – Sophomore Credits: 1
- MUS 242 - Private Instruction in Voice and Instruments – Sophomore Credits: 1

Music Theory (credits: 15)

- MUS 130 - Music Theory I Credits: 3
- MUS 131 - Music Theory II Credits: 3
- MUS 230 - Music Theory III Credits: 3
- MUS 231 - Music Theory IV Credits: 3
- MUS 495 - Analytical Techniques (Capstone) Credits: 3

Keyboard Musicianship (credits: 2)

- MUS 263 - Keyboard Musicianship I Credits: 1
- MUS 264 - Keyboard Musicianship II Credits: 1

Aural Perception and Sight Singing (credits: 2)

- MUS 133 - Aural Perception and Sight-Singing I Credits: 1
- MUS 134 - Aural Perception and Sight-Singing II Credits: 1

Music Literature (credits: 6)

- MUS 119 - Survey of Music Literature I Credits: 3
- MUS 120 - Survey of Music Literature II Credits: 3

Music Electives (credits: 6)

Choose from the following:

- MUS 218 - World Music Credits: 3
- MUS 219 - Jazz History Credits: 3
- MUS 300 - Exploring American Music Credits: 3
- MUS 302 - Music: Medieval and Renaissance Eras Credits: 3
- MUS 303 - Music: Baroque Era Credits: 3
- MUS 304 - Music: Classical Era Credits: 3
- MUS 305 - Music: Nineteenth Century Credits: 3
- MUS 306 - Music from 1900-1960 Credits: 3
- MUS 307 - Music Since 1960 Credits: 3
- MUS 308 - Music History Seminar Credits: 3
- MUS 310 - Piano Literature Credits: 2
- MUS 320 - Introduction to Conducting Credits: 2
- MUS 330 - Instrumentation/Orchestration Credits: 3
- MUS 333 - Form and Analysis in Western Music Credits: 3
- MUS 337 - Jazz Theory Credits: 2
- MUS 380 - Special Topics in Music Credits: 1 to 4

## Final Project

- MUS 479 - B.A. Senior Project Credits: 1 to 2

## Suggested Order of Coursework for a Major in Music

## Freshman Year - Fall

- Major ensemble Credits: 1
- MUS 141 - Private Instruction in Voice and Instruments – Freshman Credits: 1
- MUS 263 - Keyboard Musicianship I Credits: 1

## Freshman Year - Winter

- Major ensemble Credits: 1
- MUS 142 - Private Instruction in Voice and Instruments – Freshman Credits: 1
- MUS 264 - Keyboard Musicianship II Credits: 1

## Sophomore Year - Fall

- Major ensemble Credits: 1
- MUS 119 - Survey of Music Literature I Credits: 3
- MUS 130 - Music Theory I Credits: 3
- MUS 133 - Aural Perception and Sight-Singing I Credits: 1
- MUS 241 - Private Instruction in Voice and Instruments – Sophomore Credits: 1

## Sophomore Year - Winter

- Major ensemble Credits: 1
- MUS 120 - Survey of Music Literature II Credits: 3
- MUS 131 - Music Theory II Credits: 3
- MUS 134 - Aural Perception and Sight-Singing II Credits: 1
- MUS 242 - Private Instruction in Voice and Instruments – Sophomore Credits: 1

## Junior Year - Fall

- MUS 230 - Music Theory III Credits: 3

## Junior Year - Winter

- Music electives Credits: 2
- MUS 231 - Music Theory IV Credits: 3

## Senior Year - Fall

- Music electives Credits: 2

## Senior Year - Winter

- MUS 479 - B.A. Senior Project Credits: 1 to 2
- MUS 495 - Analytical Techniques (Capstone) Credits: 3

**Bachelor of Music**

The B.M. is designed for students who demonstrate exceptional preparation for college-level applied music and for whom graduate school is a realistic goal. Instruction in guitar, organ, piano, voice, and band and orchestral instruments is offered.

All Bachelor of Music students will need to complete the core courses, as well as requirements specific to their emphasis. Student's emphasis will be approved at the music department auditions.

**Bachelor of Music with Instrumental Emphasis** (86-87 credits)

**Bachelor of Music with Keyboard Emphasis** (84-85 credits)

**Bachelor of Music with Vocal Emphasis** (88-89 credits)

## Requirements for a Major in Music

## Music Theory and Aural Perception (credits: 21-22)

- MUS 130 - Music Theory I Credits: 3
- MUS 131 - Music Theory II Credits: 3
- MUS 133 - Aural Perception and Sight-Singing I Credits: 1
- MUS 134 - Aural Perception and Sight-Singing II Credits: 1
- MUS 230 - Music Theory III Credits: 3
- MUS 231 - Music Theory IV Credits: 3
- MUS 233 - Aural Perception and Sight-Singing III Credits: 1
- MUS 234 - Aural Perception and Sight-Singing IV Credits: 1
- MUS 495 - Analytical Techniques (Capstone) Credits: 3

**And one course from:**

- MUS 330 - Instrumentation/Orchestration Credits: 3
- MUS 333 - Form and Analysis in Western Music Credits: 3

- MUS 337 - Jazz Theory Credits: 2

## Music Literature and History (credits: 12-15)

- MUS 119 - Survey of Music Literature I Credits: 3
- MUS 120 - Survey of Music Literature II Credits: 3
- MUS 218 - World Music Credits: 3

**And two courses from: (BM vocal emphasis students only take one course)**

- MUS 302 - Music: Medieval and Renaissance Eras Credits: 3
- MUS 303 - Music: Baroque Era Credits: 3
- MUS 304 - Music: Classical Era Credits: 3
- MUS 305 - Music: Nineteenth Century Credits: 3
- MUS 306 - Music from 1900-1960 Credits: 3
- MUS 307 - Music Since 1960 Credits: 3
- MUS 308 - Music History Seminar Credits: 3

## Conducting (credits: 2)

- MUS 320 - Introduction to Conducting Credits: 2

## Applied Music (credits: 24)

- MUS 144 - Private Instruction in Voice and Instruments – Freshman Credits: 3
- MUS 145 - Private Instruction in Voice and Instruments – Freshman Credits: 3
- MUS 244 - Private Instruction in Voice and Instruments – Sophomore Credits: 3
- MUS 245 - Private Instruction in Voice and Instruments – Sophomore Credits: 3
- MUS 344 - Private Instruction in Voice and Instruments – Junior Credits: 3
- MUS 345 - Private Instruction in Voice and Instruments – Junior Credits: 3
- MUS 444 - Private Instruction in Voice and Instruments – Senior Credits: 3
- MUS 445 - Private Instruction in Voice and Instruments – Senior Credits: 3
- MUS 446 - Private Instruction in Voice and Instruments – Elective Credits: 3

## Chamber Music (credit: 1)

- MUS 104 - Chamber Music Ensembles Credits: .5

## Instrumental Emphasis

## Major Ensembles (credits: 8)

To be selected according to major instrument and may be repeated for credit:

- MUS 101 - Grand Valley Singers Credits: 1
- MUS 102 - Concert Band Credits: 1
- MUS 103 - Grand Valley Symphony Orchestra Credits: 1
- MUS 107 - Grand Valley Marching Band Credits: 1
- MUS 112 - Symphonic Wind Ensemble Credits: 1
- MUS 117 - Grand Valley University Arts Chorale Credits: 1

## Pedagogy and Literature (credits: 4)

- MUS 360 - Performance Literature Credits: 2
- MUS 370 - Performance Pedagogy Credits: 2

## Keyboard Musicianship (credits: 3)

- MUS 263 - Keyboard Musicianship I Credits: 1
- MUS 264 - Keyboard Musicianship II Credits: 1
- MUS 283 - Keyboard Musicianship III Credits: 1

## Music Electives (credits: 8)

Selected after consultation with an advisor.

## Keyboard Emphasis

## Major Ensembles (credits: 2)

All of the following may be repeated for credit:

- MUS 101 - Grand Valley Singers Credits: 1
- MUS 102 - Concert Band Credits: 1
- MUS 103 - Grand Valley Symphony Orchestra Credits: 1
- MUS 107 - Grand Valley Marching Band Credits: 1
- MUS 108 - New Music Ensemble Credits: 1

## Music

- MUS 112 - Symphonic Wind Ensemble Credits: 1
- MUS 117 - Grand Valley University Arts Chorale Credits: 1

### Collaborative Piano (credits: 7)

Seven semesters of MUS 126. MUS 126 counts as corequisite ensemble credit for applied lessons for BM Keyboard emphasis majors.

- MUS 126 - Collaborative Piano Credits: 1

### Pedagogy and Literature (credits: 8)

- MUS 310 - Piano Literature Credits: 2
- MUS 361 - Piano Pedagogy I Credits: 3
- MUS 371 - Piano Pedagogy II Credits: 3

### Music Electives (credits: 4)

Selected after consultation with an advisor.

## Vocal Emphasis

### Major Ensembles (credits: 8)

To be selected according to major instrument. May be repeated for credit:

- MUS 101 - Grand Valley Singers Credits: 1
- MUS 102 - Concert Band Credits: 1
- MUS 103 - Grand Valley Symphony Orchestra Credits: 1
- MUS 107 - Grand Valley Marching Band Credits: 1
- MUS 112 - Symphonic Wind Ensemble Credits: 1
- MUS 117 - Grand Valley University Arts Chorale Credits: 1

### Pedagogy and Literature (credits: 6)

- MUS 359 - Diction for Singers Credits: 2
- MUS 360 - Performance Literature Credits: 2
- MUS 370 - Performance Pedagogy Credits: 2

### Keyboard Musicianship (credits: 4)

- MUS 263 - Keyboard Musicianship I Credits: 1
- MUS 264 - Keyboard Musicianship II Credits: 1
- MUS 283 - Keyboard Musicianship III Credits: 1
- MUS 284 - Keyboard Musicianship IV Credits: 1

### Additional Requirements (credits: 10)

- MUS 170 - Stage Movement Credits: 1
- MUS 267 - Opera Workshop Credits: 1
- Foreign Language for Voice Majors Credits: 8 (Two courses in differing languages.)

## Bachelor of Music Education

Students will be required to select one of two emphases: Choral/vocal emphasis or instrumental emphasis. Students must earn a minimum of 77 hours in music and 39 hours in professional education.

Vocal/choral majors normally will choose an applied emphasis in voice or keyboard. Instrumental majors normally will choose a standard band or orchestra instrument as their applied emphasis.

**MUS Requirements Credits:** 69-73 (three are general education)

**Certification Requirements Credits:** 39 (three are general education)

### Requirements for Music, B.M.E

#### Music Theory and Aural Perception (credits: 18-19)

- MUS 130 - Music Theory I Credits: 3
- MUS 131 - Music Theory II Credits: 3
- MUS 133 - Aural Perception and Sight-Singing I Credits: 1
- MUS 134 - Aural Perception and Sight-Singing II Credits: 1
- MUS 230 - Music Theory III Credits: 3
- MUS 231 - Music Theory IV Credits: 3
- MUS 233 - Aural Perception and Sight-Singing III Credits: 1
- MUS 234 - Aural Perception and Sight-Singing IV Credits: 1

One course from:

- MUS 330 - Instrumentation/Orchestration Credits: 3
- MUS 333 - Form and Analysis in Western Music Credits: 3
- MUS 337 - Jazz Theory Credits: 2

#### Music Literature and History (credits: 12 - three are general education)

- MUS 119 - Survey of Music Literature I Credits: 3
- MUS 120 - Survey of Music Literature II Credits: 3
- MUS 218 - World Music Credits: 3

One course from:

All count as SWS general education.

- MUS 302 - Music: Medieval and Renaissance Eras Credits: 3
- MUS 303 - Music: Baroque Era Credits: 3
- MUS 304 - Music: Classical Era Credits: 3
- MUS 305 - Music: Nineteenth Century Credits: 3
- MUS 306 - Music from 1900-1960 Credits: 3
- MUS 307 - Music Since 1960 Credits: 3
- MUS 308 - Music History Seminar Credits: 3

#### Keyboard Musicianship (credits: instrumental 3, choral/vocal 4)

Piano majors are exempt from this requirement.

- MUS 263 - Keyboard Musicianship I Credits: 1
- MUS 264 - Keyboard Musicianship II Credits: 1
- MUS 283 - Keyboard Musicianship III Credits: 1
- MUS 284 - Keyboard Musicianship IV Credits: 1 (Choral/Vocal only)

#### Music Education (Professional) Courses (credits: instrumental 23, choral/vocal 21)

- MUS 200 - Introduction to Music Education Credits: 1
- MUS 253 - Woodwind Techniques Credits: 2
- MUS 255 - Brass Techniques Credits: 2
- MUS 257 - Class Percussion Credits: 1
- MUS 258 - String Techniques Credits: 2
- MUS 320 - Introduction to Conducting Credits: 2
- MUS 338 - Techniques of Jazz Instruction Credits: 1
- MUS 354 - Teaching the Developing Voice Credits: 2 (Choral/Vocal Majors only)
- MUS 362 - Marching Band Techniques Credits: 2 (Instrumental Majors only)
- MUS 370 - Performance Pedagogy Credits: 2
- MUS 456 - Teaching Music in the Elementary School Credits: 2
- MUS 461 - Instrumental Music Methods and Materials Credits: 2
- MUS 465 - Choral/General Music in the Secondary School Credits: 2

#### Ensembles (credits: 7-9)

##### Instrumental Music Majors

May be repeated for credit.

Students taking applied lessons in wind, brass, or percussion must also take MUS 107 - Marching Band for 2 semesters.

- MUS 102 - Concert Band Credits: 1
- MUS 103 - Grand Valley Symphony Orchestra Credits: 1
- MUS 105 - Grand Valley Jazz Ensemble Credits: 1 (only counts as major ensemble for 1 year)
- MUS 112 - Symphonic Wind Ensemble Credits: 1

##### Choral/Vocal Majors

May be repeated for credit.

- MUS 101 - Grand Valley Singers Credits: 1
- MUS 117 - Grand Valley University Arts Chorale Credits: 1
- MUS 118 - Varsity Men Credits: 1

#### Applied Music, Instrumental and Choral/Vocal (credits: 7)

- MUS 141 - Private Instruction in Voice and Instruments – Freshman Credits: 1
- MUS 142 - Private Instruction in Voice and Instruments – Freshman Credits: 1
- MUS 241 - Private Instruction in Voice and Instruments – Sophomore Credits: 1
- MUS 242 - Private Instruction in Voice and Instruments – Sophomore Credits: 1
- MUS 341 - Private Instruction in Voice and Instruments – Junior Credits: 1

- MUS 342 - Private Instruction in Voice and Instruments – Junior Credits: 1
- MUS 441 - Private Instruction in Voice and Instruments – Senior Credits: 1

Certification Requirements (credits 39 - three are general education)

- PSY 301 - Child Development Credits: 3
- EDI 337 - Introduction to Learning and Assessment Credits: 3
- EDF 315 - Diverse Perspectives on Education Credits: 3
- EDT 370 - Technology in Education Credits: 3
- EDF 310 - Organizing and Managing Classroom Environments Credits: 3
- EDR 321 - Content Area Literacy Credits: 3
- EDS 379 - Universal Design for Learning: Secondary Credits: 3
- EDI 331 - Methods and Strategies of Secondary Teaching Credits: 5
- EDI 431 - Student Teaching, Secondary Credits: 8
- EDI 432 - Student Teaching, Secondary Content Practicum Credits: 2
- EDF 485 - The Context of Educational Issues Credits: 3

## Music Minor

The music minor program is designed for students with previous training in music seeking non-music degrees who desire to increase their knowledge of music or further develop their skills in music.

### Requirements for a Minor in Music

Music Theory and Aural Perception (8 credits)

- MUS 130 Music Theory I Credits: 3
- MUS 131 Music Theory II Credits: 3
- MUS 133 Aural Perception and Sight-Singing I Credits: 1
- MUS 134 Aural Perception and Sight-Singing II Credits: 1

Music Literature and History (6 credits)

- MUS 119 Survey of Music Literature I Credits: 3
- MUS 120 Survey of Music Literature II Credits: 3

Keyboard Musicianship (2 credits)

Piano minors are exempt from this requirement.

- MUS 263 Keyboard Musicianship I Credits: 1
- MUS 264 Keyboard Musicianship II Credits: 1

Major Ensembles (4 credits)

To be selected according to major instrument:

- MUS 101 Grand Valley Singers Credits: 1
- MUS 102 Concert Band Credits: 1
- MUS 103 Grand Valley Symphony Orchestra Credits: 1
- MUS 107 Grand Valley Marching Band Credits: 1
- MUS 112 Symphonic Wind Ensemble Credits: 1
- MUS 117 Grand Valley University Arts Chorale Credits: 1

Applied Music (4 credits)

- MUS 141 Private Instruction in Voice and Instruments – Freshman Credits: 1
- MUS 142 Private Instruction in Voice and Instruments – Freshman Credits: 1
- MUS 241 Private Instruction in Voice and Instruments – Sophomore Credits: 1
- MUS 242 Private Instruction in Voice and Instruments – Sophomore Credits: 1

Music Elective (3 credits)

Selected in consultation with the student's advisor.

- MUS 218 World Music Credits: 3
- MUS 219 Jazz History Credits: 3
- MUS 300 Exploring American Music Credits: 3
- MUS 341 Private Instruction in Voice and Instruments – Junior Credits: 1
- MUS 320 Introduction to Conducting Credits: 2

## Piano Pedagogy Certificate

Students must be degree-seeking students to receive the certificate. The certificate will be awarded at the same time the degree is awarded. All undergraduate certificates have received Higher Learning Commission approval, and students are eligible for financial aid because they are seeking a degree. Piano pedagogy certification (in the Department of Music, Theatre, and Dance at Grand Valley State University) will enable undergraduate piano majors and area piano teachers to focus on the skills necessary for successful piano teaching. Music majors who are not piano majors who are interested in honing their skills in piano teaching may also work towards this certification. Students learn how to teach beginner, intermediate, and early-advanced students. They learn how to teach pre-college students as well as music majors who take keyboard as their secondary instrument. They learn how to teach correct technique, how to develop musicianship and good sight-reading skills, how to select and teach repertoire, how to practice efficiently, and how to motivate. Students learn about the most important competitions and festivals in the state as well as in the nation.

To gain entrance into the program, an interview and a performance of one memorized piano work with the piano pedagogy professor will take place.

This certification provides teachers with theoretical knowledge and practical experiences in accordance with state and national piano teaching guidelines.

The piano pedagogy coursework includes guided teaching experiences.

Students completing the piano pedagogy certification will have a record of this accomplishment appear on their academic transcript, and a certificate for their piano studio.

### Piano Pedagogy Certification

The piano pedagogy certification is 12 credits; seven credits in piano pedagogy, two credits in piano literature, and three elective credits:

- MUS 310 - Piano Literature Credits: 2
- MUS 361 - Piano Pedagogy I Credits: 3
- MUS 371 - Piano Pedagogy II Credits: 3
- MUS 379 - Piano Pedagogy Masterclass Credits: 1  
(To be taken after MUS 361 and 371.)

### Elective Credits

Students may choose three credits from the following elective credits:

- MUS 104 - Chamber Music Ensembles Credits: .5
  - MUS 126 - Collaborative Piano Credits: 1
  - MUS 141 - Private Instruction in Voice and Instruments – Freshman Credits: 1  
AND MUS 142 - Private Instruction in Voice and Instruments – Freshman Credits: 1
  - MUS 144 - Private Instruction in Voice and Instruments - Freshman Credits: 3  
AND MUS 145 - Private Instruction in Voice and Instruments – Freshman Credits: 3
  - MUS 180 - Special Topics in Music Credits: 1
- Other courses of interest:
- PSY 301 - Child Development Credits: 3
  - PSY 331 - Adolescent Development Credits: 3

## Natural Resources Management - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/biology/nrm](http://www.gvsu.edu/biology/nrm)

Environmental pollution, deforestation, climate change, and increasing demand for outdoor recreation are just a few of the factors that pose challenges to environmental sustainability. As more users place demands

## Natural Resources Management

on scarce environmental resources, the need for intelligent conservation of our natural assets is greater than ever. The natural resources management (NRM) program prepares students not only to care for the land and water-based ecosystems of Michigan and beyond, but also to serve the people whose well-being depends on these resources.

The careful stewardship of the environment requires knowledge in both the natural and social sciences. Ecology is the foundational science of the NRM program. Students learn to combine this ecological knowledge with quantitative methods, economics, and policy and apply it to practical situations. These practical applications might include managing wildlife populations or restoring natural ecosystems, such as forests and wetlands. In the interdisciplinary NRM courses, students examine the sources of conflict that lead to environmental degradation and learn the methods of sustainable resources management. With an advisor's guidance, students may develop customized programs to develop expertise in fisheries, forestry, wildlife, soil and water conservation, watershed management, natural resources and environmental policy, ecosystem restoration, and applications of geographic information systems.

### Mission

The natural resources management program provides a broad-based natural resources management education in a liberal arts curriculum and serves the public interest through the scientific analysis of natural resources.

### Degrees Offered

The program offers a Bachelor of Science in natural resources management.

## Bachelor of Science in Natural Resources Management

### Requirements for a Major in Natural Resources Management NRM Major

Completion of at least 36 NRM course credits, including:

- NRM 150 - Introduction to Natural Resources Credits: 3
- NRM 250 - Resource Measurement and Maps Credits: 3
- NRM 281 - Principles of Soil Science Credits: 4
- NRM 451 - Natural Resource Policy Credits: 3
- NRM 495 - Trends in Natural Resource Management (Capstone) Credits: 4

**OR BOTH** NRM 496 - Trends in Western U.S. Natural Resource Management Credits: 2

**AND** NRM 497 - Field Trip - Issues in Western U.S. Natural Resources Management Credits: 2

Students must select additional NRM courses from each of the following competency areas:

Analytical: Complete at least three credits from the following courses:

- NRM 320 - Introduction to Resource Systems Credits: 3
- NRM 395 - GIS Applications in Resource Management Credits: 3

Upper Level Resource Management: Complete at least 10 credits from the following courses:

- NRM 330 - Environmental Pollution Credits: 3
- NRM 386 - Ecological Restoration and Management Credits: 4
- NRM 408 - Wildlife Management Credits: 4
- NRM 420 - Wildland Recreation Management Credits: 3
- NRM 452 - Watershed and Wetland Management Credits: 4
- NRM 462 - Forest Ecosystem Management Credits: 4

Complete remaining NRM elective courses to total at least 36 credits.

### NRM Cognate Requirements

Completion of at least 32 course credits:

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- BIO 215 - Ecology Credits: 4

- BIO 460 - Terrestrial Ecosystem Ecology Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4  
**OR** CHM 115 - Principles of Chemistry I Credits: 4
- ECO 211 - Introductory Microeconomics Credits: 3
- ECO 345 - Environmental and Resource Economics Credits: 3
- MTH 122 - College Algebra Credits: 3  
**OR** MTH 123 - Trigonometry Credits: 3  
**OR** MTH 125 - Survey of Calculus Credits: 3  
**OR** MTH 201 - Calculus I Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3

### Limits

- No more than three (3) credits of NRM 399 - Readings in Resource Management may be applied to the major.
- No more than three (3) credits of NRM 499 - Research in Resource Management may count towards the major.
- No more than five (5) credits of NRM 490 - Internship in Resource Management **plus** NRM 499 - Research in Resource Management may be applied to the major.

### B.S. Degree Requirements

The Bachelor of Science degree in natural resources management requires the following three courses:

- STA 215 - Introductory Applied Statistics Credits: 3
- NRM 250 - Resource Measurement and Maps Credits: 3
- NRM 495 - Trends in Natural Resource Management (Capstone) Credits: 4

**OR BOTH** NRM 496 **AND** NRM 497

### Minors and Certificates (optional)

All NRM majors are encouraged to complete a minor or certificate that complements their coursework in the NRM major. Examples include the biology minor, environmental studies minor, or geographic information systems technology certificate. Students may also complete additional NRM courses as electives.

### Associate Wildlife Biologist Certification

Students who intend to pursue a career in wildlife biology and management are encouraged to complete the necessary coursework for certification by The Wildlife Society ([www.wildlife.org](http://www.wildlife.org)) as an associate wildlife biologist. This coursework will also prepare students for entry-level positions in wildlife biology/management or entry into graduate school.

The curriculum is designed to provide a skill set based on a broad scientific knowledge, understanding of natural resource management principles, and communication skills. This base along with the hands-on skills learned in classes prepares students for a successful career as wildlife professionals. A sampling of wildlife career options can be found at [www.wildlife.org/](http://www.wildlife.org/).

Wildlife Society certification is a professional track rather than an academic emphasis. For a recommended schedule of courses to complete the certification, please see a regular NRM faculty advisor.

### Suggested Order of Coursework for a Major in Natural Resources Management

#### First Year

- General education courses
- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4  
**OR** CHM 115 - Principles of Chemistry I Credits: 4
- MTH 122 - College Algebra Credits: 3  
**OR** (MTH 123, MTH 125, **OR** MTH 201)
- NRM 150 - Introduction to Natural Resources Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

## Second Year

- General education courses
- NRM elective courses
- NRM 250 - Resource Measurement and Maps Credits: 3
- NRM 281 - Principles of Soil Science Credits: 4
- BIO 215 - Ecology Credits: 4
- ECO 211 - Introductory Microeconomics Credits: 3
- NRM 320 - Introduction to Resource Systems Credits: 3
- **OR** NRM 395 - GIS Applications in Resource Management Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

## Third Year

- General education courses
- General elective courses
- NRM upper level management courses
- NRM elective courses
- ECO 345 - Environmental and Resource Economics Credits: 3
- NRM 451 - Natural Resource Policy Credits: 3

## Fourth Year

- General education courses
- Elective courses
- NRM upper level management courses
- NRM elective courses
- BIO 460 - Terrestrial Ecosystem Ecology Credits: 4
- NRM 495 - Trends in Natural Resource Management (Capstone) Credits: 4
- **OR BOTH** NRM 496 **AND** NRM 497 (Capstone)

## Natural Resources Management Minor

### Requirements for a Minor in Natural Resources Management

Students who wish to minor in natural resources management must complete a minimum of 24 hours in the program, including:

- NRM 150 - Introduction to Natural Resources Credits: 3
- 10 hours of 300 and 400-level courses

### Limits

- NRM 399 - Readings in Resource Management does not count toward the minor.
- No more than three (3) credits of NRM 499 - Research in Resource Management may be applied toward the minor.
- No more than three (3) credits of NRM 490 - Internship in Resource Management **plus** NRM 499 - Research in Resource Management may be applied to the minor.

## Bachelor of Science in Nursing - Program Description

For additional information about opportunities your college offers, please refer to the Kirkhof College of Nursing section in this catalog.

**Website:** [www.gvsu.edu/kcon](http://www.gvsu.edu/kcon)

The Kirkhof College of Nursing (KCON) undergraduate nursing programs emphasize health promotion and illness prevention as well as care of the sick. Students' ability to think critically, solve problems, formulate concepts, make clinical judgments, analyze and summarize information, and form valid conclusions are integral to learning. This focus provides the student with the characteristics necessary for professional development and personal enrichment in a changing society.

The Bachelor of Science in Nursing (BSN) degree prepares the graduate to fulfill the professional nursing roles of provider of care, designer/manager/coordinator of care, and member of the profession. It also provides the foundation for continued education in advanced practice through graduate nursing studies.

The KCON BSN graduate will be prepared to:

1. Provide nursing care based on expanding clinical judgment within parameters of functional capacity of individuals, families, groups and communities in multiple settings that incorporate knowledge from the liberal arts and knowledge unique to nursing.
2. Coordinate health care with individuals, families, groups and communities across the life span, using communication skills, in collaboration with members of the health care team.
3. Assume ethical, legal and professional accountability for the development and practice of nursing in a changing health care environment.

The undergraduate program provides learning experiences in myriad settings that combine the liberal arts and basic sciences with nursing theory and clinical practice. Students are prepared to provide nursing interventions at a beginning generalist level to individuals, families, and communities. Students are scheduled for clinical practice at a variety of hospitals and health care agencies, including home care, community centers, and ambulatory settings. KCON nursing students must be prepared to meet the needs of a student schedule in a profession where work demands occur at any time of the day or week.

Prior to beginning KCON clinical courses, students must complete comprehensive health compliance obligations including, but not limited to, a criminal background check, fingerprinting, and drug screening. Please note: All State Boards of Nursing review the records of all graduates who have completed a nursing program to determine eligibility to take the National Council Licensure Examination-RN (NCLEX-RN). All State Boards of Nursing retain the right to deny a Bachelor of Science in nursing (BSN) graduate permission to write the licensure examination if he or she has been convicted of a crime.

Nursing majors must complete core courses in the humanities and the social, physical, natural, and health sciences. These core courses provide a strong scientific and humanistic foundation fundamental to subsequently required clinical nursing courses. Before graduation, students must also complete the general education requirements of the university. (See Degree Requirements—Undergraduate, in the General Academic Regulations Section in the Grand Valley State University Undergraduate and Graduate Catalog.)

## Bachelor of Science in Nursing - R.N. to B.S.N.

### Registered Nurses

The Kirkhof College of Nursing offers a program of study specifically designed for a registered nurse (R.N.) to obtain a Bachelor of Science in nursing (B.S.N.) degree. The R.N. to B.S.N. program is designed for part time. Individualized program plans based on previously completed coursework are created for each applicant.

### Admission

1. You must apply to Grand Valley State University (GVSU) for admission as degree-seeking student. Upon admission to GVSU, you must attend a Transfer Orientation and declare nursing as your major. Secondary application is required for the R.N. to B.S.N. program within the Kirkhof College of Nursing.
2. To be admitted to the R.N. to B.S.N. program a prospective student must have earned an overall GPA of 3.0 or have earned a 3.0 GPA within their last 15 credits. In addition, a student must demonstrate completion of the required prerequisite courses with a minimum grade of C (2.0).
3. Prior to beginning the NUR 400 level courses, the student must complete and maintain comprehensive health compliance obligations including, but not limited to, a criminal background check, fingerprinting, drug screening, immunizations, physical exams, technical standards, CPR, and relevant training. Evidence of RN licensure is also required.

## Nursing

- The R.N. to B.S.N. student will be scheduled for clinical practice at a variety of community hospitals and health care agencies, including home care, public health departments, and other ambulatory settings.

### Requirements for a Major in Nursing

R.N. to B.S.N. students are required to

- fulfill the university general education requirements;
- complete a minimum of 120 semester hours of credit for graduation; and
- earn 58 credits at a four-year institution with the last 30 uninterrupted credits earned at GVSU.

To progress in the nursing program, a minimum grade of C (2.0) is required in all nursing and other core courses.

A student who has met the requirements in this section during their prelicensure program may request a review of the following courses:

- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- BMS 305 - Clinical Nutrition Credits: 3
- BMS 310 - Basic Pathophysiology Credits: 3
- BMS 311 - Pharmacological Aspects of Biomedical Sciences Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- MTH 110 - Algebra Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- WRT 305 - Writing in the Disciplines Credits: 3

### Required Nursing Courses

- One nursing elective: The student may choose between NUR 344, 354, **OR** 500.
- IPE 407 - Integrated Team Health Care Credits: 2
- NUR 265 - Introduction to Nursing Research and Evidence-based Practice Credits: 3
- NUR 311 - Dimensions of Nursing Practice Credits: 2
- NUR 312 - Professional Nursing Issues Credits: 2
- NUR 411 - Community Based Nursing Care Credits: 4
- NUR 412 - Nursing Care for Populations Credits: 4
- NUR 456 - Transformative Nursing Leadership Credits: 4

### Suggested Order of Coursework

#### Year 1

##### Spring/Summer

- NUR 311 - Dimensions of Nursing Practice Credits: 2
- Prerequisites or general education courses

##### Fall

- NUR 312 - Professional Nursing Issues Credits: 2
- Prerequisites or general education courses

##### Winter

- NUR 265 - Introduction to Nursing Research and Evidence-based Practice Credits: 3
- Issues/elective

#### Year 2 (admitted to KCON)

##### Spring/Summer

- IPE 407 - Integrated Team Health Care Credits: 2
- NUR 411 - Community Based Nursing Care Credits: 4

##### Fall

- NUR 412 - Nursing Care for Populations Credits: 4

##### Winter

- NUR 456 - Transformative Nursing Leadership Credits: 4

## Bachelor of Science in Nursing - Second Degree

The Kirkhof College of Nursing offers a B.S.N. for persons with a baccalaureate degree in another discipline. This option is designed for full-time study.

Only students with another baccalaureate degree may apply to the second degree program. To be considered for the program a student must:

- Obtain admission to Grand Valley State University
- Declare nursing as a major
- Earn a minimum cumulative grade point average of 3.0 (including transfer credits)
- Complete (with a grade of C or better) (2.0) all admission prerequisite coursework by time of application.
- Earn a minimum prerequisite grade point average of 3.0 (including transfer credits)
- Adhere to the KCON course repeat policy which states that a student may repeat three admission prerequisite courses and two of those courses can be BMS, CHM, or BIO.
- No required course may be repeated more than once

KCON admits one cohort into the second degree program each spring/summer semester. The Office of Student Services will announce application deadline via the KCON website at [www.gvsu.edu/kcon/](http://www.gvsu.edu/kcon/). Admission to the program is highly competitive. Students who only meet minimum requirements may not be competitive.

Multiple selection criteria are used to determine admission to the professional nursing program. These include:

- Prerequisite GPA
- Interview performance. Interviews are granted to 1.5 times the number of available seats.
- Laker score based on credits earned at GVSU

Students should be aware that prior to beginning the clinical courses, they must complete comprehensive health compliance obligations, including but not limited to a criminal background check, fingerprinting, and drug screening. Students should also be aware that all State Boards of Nursing review the records of all graduates who have completed a nursing program to determine eligibility to write the National Council Licensure Examination (NCLEX-RN). All State Boards of Nursing retain the right to deny a graduate permission to write the licensure examination if he or she has been convicted of a crime.

All courses listed as follows must be completed with a minimum grade of C (2.0). In addition, continued progression through the nursing major requires a minimum grade of C (2.0) in corequisite courses. All required courses for the nursing major must be taken for graded credit.

### Prerequisite Admission Courses

- BIO 355 - Human Genetics Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- PSY 364 - Life Span Developmental Psychology Credits: 3

Note: In order to begin in the nursing program, a minimum grade of C (2.0) is required in the following prerequisite courses:

- BMS 305 - Clinical Nutrition Credits: 3
- BMS 310 - Basic Pathophysiology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Corequisite and Nursing Courses

- BMS 311 - Pharmacological Aspects of Biomedical Sciences Credits: 3
- NUR 265 - Introduction to Nursing Research and Evidence-based Practice Credits: 3
- NUR 266 - Professional Nursing I Credits: 4

- NUR 267 - Clinical Nursing I Credits: 4
- NUR 316 - Professional Nursing II Credits: 4
- NUR 317 - Clinical Nursing II Credits: 6
- NUR 362 - Professional Nursing III - Foundations Credits: 2
- NUR 363 - Clinical Nursing III - Foundations Credits: 3
- NUR 368 - Professional Nursing III-Advanced Credits: 2
- NUR 369 - Clinical Nursing III - Advanced Credits: 3
- NUR 416 - Professional Nursing IV Credits: 4
- NUR 417 - Clinical Nursing IV Credits: 6
- NUR 467 - Professional Nursing V Credits: 10
- IPE 407 - Integrated Team Health Care Credits: 2

### Plan of Coursework

To remain in the cohort, students should plan on completing the program in the following manner:

#### Spring/Summer: Nursing Semester I

- NUR 265 - Introduction to Nursing Research and Evidence-based Practice Credits: 3
- NUR 266 - Professional Nursing I Credits: 4
- NUR 267 - Clinical Nursing I Credits: 4
- BMS 311 - Pharmacological Aspects of Biomedical Sciences Credits: 3 \*

*\*Course can be taken prior to entering the professional nursing program*

#### Fall: Nursing Semester II

- NUR 316 - Professional Nursing II Credits: 4
- NUR 317 - Clinical Nursing II Credits: 6
- NUR 362 - Professional Nursing III - Foundations Credits: 2
- NUR 363 - Clinical Nursing III - Foundations Credits: 3

#### Winter: Nursing Semester III

- NUR 368 - Professional Nursing III-Advanced Credits: 2
- NUR 369 - Clinical Nursing III - Advanced Credits: 3
- NUR 416 - Professional Nursing IV Credits: 4
- NUR 417 - Clinical Nursing IV Credits: 6

#### Spring/Summer: Nursing Semester IV

- IPE 407 - Integrated Team Health Care Credits: 2
- NUR 467 - Professional Nursing V Credits: 10

## Bachelor of Science in Nursing - Traditional

### Undergraduate Nursing Admission

#### Freshman Nursing Majors (direct admit)

Direct admission to the traditional B.S.N. program is based on exceptional academic performance in high school.

To be eligible for direct admit status to the traditional B.S.N. program the student must:

- Qualify as an incoming freshman and attend GVSU directly out of high school.
- Achieve a cumulative high school grade point average of 3.6 or higher
- Earn an ACT composite score of 30 or higher or SAT composite score of 1400 or higher
- Submit all completed application admission documents, including ACT or SAT score, to the GVSU Admissions Office by December 31 of the applicant's high school senior year
- Indicate nursing as the intended major on the GVSU admission application
- Schedule a New Student Orientation session by May 1 of the senior year in high school
- Declare a nursing major at New Student Orientation.

To retain direct admit status to the traditional B.S.N. program the student must:

- Maintain a cumulative grade point average of 3.0
- Earn a minimum 3.5 grade point average in the admission prerequisite courses

- Remain a declared nursing major. Please be aware that a change of major will result in loss of direct admit status.
- Adhere to the KCON course repeat policy; a student may repeat three prerequisite courses and two of those courses can be BMS, CHM, or BIO. No required course may be repeated more than once.

To progress into the clinical portion of the traditional BSN program the student with direct admit status:

- Complete all admission prerequisite courses prior to application
- Complete the additional traditional B.S.N. program prerequisite courses
- Submit an application for admission to the traditional BSN program by the stated deadline

Complete and submit comprehensive health compliance requirements prior to beginning the clinical courses including, but not limited to, a criminal background check, fingerprinting and drug screening. Please note: All State Boards of Nursing review the records of all graduates who have completed a nursing program to determine eligibility to take the National Council Licensure Examination-RN (NCLEX-RN). All State Boards of Nursing retain the right to deny a Bachelor of Science in Nursing (B.S.N.) graduate permission to take the licensure examination if convicted of a crime.

#### Freshman Nursing Majors (nondirect admit)

Students who have earned a bachelor's degree in another discipline are ineligible for this program. Please see the B.S.N. Second Degree section.

The majority of prenursing students admitted to the university are nondirect admit status and must complete a secondary application. An eligible applicant must:

- Have a minimum cumulative grade point average of 3.0 (including transfer credits)
- Demonstrate successful completion (with a grade of C or better) of all prerequisite coursework
- Adhere to the KCON course repeat policy which states that a student may repeat three admission prerequisite courses and two of those courses can be BMS, CHM, or BIO.
- No required course may be repeated more than once.

KCON admits two cohorts into the traditional professional nursing program on an annual basis; one cohort in the fall semester and one cohort in the winter semester. The Office of Student Services will announce application deadlines via the KCON website at [www.gvsu.edu/kcon/](http://www.gvsu.edu/kcon/). Admission to the program is highly competitive. A student may not be competitive if only meeting the minimum requirements.

Selection criteria used to determine student admission to the traditional B.S.N. program include:

1. Prerequisite GPA
2. Interview performance. Interviews are granted to 1.5 times the number of available seats.
3. Laker score (determined by the number of credits earned at GVSU).

Complete and submit comprehensive health compliance requirements prior to beginning the clinical courses including, but not limited to, a criminal background check, fingerprinting and drug screening. Please note: All State Boards of Nursing review the records of all graduates who have completed a nursing program to determine eligibility to take the National Council Licensure Examination-RN (NCLEX-RN). All State Boards of Nursing retain the right to deny a Bachelor of Science in Nursing (B.S.N.) graduate permission to take the licensure examination if convicted of a crime.

All courses listed as follows must be completed with a minimum grade of C (2.0). Continued progression through the nursing major requires a minimum grade of C (2.0) in corequisite courses. All required courses for the nursing major must be taken for graded credit.

#### Admission Prerequisite Courses

- BIO 120 - General Biology I Credits: 4
- BMS 250 - Anatomy and Physiology I Credits: 4

## Nursing

- CHM 109 - Introductory Chemistry Credits: 4
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- One general education course Credits: 3+

### Other Required Courses

The following required courses must be completed with a grade of C (2.0) or better before the start of nursing program.

- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 251 - Anatomy and Physiology II Credits: 4
- PSY 364 - Life Span Developmental Psychology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Corequisite Courses in the Nursing Program

The following corequisite courses are designed for the student to take at a time that complements the nursing clinical courses.

- BMS 305 - Clinical Nutrition Credits: 3
- BMS 310 - Basic Pathophysiology Credits: 3
- BMS 311 - Pharmacological Aspects of Biomedical Sciences Credits: 3
- BIO 355 - Human Genetics Credits: 3

### Transfer Students

A student planning to transfer to GVSU from another college or university should work closely with their local academic advisor. As a transfer student, be sure to carefully review your GVSU transcript evaluation upon admission to the university. You must be admitted to GVSU as a degree-seeking undergraduate student and declare nursing as your major.

To be considered for the nursing program, a student must be admitted to GVSU and have declared nursing as a major prior to application. An eligible applicant must:

- Earn a minimum cumulative grade point average of 3.0 (including transfer credits)
- Demonstrate successful completion (with a grade of C or better) in all prerequisite coursework
- Adhere to the KCON course repeat policy which states that a student may repeat three prerequisite courses and two of those courses can be BMS, CHM, or BIO.
- No required course may be repeated more than once.

KCON admits two cohorts into the traditional B.S.N. program on an annual basis; one cohort in the fall semester and one cohort in the winter semester. The Office of Student Services will announce application deadlines via the KCON website at [www.gvsu.edu/kcon/](http://www.gvsu.edu/kcon/). Admission to the program is highly competitive. A student may not be competitive if only meeting the minimum requirements.

Complete and submit comprehensive health compliance requirements prior to beginning the clinical courses including, but not limited to, a criminal background check, fingerprinting and drug screening. Please note: All State Boards of Nursing review the records of all graduates who have completed a nursing program to determine eligibility to write the National Council Licensure Examination-RN (NCLEX-RN). All State Boards of Nursing retain the right to deny a Bachelor of Science in Nursing (B.S.N.) graduate permission to take the licensure examination if convicted of a crime.

### Suggested Order of Coursework for a Major in Nursing

#### First Semester (credits: 14)

- BIO 120 - General Biology I Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- General education Credits: 3

#### Second Semester (credits: 15)

- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- WRT 150 - Strategies in Writing Credits: 4
- BMS 250 - Anatomy and Physiology I Credits: 4

- General education course Credits: 3

#### Third Semester (credits: 17)

- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 251 - Anatomy and Physiology II Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3
- General education course Credits: 3

#### Fourth Semester (credits: 14)

- NUR 266 - Professional Nursing I Credits: 4
- NUR 267 - Clinical Nursing I Credits: 4
- BMS 305 - Clinical Nutrition Credits: 3
- BMS 310 - Basic Pathophysiology Credits: 3

#### Fifth Semester (credits: 16)

- BMS 311 - Pharmacological Aspects of Biomedical Sciences Credits: 3
- NUR 265 - Introduction to Nursing Research and Evidence-based Practice Credits: 3
- NUR 316 - Professional Nursing II Credits: 4
- NUR 317 - Clinical Nursing II Credits: 6

#### Sixth Semester (credits: 16)

- BIO 355 - Human Genetics Credits: 3
- NUR 366 - Professional Nursing III Credits: 4
- NUR 367 - Clinical Nursing III Credits: 6
- General education course Credits: 3

#### Seventh Semester (credits: 15)

- IPE 407 - Integrated Team Health Care Credits: 2
- NUR 416 - Professional Nursing IV Credits: 4
- NUR 417 - Clinical Nursing IV Credits: 6
- General education course Credits: 3

#### Eighth Semester (credits: 13)

- NUR 467 - Professional Nursing V Credits: 10
- General education course Credits: 3

### Total Credits: 120

### Footnotes

To progress in the nursing program, a minimum grade of C (2.0) is required in the prerequisite, required, corequisite, and all nursing courses.

A grade less than a C (2.0) is considered a failure in all required nursing courses (designated by NUR). Students who fail more than one nursing course will not be allowed to remain in the program. Withdrawal from a course in failing status will be considered a course failure regardless of when the withdrawal occurs.

Total number of program credits may vary and could exceed 120 based on students' general education course selections.

## Master of Science in Nursing - Program Description

**Website:** [www.gvsu.edu/kcon](http://www.gvsu.edu/kcon)

The Kirkhof College of Nursing offers a Master of Science in nursing (M.S.N.) degree. The M.S.N. prepares professional nurses as advanced generalists to serve as leaders within clinical microsystems. The curriculum is designed to provide students with the clinical leadership skills essential for the integration of evidence-based practice at the patient-provider interface.

The KCON M.S.N. graduate will be prepared to

1. provide nursing care in a generalized area of practice by applying advanced knowledge synthesized from nursing and related disciplines;
2. improve health care by assuming leadership roles in collaboration with other professionals and consumers; and
3. contribute to the advancement of the profession.

## Admission to Master of Science in Nursing Program

The M.S.N. admission process is designed for post baccalaureate in nursing (B.S.N.) entry. Applicants must be graduates from a B.S.N. program that was accredited by either the Commission on Collegiate Nursing Education (CCNE) or Commission for Nursing Education Accreditation (CNEA) or anticipate that they will have graduated from such a program before enrolling.

1. Complete the GVSU graduate application available at admissions. [gvsu.edu/admissions/grad](http://gvsu.edu/admissions/grad) application/ specifying the M.S.N. option
2. Submit transcripts from all previous undergraduate and graduate (if applicable) coursework
3. Have a minimum cumulative GPA of 3.0 (on a 4.0 scale) for all undergraduate and graduate (if applicable) coursework
4. Submit a written goal statement describing professional and educational goals
5. Submit a current curriculum vitae/resume
6. Submit a scholarly writing exercise, using the guidelines in the online application
7. Participate in an interview with KCON faculty
8. International student applicants must meet TOEFL requirements for GVSU

Full admission is contingent on successful completion of the following:

1. Current licensure to practice as a registered nurse in Michigan
2. A required criminal background check and drug screen
3. Health record documentation and immunization requirements

A new class will begin the M.S.N. program each fall semester. The application and supplemental materials must be received by February 1 of the calendar year in which the student desires entry.

## Master of Science in Nursing

### Requirements for the Master of Science in Nursing

The M.S.N. curriculum for an advanced generalist consists of 41 credits completed over 6 semesters. Students must complete the following coursework with a grade of B (3.0) or better. M.S.N. courses are offered primarily in the Cook DeVos Center for Health Sciences. State-of-the-art facilities support the use of technology to enhance student learning. Most M.S.N. courses are offered in a hybrid format.

#### Graduate Nursing Core (12 credits)

- NUR 605 - Theoretical Perspectives in Nursing I Credits: 3
- NUR 607 - Health Care System, Policy and Politics Credits: 3
- NUR 608 - Leadership Roles in Complex Systems Credits: 3
- STA 610 - Applied Statistics for Health Professions Credits: 3

#### Clinical Nursing Core (9 credits)

- NUR 620 - Clinical Pharmacology Credits: 3
- NUR 622 - Advanced Pathophysiology I Credits: 3
- NUR 623 - Advanced Pathophysiology II Credits: 3

#### Advanced Generalist Core (16 credits)

- NUR 611 - Clinical Outcomes Management Credits: 4
- NUR 612 - Quality Improvement and Performance Management in Nursing Credits: 4
- NUR 615 - Advanced Generalist Clinical Practicum I Credits: 4
- NUR 616 - Advanced Generalist Clinical Practicum II Credits: 4

#### Research Core (4 credits)

- NUR 613 - Nursing Research and Evidence-Based Practice I Credits: 3
- NUR 614 - Nursing Research and Evidence-Based Practice II Credits: 1

## Doctor of Nursing Practice - Program Description

For additional information about opportunities your college offers, please refer to the Kirkhof College of Nursing section in this catalog.

**Website:** [www.gvsu.edu/kcon](http://www.gvsu.edu/kcon)

The Kirkhof College of Nursing offers a program of graduate study leading to a Doctor of Nursing Practice (D.N.P.) degree. The D.N.P. program prepares nurse leaders who will contribute to the nursing profession and improve the health of society with an emphasis on either advanced clinical primary care or health systems leadership. The changing demands of this nation's complex health care environment require the highest level of scientific knowledge and practical expertise to assure high quality patient outcomes.

The KCON D.N.P. graduate will be prepared to

1. provide advanced and complex care within an area of specialization in nursing that is scientifically and evidence-based and incorporates the science of nursing and other disciplines to optimize the functioning of human beings and their families and communities;
2. use organizational and systems leadership, information technology, interprofessional collaboration, and policy advocacy to improve and transform health care; and
3. contribute to the practice of nursing through clinical scholarship for evidence-based practice and active leadership in local and national professional groups.

### Admission to Doctor of Nursing Practice Program

The D.N.P. program is designed for both post baccalaureate in nursing (B.S.N.) and post-master's degree entry. If a post B.S.N. applicant, the B.S.N. program must have been accredited by the Commission on Collegiate Nursing Education (CCNE) or Commission for Nursing Education Accreditation (CNEA). Applicants who have not yet graduated with a BSN must anticipate that they will do so before enrolling.

1. Complete the GVSU graduate application available at admissions. [gvsu.edu/admissions/grad-application/](http://gvsu.edu/admissions/grad-application/) specifying the D.N.P. option
2. Select one of two program emphases: advanced practice primary care (child/adolescent or adult/older adult) or health systems leadership
3. Submit transcripts from all previous undergraduate and graduate coursework (if applicable)
4. Have a minimum cumulative GPA of 3.0 (on a 4.0 scale) for all undergraduate coursework
5. Have a minimum cumulative GPA of 3.0 (on a 4.0 scale) for all graduate coursework (if applicable)
6. Submit a written goal statement describing professional and educational goals.
7. Submit a current curriculum vitae/resume.
8. Submit a scholarly writing exercise, using the guidelines in the online application.
9. Participate in an interview process with KCON faculty.
10. International student applicants must meet TOEFL requirements for GVSU.

Full admission is contingent on successful completion of the following:

1. Current licensure to practice as a registered nurse in Michigan.
2. A required criminal background check and drug screen.
3. Health record documentation and immunization requirements.

A new class will begin the D.N.P. program each fall semester. The application and supplemental materials must be received by February 1 of the calendar year in which the student desires entry.

### Advanced Practice Certification

Post B.S.N. students pursuing an advanced practice primary care emphasis must complete the didactic and clinical courses in a selected population (child/adolescent or adult/older adult) which will qualify them to sit for national primary care specialty certification (pediatrics or adult-gerontology). Post M.S.N. students who do not hold a current national primary care advanced practice certification in a clinical specialty must complete the didactic and clinical courses that will qualify them to sit for national primary care specialty certification in a selected population (pediatrics, adult health, gerontology).

### Nurse Executive Certification

Students completing the health systems leadership track will be eligible for and encouraged to sit for national certification as a nurse executive.

## Doctor of Nursing Practice Requirements

This post B.S.N. D.N.P. curriculum for advanced practice consists of 94 credits completed over 12 semesters. The post B.S.N. D.N.P. curriculum for health systems leadership consists of 79 credits completed over 10 semesters. Because program plans are individualized for post M.S.N. students, the number of credits and semesters needed to complete the D.N.P. program will vary depending on previous coursework and program emphasis. Students must complete all coursework with a grade of B (3.0) or better.

The D.N.P. courses will be offered primarily in the Cook-DeVos Center for Health Sciences. State-of-the-art facilities support the use of technology to enhance student learning. A number of courses are offered in a hybrid (Web-enhanced) format.

### Doctor of Nursing (D.N.P.) Core Courses

- NUR 605 - Theoretical Perspectives in Nursing I Credits: 3
- NUR 606 - Theoretical Perspectives in Nursing II Credits: 3
- NUR 607 - Health Care System, Policy and Politics Credits: 3
- NUR 608 - Leadership Roles in Complex Systems Credits: 3
- STA 610 - Applied Statistics for Health Professions Credits: 3
- STA 620 - Applied Multivariate Methods for Health Care Credits: 3
- NUR 625 - Health Issues in Vulnerable Populations Credits: 4
- NUR 690 - Introduction to Scientific Inquiry Credits: 3
- NUR 691 - Evidence-Based Practice in Nursing Credits: 3
- NUR 792 - Scholarly Inquiry in Nursing Practice I Credits: 1 to 2
- NUR 793 - Scholarly Inquiry in Nursing Practice II Credits: 2

### Advanced Practice Nursing (APN) Track: Core Courses

- NUR 610 - Advanced Assessment Credits: 3
- NUR 620 - Clinical Pharmacology Credits: 3
- NUR 622 - Advanced Pathophysiology I Credits: 3
- NUR 623 - Advanced Pathophysiology II Credits: 3
- NUR 628 - Nursing Therapeutics: Mental Health Credits: 3
- NUR 676 - Health Perspectives: Mental Health Credits: 3
- NUR 677 - Practicum I: Mental Health Credits: 4

### APN Track: Child/Adolescent Specialty

Students also complete the D.N.P. and advanced practice core courses.

- NUR 629 - Developmental Health: Child/Adolescent Credits: 3
- NUR 720 - Primary Health Care: Child/Adolescent Credits: 3
- NUR 721 - Primary Care Practicum: Child/Adolescent Credits: 4
- NUR 722 - Management of Chronic Conditions: Child/Adolescent Credits: 3
- NUR 723 - Chronic Care Practicum: Child/Adolescent Credits: 4
- NUR 724 - Chronic and Complex Care: Child/Adolescent Credits: 3
- NUR 725 - Chronic and Complex Care Practicum: Child/Adolescent Credits: 4
- NUR 726 - Complex Behavioral Problems: Child/Adolescent Credits: 3
- NUR 727 - Clinical Immersion I: Child/Adolescent Credits: 4
- NUR 728 - Clinical Immersion II: Child/Adolescent Credits: 4

### APN Track: Adult/Older Adult Specialty

Students also complete the D.N.P. and advanced practice core courses.

- NUR 630 - Developmental Health: Adult/Older Adult Credits: 3
- NUR 730 - Primary Health Care: Adult/Older Adult Credits: 3
- NUR 731 - Primary Care Practicum: Adults/Older Adults Credits: 4
- NUR 732 - Management of Chronic Conditions in Adults and Older Adults Credits: 3
- NUR 733 - Chronic Care Practicum: Adult/Older Adult Credits: 4
- NUR 734 - Transitions and Complex Care of the Adult/Older Adult Credits: 3
- NUR 735 - Transitions and Complex Care Practicum: Adult/Older Adult Credits: 4
- NUR 736 - Complex Behavioral Problems: Adult/Older Adult Credits: 3
- NUR 737 - Clinical Immersion I: Adult/Older Adult Credits: 4

- NUR 738 - Clinical Immersion II: Adult/Older Adult Credits: 4

### Health Systems Leadership

Students also complete the D.N.P. core courses.

- NUR 646 - Theories of Health Systems Leadership Part I Credits: 3
- NUR 647 - Theories of Health Systems Leadership Part II Credits: 3
- NUR 650 - Business and Quality in Nursing Credits: 3
- NUR 702 - Nursing Leadership and Health Services Research Credits: 3
- NUR 740 - Health Systems Leadership: Practicum I Credits: 6
- NUR 741 - Health Systems Leadership: Practicum II Credits: 6
- NUR 742 - Health Systems Leadership: Practicum III Credits: 6
- PA 614 - Organization Theory Credits: 3
- PA 632 - Health Services Financial Management Credits: 3
- PA 634 - Health Care Law and Ethics Credits: 3
- PA 643 - Strategic Management and Planning Credits: 3

## Certificate in Palliative and Hospice Care

Students wishing to pursue the palliative and hospice care certificate must submit an official GVSU application. The post baccalaureate graduate palliative/hospice certificate is designed to explore the growing discipline of palliative and hospice care as a health specialty and a care option for persons with terminal or life-limiting illness. The certificate is designed for interested individuals across health and related helping professions who seek to develop focal expertise in the field. This certificate program will review and critique the growing field of hospice and palliative care and explore the common human experience of death and terminal illness from a personal, professional, and societal perspective.

### Program Content

The course will engage participants using multiple teaching strategies, including discussion and debate, case studies, and simulation to expose learners to common challenges surrounding death, dying, and loss in America and other societies. Philosophies of palliative/hospice care and common dilemmas in terminal illness will serve as focal points for discussion. Coursework will integrate and challenge student learning with in-depth discussions of contrasts and commonalities in end of life care as well as facilitators and barriers to palliative and/or hospice care utilization by individuals and society.

### Program Objectives

At the completion of the certificate, learners will be able to:

1. Contrast the interdisciplinary philosophy and delivery of palliative and hospice care with existing traditional medical models.
2. Delineate common types of pain and pain syndromes that contribute to symptom burden in individuals with life-limiting illness.
3. Develop strategies to alleviate the complex symptoms of individuals with chronic and terminal illness using a team approach.
4. Incorporate behaviors that acknowledge grieving and loss into routine care planning for individuals seeking palliative and hospice care.
5. Assimilate evidence-based strategies into effective provider communication that integrates patients and families as the unit of care.
6. Utilize an interdisciplinary framework to support and develop a plan of care for individuals who require palliative and/or hospice care.

### Audience

The certificate is designed for an interdisciplinary audience. It is directed toward postbaccalaureate graduates of nursing, social work, pharmacy, spiritual care, occupational and recreational therapy and others as well as the roles of physician, nurse practitioner, and physician assistant who wish to gain focused knowledge of the discipline. Admission to Grand Valley State University is required to complete the certificate.

### Certificate Requirements

The certificate content will be delivered in a series of three courses with an added directed elective.

**Required Courses (9 credits)**

- NUR 581 - Chronic and Terminal Illness: The Palliative/Hospice Model Credits: 3
- NUR 582 - Complex Pain and Symptom Management Credits: 3
- SW 669 - Responses to Loss and Death Credits: 3

**One Elective Course (3 credits)**

- NUR 607 - Health Care System, Policy and Politics Credits: 3
- NUR 620 - Clinical Pharmacology Credits: 3
- SW 671 - Social Work Practice in Health Care Credits: 3
- PA 634 - Health Care Law and Ethics Credits: 3

**Requirements for Admission**

1. Earned baccalaureate degree from an accredited university.
2. Cumulative grade point of 3.0 or higher (on a 4.0 scale), or permission of instructor.
3. Submission of a curriculum vitae/resume.
4. Application for admission to GVSU.
5. One page narrative goal statement.

## Occupational Safety and Health Management - Program Description

For additional information about opportunities your college offers, please refer to the Seymour and Esther Padnos College of Engineering and Computing section in this catalog.

**Website:** [www.gvsu.edu/osh](http://www.gvsu.edu/osh)

**Degree Offered**

Bachelor of Science in occupational safety and health management.

The occupational safety and health management curriculum is designed to fulfill the undergraduate educational requirements of those wishing to enter the professional safety field. Considerable federal and state legislation enacted during the past half century has firmly established safety as a fundamental goal for improving the quality of work life in this country. Occupationally related injuries and illnesses are extensive and profoundly affect every element of our society. The demand for competent, fully qualified safety professionals to assume positions within government, industry, and community agencies is increasing.

Grand Valley's B.S. in occupational safety and health management degree is structured to provide students with the proper balance of safety management and scientific training required in the field. The program prepares graduates for careers in both the private and public sectors.

The B.S. in occupational safety and health management degree is a secondary admission program. Because many of the occupational safety and health courses serve students in other majors or minors (as elective credit) students wishing to take particular OSH courses should seek instructor approval. The following courses are not open to non-OSH majors: OSH 390, OSH 416, OSH 440, OSH 490, or OSH 495. A student who has declared an OSH major is assigned an academic advisor from the professional advising staff in student services for the first two years and then from the faculty of the OSH Department after secondary admission.

**Industry Involvement**

Grand Valley's OSHM degree program has a firm foundation of industrial support. Michigan and local industries are sought out to contribute to the development of the OSH curriculum by providing both financial support and opportunities for internships and other experiential learning opportunities for students. The OSH program is served by an Industrial Advisory Board composed of OSH professionals.

For more information, please visit the degree requirements page.

## Bachelor of Science in Occupational Safety and Health Management

For more information, please visit the Occupational Safety and Health Management - Program Description.

## Requirements for a Major in Occupational Safety and Health Management

Students planning to major in occupational safety and health management (OSHM) must complete the following requirements:

**1. General University Degree Requirements**

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog. Note that some of the OSHM fundamentals courses listed as follows meet these requirements.

**2. OSHM Fundamentals**

Admission to major standing in the OSHM program requires approval of a secondary application. Applicants must meet at least the following:

- GPA of 2.3 or above in the OSHM fundamentals courses listed as follows;
- Completion of each course in the OSHM fundamentals with a grade of C (2.0) or above with not more than one repeat

The OSHM fundamentals courses, 33 to 38 credits, are as follows.

- BIO 105 - Environmental Science Credits: 3  
**OR** BIO 104 - Biology for the 21st Century Credits: 4  
**OR** BIO 120 - General Biology I Credits: 4
- BMS 202 - Anatomy and Physiology Credits: 4  
**OR** BMS 208 - Human Anatomy Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4  
**OR** CHM 115 - Principles of Chemistry I Credits: 4
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4  
**OR** CHM 232 - Biological Chemistry Credits: 4
- MTH 122 - College Algebra Credits: 3  
**OR** MTH 125 - Survey of Calculus Credits: 3  
**OR** MTH 201 - Calculus I Credits: 4
- OSH 300 - Introduction to Occupational Safety and Health Credits: 3
- PHY 200 - Physics for the Life Sciences Credits: 4  
**OR** PHY 220 - General Physics I Credits: 5  
**OR** PHY 230 - Principles of Physics I Credits: 5
- PSY 101 - Introductory Psychology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3  
**OR** STA 220 - Statistical Modeling for Engineers Credits: 2
- WRT 150 - Strategies in Writing Credits: 4

**3. OSHM Core**

A minimum of 37 semester hours.

- OSH 310 - Hazard Control Credits: 3
- OSH 316 - Health and Safety Techniques Credits: 3
- OSH 326 - Principles of Industrial Hygiene Credits: 3
- OSH 330 - Principles of Loss Control Credits: 3
- OSH 350 - Behavioral Aspects of Safety Credits: 3
- OSH 390 - OSH Internship Preparation Credits: 1
- OSH 400 - Critical Incident Analysis Credits: 3
- OSH 410 - Ergonomic Safety Engineering Credits: 3
- OSH 414 - Environmental Safety and Health Regulations Credits: 3
- OSH 424 - Fire Science Credits: 3
- OSH 440 - Safety and Health Program Development Credits: 3
- OSH 490 - Internship in Occupational Safety and Health Management Credits: 3 to 6
- OSH 495 - Safety and Health Administration Credits: 3

**4. OSHM Electives**

In addition to the preceding, students must take nine hours of electives from the list as follows.

- OSH 360 - Motor Fleet Safety Credits: 3
- OSH 370 - Product Safety and Liability Credits: 3
- OSH 416 - Advanced Industrial Hygiene Credits: 3
- OSH 420 - Health Care Facility Safety Credits: 3
- OSH 430 - Construction Safety Credits: 3

**Suggested Order of Coursework for a Major in OSHM**

This suggested order of coursework assumes that students will complete the fundamentals and general education courses with the help of their

## Occupational Science and Therapy

advisor and apply for admission by February 1 of the winter semester of their sophomore year.

### First Year

- General education Foundations courses Credits: 9
- Free elective
- BIO 105 - Environmental Science Credits: 3  
OR BIO 120 - General Biology I Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

### Second Year

- General education Foundations courses Credits: 9
- Free elective
- BMS 202 - Anatomy and Physiology Credits: 4  
OR BMS 208 - Human Anatomy Credits: 3
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- MTH 125 - Survey of Calculus Credits: 3
- OSH 300 - Introduction to Occupational Safety and Health Credits: 3
- PHY 200 - Physics for the Life Sciences Credits: 4

### Third Year

- OSHM electives Credits: 6
- General education Issues Credits: 6
- OSH 310 - Hazard Control Credits: 3
- OSH 316 - Health and Safety Techniques Credits: 3
- OSH 326 - Principles of Industrial Hygiene Credits: 3
- OSH 390 - OSH Internship Preparation Credits: 1
- OSH 400 - Critical Incident Analysis Credits: 3
- OSH 414 - Environmental Safety and Health Regulations Credits: 3
- OSH 424 - Fire Science Credits: 3

### Summer Between Third and Fourth Years

- OSH 490 - Internship in Occupational Safety and Health Management Credits: 3 to 6

### Fourth Year

- OSHM elective Credits: 3
- Free electives as needed to complete 120 total credits
- OSH 330 - Principles of Loss Control Credits: 3
- OSH 350 - Behavioral Aspects of Safety Credits: 3
- OSH 410 - Ergonomic Safety Engineering Credits: 3
- OSH 440 - Safety and Health Program Development Credits: 3
- OSH 495 - Safety and Health Administration Credits: 3

## Occupational Safety and Health Minor

### Requirements for a Minor in Occupational Safety and Health

A minor in occupational safety and health consists of 21 credits chosen with the consent of the OSH advisor.

Note: Many of the occupational safety and health courses serve students in other majors or minors as elective credit. These students should seek instructor approval for registration in each OSH course. The following courses are not open to non-OSH majors: OSH 390, OSH 416, OSH 440, OSH 490, or OSH 495.

## Occupational Science and Therapy - Program Description

For additional information about opportunities your college offers, please refer to the College of Health Professions section of this catalog.

**Website:** [www.gvsu.edu/ot](http://www.gvsu.edu/ot)

### Degree Offered

Master of Science (M.S.) in occupational therapy

### Accreditation Status

The occupational therapy (OT) traditional program and the OT hybrid program are accredited by the Accreditation Council for Occupational

Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. ACOTE's phone number is (301) 652-AOTA and its Web address is [www.acoteonline.org](http://www.acoteonline.org). Graduates of the program will be able to sit for the national certification examination for the occupational therapist, administered by the certifying body, National Board for Certification in Occupational Therapy (NBCOT), 800 S. Frederick Ave., Ste. 200, Gaithersburg, MD 20877-4150. After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). Most states require licensure in order to practice. However, state licenses are usually based on the results of the NBCOT Certification Examination.

### Departmental Mission

The mission of the GVSU Occupational Science and Therapy Department is to educate and empower students to have a positive impact on the health of individuals and groups in our society through innovation and leadership in occupation-based practice.

### Occupational Science

Occupational science is an interdisciplinary field in the social and behavioral sciences dedicated to the study of the daily activities (known as occupations) of human beings. The word "occupation" refers to the goal-directed activities that are part of daily human life as well as the habits and patterned routines of purposeful activity that occur over the lifespan. The study of occupations includes how these various purposeful and productive patterns, habits, and activities affect health and wellbeing.

Occupational science began as an effort by several scholars in different disciplines, in order to understand better how people used their time, and how they made decisions about time use. The field was named and given additional credibility in 1989 by Elizabeth Yerxa, a visionary leader of occupational therapy and her team of faculty at the University of Southern California (USC). The vision of Dr. Yerxa was that occupational science would be the unique scientific and research base for evidence-based practice in occupational therapy. USC offers the premier Doctor of Philosophy degree in Occupational Science.

Occupational science now includes many other university-based academic programs leading to undergraduate and graduate degrees in the field. The disciplines that incorporate occupational scientists include architecture, education, marketing, psychology, sociology, anthropology, economics, occupational therapy, leisure science, public health, and geography. There are several national, regional and international societies dedicated to promoting the continued evolution of occupational science, and several academic journals devoted heavily to occupational science including the Journal of Occupational Science, Occupational Therapy Journal of Research: Occupation, Participation and Health, The Journal of Leisure Research, Journal of Happiness Studies, Quality of Life Research, Applied Research in Quality of Life, and numerous international journals of occupational science and therapy.

### Occupational Therapy

Learning, growing, playing, working, managing our homes, and caring for our families are among the occupations of life. Unfortunately, physical, emotional, or other challenges often prevent people from fully participating in the job of living. Diseases, injuries, or developmental problems can make it difficult for people to do everyday tasks or be active and independent.

Occupational therapy uses meaningful and purposeful activity as a therapeutic intervention to help an individual with injuries or disabilities to reach his/her highest level of independent functioning. These meaningful and purposeful activities are referred to as occupations. Occupations include work skills, play/leisure activities, rest, and self-care activities such as preparing a meal or taking a shower.

Occupational therapists provide clients with services ranging from prevention/wellness to full rehabilitation, directed toward achieving maximum functional independence in daily life occupations. Occupational

therapy may include the use of devices such as, but not limited to, adapted silverware, computer access enhancers, environmental modifications, and writing aids to assist individuals to achieve a desired level of independence in any given occupation.

Occupational therapists interact and practice in collaboration with a variety of health professionals. They also educate the public and advocate for the clients. Occupational therapy makes it possible for people to achieve full participation in life. By choosing a career in occupational therapy, you will make a difference, improving the lives of people, from newborns to the oldest adults.

## Master of Science in Occupational Therapy

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

**Website:** [www.gvsu.edu/ot](http://www.gvsu.edu/ot)

### Master of Science in Occupational Therapy Programs (MSOT)

The occupational therapy traditional program is a two-year graduate curriculum leading to an entry-level Master of Science degree. The occupational therapy hybrid program is a three-year graduate curriculum that also leads to an entry-level Master of Science degree. Both programs contain the same content, but the traditional program is intended for those students who can take 15 to 16 credits per semester and is totally in-seat, while the hybrid program is intended for students who wish to maintain full-time employment throughout the curriculum and take a reduced credit load of 7 to 11 credits per semester.

The occupational therapy graduate curriculum is built around the science of occupation as the core knowledge base, which is predicated upon the assumption that occupational therapists must operate from a common base of knowledge, skills, values, and philosophy. The curriculum is designed to produce professional practitioners and socially conscious citizens who appreciate the unique perspective of individuals and the cultures that influence them, value a democratic perspective of health care and social services delivery, and apply problem-solving, critical thinking, and lifelong learning toward meeting the needs of society.

Incoming freshmen interested in occupational therapy should begin by selecting an undergraduate major in their first year. Suggested majors include allied health sciences, biology, behavioral neuroscience, psychology, or sociology. Although these degrees provide a well-rounded background, any undergraduate major may be selected as long as the required occupational therapy prerequisite courses are completed along with the undergraduate degree before beginning the professional program. Once a selection of major has been made, students should work with the academic advisor from that department and with an occupational therapy program advisor to ensure that all major requirements are completed, along with the required prerequisite courses. All of these required prerequisite courses must be taken for a letter grade. Students may apply for admittance to the occupational therapy programs during the year in which they attain senior status. All students accepted into the occupational therapy programs must have a completed baccalaureate degree from an accredited institution of higher learning prior to the beginning of the master's program coursework.

Admission to the occupational therapy graduate programs is competitive. Maximum traditional class size is 40; the maximum class size for the hybrid program is 20. For the traditional program, the candidates are ranked on a total score basis and our top 40 candidates (minus early admits from GVSU, CMU, U of M, and Hope and deferrals) are sent a letter offering them seats in the program. Each alternate candidate is offered admission one for one in rank order if any of the original 40 candidates decline admission. For the hybrid program, candidates are also ranked on a total score basis and the top 20 candidates are sent a letter offering seats in the program. Each alternate candidate is offered

admission one for one in rank order if any of the original 20 candidates decline admission.

Admission decisions will be made in the first and second semesters of the calendar year. Once enrolled in one of the occupational therapy programs, students will take professional courses in individual and group interventions, clinical reasoning, occupational therapy theory and practice, advanced professional issues, and research.

All courses taken with the occupational therapy program must be taken for an earned letter grade, excluding fieldwork and research courses, unless otherwise specified by the occupational therapy department chair. Degree requirements include a final research project or thesis, three Level I fieldwork assignments (60-80 hours each), and two full-time Level II fieldwork assignments (480 hours each). The Level II fieldwork assignments may be local or they may be in other areas of the country. It is important to note that Level II fieldwork assignments must be completed within 24 months of completion of the didactic curriculum. Part time Level II fieldwork assignments are available if circumstances warrant.

### MSOT Candidate Information

A new class enters each year in late August. The traditional program admits 40 students per year. The hybrid program admits 20 students per year. By the application deadline, all candidates must have completed at least nine credit hours of the prerequisite requirements (the elective and statistics course do not count towards this total) and at least 50 hours of volunteer experience with a licensed OTR.

The application deadline is January 15 of the year you will be starting the program. There are two phases to the admission process.

#### Phase I includes a review of:

- Prerequisite GPA
- GPA in last 60 credit hours earned
- Achievement Profile form (minimum score of 8.0)
- Two Recommendation forms - one from a professor or employer if degree is already completed and one from an OT you have volunteered with
- Documentation of OT Experience form(s)

#### Phase II includes:

- An individual interview with a faculty member
- A 1½ hour writing exercise

All eligible candidates will be invited to take part in the interview and writing exercise. Phase II is typically conducted in late February to mid-March; all candidates are notified of the admission decisions by late March or early April.

### Degree

Many students who are admitted to the program are psychology majors. However, we have students who have degrees in behavioral sciences, health sciences, sociology, social work, anthropology, therapeutic recreation, and kinesiology. These are all excellent degrees, which provide a solid background for occupational therapy. As long as the prerequisite courses are completed, the undergraduate degree may be in any field. We have had students with business, art, and information technology degrees, to name a few others.

### Prerequisites

The Prerequisite GPA Calculation Form details the prerequisite course requirements for the program and allows you to document your progress.

If you have any questions regarding the prerequisites you may contact the College of Health Professions (CHP) Student Services office at [www.gvsu.edu/chpss/](http://www.gvsu.edu/chpss/). The OT program Admissions Committee must approve any prerequisite not posted on [www.gvsu.edu/ot/guide-list.htm](http://www.gvsu.edu/ot/guide-list.htm) [www.gvsu.edu/studentapps/mtn/](http://www.gvsu.edu/studentapps/mtn/). The OT program accepts prerequisite courses that have been taken at accredited community colleges and/or universities. All nonGVSU prerequisite courses not found in either of these guides should be first reviewed by a Student Services advisor; a member of the OT program Admissions Committee may be consulted

## Occupational Science and Therapy

to ensure the course meets our admissions standards. It is better to ask questions and have the prerequisite course reviewed/approved prior to your enrollment in the course. This will avoid potential barriers in the admission process.

Some of the prerequisites might be available on line through Michigan Colleges Online at [www.miccollegesonline.org](http://www.miccollegesonline.org) or through the following community colleges and universities: Link to list of eligible evening, weekend and online courses

Please note: This list of eligible courses is provided as a courtesy and it remains the candidate's responsibility to confer with the CHP Student Services Office for accuracy.

### Course Equivalencies

Courses that fulfill GVSU's OT prerequisites for all Michigan four-year colleges/universities are located on the OT webpage, under Prospective Students.

Course equivalencies for all Michigan 4-year colleges/universities and community colleges can be found on the GVSU Registrar's webpage [www.gvsu.edu/registrar/](http://www.gvsu.edu/registrar/); click on Additional Resources; click on Course Equivalencies: [www.gvsu.edu/studentapps/mtn/](http://www.gvsu.edu/studentapps/mtn/).

Once you get to the webpage:

- Select a college or university
- Use "CTRL F" to locate specific course equivalency
- This will bring you to the GVSU course (right side) and equivalent from designated school (left side)

### GPA Requirements

At a minimum, each candidate must have at least a 3.0 GPA average in the last 60 hours of coursework completed prior to the application. Additionally, each candidate must have at least a 3.0 GPA average in the prerequisite coursework with no individual course below a C. If a student elects to repeat a course, the program will use the higher grade of the two courses in the prerequisite GPA calculation. The program does not consider courses that have been repeated more than once. The OT program Admissions Committee will not review applications with GPA scores lower than 3.0 in either category.

### Five-year Prerequisite Requirement

Note: All prerequisites must have been completed within five years of the year of application.

### Competitive GPA

To be most competitive for admission a candidate should have a prerequisite GPA in the 3.6 - 3.8 range and a last 60 hour GPA in the 3.6 - 3.8 range. It is very difficult to gain admission to the program with a last 60 hour GPA and prerequisite GPA of between 3.0 - 3.3.

Grades account for approximately 30 percent of the total consideration for admission to the program. The GVSU admissions process looks at multiple factors besides grades for admission.

### Application Process to the MSOT Programs

A candidate can only apply to one program, either the Traditional or Hybrid program, each year and therefore must indicate either the traditional or hybrid program on the graduate application. **Maximum class size for the traditional program is 40 and for the hybrid program is 20.**

Admission to either program within the Occupational Science and Therapy department first requires completion of the Grand Valley State University graduate application, regardless of previous college attended. Candidates must complete all prerequisite courses and earn a bachelor's degree prior to entering the program. There will be **no waivers or exceptions** to this policy.

Completed applications should be submitted by January 15 for both the Traditional program and the Hybrid program. All paper application forms and supplemental application materials should be mailed to

the Admissions Office, 1 Campus Dr. Allendale, MI 49401. It is the candidate's responsibility to ensure that all application materials are received and processed by Admissions by the January 15 deadline.

**International student applicants** should be able to communicate effectively in English and submit the following materials:

- a) Original or certified original transcripts.
- b) Written TOEFL score minimum of 550. The minimum IELTS score of 6.5.
- c) Official transcript credential evaluation (e.g., WES, ECE)

For further details, please read:

- Candidate Information Sheet
- The GVSU Department of Occupational Science and Therapy technical standards to ensure they are capable of meeting the requirements of the program prior to applying.
- Admissions Policy

### Application Process

The GVSU Admissions office must receive the following for your application to be complete:

1. Complete the Graduate School application online.
2. Submit official transcripts from all colleges and universities attended through the fall semester prior to January 15 deadline. Students are responsible for sending official transcripts at the end of each semester for proof of completion of prerequisites and if admitted to the program, to demonstrate progress towards or the completion of a bachelor's degree.
3. Submit two recommendation forms within your online graduate application - One must be from an OTR and one must be from a professor or an employer if your degree is already completed
4. Complete the Prerequisite GPA Calculation Form
  - **At least nine credit hours of prerequisites must be completed at the time of application.** The elective and the statistics course are not included in this requirement. Each individual prerequisite course must be completed with a grade of C or better.
  - GPA scores for the prerequisite courses, and for the last 60 hours must both be at or above 3.0
  - A plan for completion of prerequisites that are not fulfilled at the time of application must also be included in the Prerequisite GPA Calculation form.
  - **Mail this** and all supplemental materials to the Admissions Office, 1 Campus Drive, Allendale, MI 49401.
5. Complete the Achievement Profile Form detailing student accomplishments that reflect the core values of the program.
  - **Mail this** and all supplemental materials to the Admissions Office, 1 Campus Drive, Allendale, MI 49401
6. Complete the **Documentation of OT Experience Form** detailing minimum of 50 hours under the supervision of an occupational therapist. All hours must be included. A minimum of 50 hours must be completed in order for an application to be considered complete. Volunteer hours accrued outside the United States will only account for a maximum of 25 of the required 50 hours.
  - **Mail this** and all supplemental materials to the Admissions Office, 1 Campus Drive, Allendale, MI 49401

After the application deadline, the OT Admissions Committee will meet to review all completed applications. The top 60 for the Traditional program and the top 40 for the Hybrid program will be invited for the Next Step of the application process.

### Next Step

1. An interview and an onsite writing sample.
2. The candidates are ranked on a total score basis.
3. Traditional program: The top 40 candidates (minus early admits from Grand Valley State University, Central Michigan University, University of Michigan, and Hope College) are sent a letter offering them seats in the program. Candidates are asked to provide a written reply within a two week deadline. The balance of candidates over 40 are considered alternates for admission and are ranked according to

- total score. Each alternate candidate is offered admission one for one in rank order if any of the original 40 candidates declines admission.
4. Hybrid program: The top 20 candidates (minus early admits from Grand Valley State University, Central Michigan University, University of Michigan, and Hope College) are sent a letter offering them seats in the program. They are asked to provide a written reply within a two week deadline. The balance of candidates over 20 are considered alternates for admission and are ranked according to total score. Each alternate candidate is offered admission one for one in rank order if any of the original 20 candidates declines admission.
  5. Candidates who are not selected are informed once each cohort is filled and are welcome to request a meeting with a member of the OT Admissions Committee to discuss their application. This advising session is recorded and placed in the candidate's program file for future reference.
  6. Candidates who are not selected may reapply the following year.

#### Prerequisite Courses as Follows

Prerequisite Course Name	GVSU Course Equivalent
Anatomy and Physiology Sequence A or	BMS 208 and BMS 290 <u>AND</u> BMS 309
Anatomy and Physiology Sequence B	BMS 250 and BMS 251
Kinesiology	MOV 300
Psychopathology	PSY 303
Lifespan Developmental Psychology	PSY 364
One of the Following: Foundations of Behavioral Neuroscience	EITHER: PSY 330 -OR-
Neuropsychology	PSY 431 -OR-
Neuroanatomy	BMS 427
Intro to Statistics	STA 215
One elective from psychology, sociology, anthropology, public health, or related field (200-level or higher)	

#### MSOT Degree Requirements

Completion of 81 to 82 credits in the professional curriculum is required for the master's degree in occupational therapy. General graduate academic policies can be found in the Grand Valley State University Undergraduate and Graduate Catalog. General university degree requirements are in the Academic Regulations section of the Catalog and the requirements for undergraduate majors are in the appropriate Academic Program section.

Because the Occupational Therapy program prepares students to practice in a variety of settings, the department assumes the responsibility to assure the public that our students have met high standards of professional behavior, academic achievement and consistent evidence of response to consumer needs. Criminal background checks and drug screens may be required prior to participation in certain clinical experiences. The cost of this evaluation is the responsibility of the student.

The program requires that students attain a minimum of 84 percent competency in each course. This requirement is reflected in each course syllabus across the professional curriculum.

- OST 502 - Theoretical Foundations in Occupational Therapy Credits: 3
- OST 503 - Group Occupations in Practice Credits: 3
- OST 505 - Limitations on Occupation Credits: 3
- OST 551 - Meaningful Living Through Occupation Credits: 3
- OST 552 - Meaningful Living Laboratory Credits: 3
- OST 553 - Level I Fieldwork (Part 1) Credits: 2
- OST 555 - Professional Socialization in Occupational Therapy Credits: 3
- OST 557 - Research Design in Occupational Therapy Credits: 2

- OST 558 - Mental Health Services in Occupational Therapy Credits: 3
  - OST 559 - Mental Health Laboratory Credits: 1
  - OST 561 - Child and Adolescent Practice Credits: 3
  - OST 562 - Child and Adolescent Laboratory Credits: 2
  - OST 563 - Level I Fieldwork (Part 2) Credits: 1
  - OST 564 - Occupational Therapy Research Proposal Credits: 2
  - OST 565 - Occupational Therapy Services Administration Credits: 3
  - OST 571 - Adult Practice Credits: 3
  - OST 572 - Adult Laboratory Credits: 3
  - OST 573 - Level I Fieldwork (Part 3) Credits: 1
  - OST 651 - Older Adult Practice Credits: 3
  - OST 652 - Older Adult Laboratory Credits: 3
  - OST 653 - Level I Fieldwork (Part 4) Credits: 1
  - \*OST 660 - Level II Fieldwork (Part 1) Credits: 9
  - \*OST 661 - Level II Fieldwork (Part 2) Credits: 9
  - IPE 507 - Integrated Team Health Care Credits: 2
  - PA 535 - Grant Writing Credits: 3
  - STA 610 - Applied Statistics for Health Professions Credits: 3
  - OST 693 - Occupational Therapy Research Project Credits: 2  
**OR** OST 695 - Occupational Therapy Master's Thesis Credits: 3
  - OST 698 - Professional Issues Seminar Credits: 1
- \*Level II fieldwork must be completed within 24 months of completion of the academic program.

#### Sample Curriculum for Traditional Program

##### Traditional Program

##### Fall I

- OST 502 - Theoretical Foundations in Occupational Therapy Credits: 3
- OST 551 - Meaningful Living Through Occupation Credits: 3
- OST 552 - Meaningful Living Laboratory Credits: 3
- OST 553 - Level I Fieldwork (Part 1) Credits: 2
- STA 610 - Applied Statistics for Health Professions Credits: 3
- OST 557 - Research Design in Occupational Therapy Credits: 2

##### Winter I

- OST 505 - Limitations on Occupation Credits: 3
- OST 558 - Mental Health Services in Occupational Therapy Credits: 3
- OST 559 - Mental Health Laboratory Credits: 1
- OST 561 - Child and Adolescent Practice Credits: 3
- OST 562 - Child and Adolescent Laboratory Credits: 2
- OST 563 - Level I Fieldwork (Part 2) Credits: 1
- OST 564 - Occupational Therapy Research Proposal Credits: 2

##### Spring/Summer I

- OST 503 - Group Occupations in Practice Credits: 3
- PA 535 - Grant Writing Credits: 3
- OST 571 - Adult Practice Credits: 3
- OST 572 - Adult Laboratory Credits: 3
- OST 573 - Level I Fieldwork (Part 3) Credits: 1
- OST 568 - Occupational Therapy Research Implementation and Analysis Credits: 1

##### Fall II

- IPE 507 - Integrated Team Health Care Credits: 2
- OST 555 - Professional Socialization in Occupational Therapy Credits: 3
- OST 565 - Occupational Therapy Services Administration Credits: 3
- OST 651 - Older Adult Practice Credits: 3
- OST 652 - Older Adult Laboratory Credits: 3
- OST 653 - Level I Fieldwork (Part 4) Credits: 1
- OST 693 - Occupational Therapy Research Project Credits: 2 OR
- OST 695 - Occupational Therapy Master's Thesis Credits: 3

##### Winter II

- OST 660 - Level II Fieldwork (Part 1) Credits: 9

##### Spring/Summer II

- OST 661 - Level II Fieldwork (Part 2) Credits: 9
- OST 698 - Professional Issues Seminar Credits: 1

## Operations Management

### Sample Curriculum for Hybrid Delivery Model

Fall I		Winter I		Summer I	
OST 502	3 cr	OST 503	3 cr	IPE 507	2 cr
OST 551	3 cr	OST 505	3 cr	OST 555	3 cr
OST 552	3 cr	OST 553	2 cr	PA 535	3 cr
		STA 610	3 cr		
<b>TOTAL:</b>	<b>9 cr</b>	<b>TOTAL:</b>	<b>11 cr</b>	<b>TOTAL:</b>	<b>8 cr</b>

Fall II		Winter II		Summer II	
OST 557	2 cr	OST 558/559	4 cr	OST 571/572	6 cr
OST 561/562	5 cr	OST 564	2 cr	OST 573	1 cr
OST 563	1 cr	OST 565	3 cr	OST 568	1 cr
<b>Total:</b>	<b>8 cr</b>	<b>Total:</b>	<b>9 cr</b>	<b>Total:</b>	<b>8 cr</b>

Fall III		Winter III		Summer III	
OST 651/652	6 cr	OST 660 (FW)	9 cr	OST 661 (FW)	9 cr
OST 653	1 cr			OST 698	1 cr
OST 693/695	2/3 cr				
<b>Total:</b>	<b>9/10 cr</b>	<b>Total:</b>	<b>9 cr</b>	<b>Total:</b>	<b>10 cr</b>
<b>Total Credits: 81-82 cr</b>					

### Occupational Therapy Traditional and Hybrid Programs

#### Research Sequence

- OST 557
- OST 564 - Prerequisite is OST 557
- OST 568 - Prerequisite is OST 564
- OST 693 or OST 695 - Prerequisite is OST 568 and STA 610

#### Core Content Sequence

- OST 551
- OST 561 - Prerequisite = OST 551 and 502; Corequisites = OST 652 and 653
- OST 571 - Prerequisite = OST 561; Corequisites = OST 572 and 573
- OST 651 - Prerequisite = OST 571; Corequisites = OST 652 and 653
- OST 552
- OST 562 - Prerequisite = 552 and 502; Corequisites = OST 561 and 563
- OST 572 - Prerequisite = 562; Corequisites = 571 and 573
- OST 652 - Prerequisite = 572; Corequisites = 651 and 653
- OST 551 and 552
- OST 558 - Prerequisite = OST 551; Corequisite = OST 559
- OST 559 - Prerequisite = OST 552; Corequisite = OST 558
- OST 553
- OST 563 - Prerequisite = 553; Corequisites = 561 and 562
- OST 573 - Prerequisite = 563; Corequisites = 571 and 572
- OST 653 - Prerequisite = 573; Corequisites = 651 and 652
- OST 660 - Prerequisite = OST 558, 559, 651, 652, 653, either 693 or 695
- OST 661 - Prerequisite = OST 660

## Bachelor of Business Administration in Operations Management

This major is designed to prepare a student in the technical and strategic aspects of producing goods and services. Operations management involves the application of managerial, quantitative, and computer skills to areas of lean, six-sigma, ERP, inventory management, forecasting and scheduling, with the goal of giving students the tools to effectively manage service and manufacturing operations. SAP, the enterprise resource planning (ERP) software, and other software packages, are integrated into the majority of the operations management courses.

## Requirements for the B.B.A.

### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

#### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND** ECO 211 - Introductory Macroeconomics Credits: 3

#### **OR** ECO 200 - Business Economics Credits: 3

- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

### Required Courses

Business core and the following:

- MGT 361 - Management Science Credits: 3
- MGT 362 - Computers in Operations Management Credits: 3
- MGT 367 - Manufacturing Planning and Control Credits: 3
- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Quantitative Group - Chose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- PHI 103 - Logic Credits: 3

And two of the following courses:

- MGT 363 - Managing Quality Credits: 3
- MGT 364 - Service Operations Management Credits: 3
- MGT 365 - Strategic Management of Operations Credits: 3

Plus, two of the following courses:

- MGT 337 - Supply Chain Management Credits: 3
- MGT 466 - International Management and Multinational Corporations Credits: 3
- MGT 467 - Advanced Topics in Operations and Supply Chain Management Credits: 3
- MKT 457 - Logistics and Transportation Credits: 3

## Master of Philanthropy and Nonprofit Leadership

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

**Website:** [www.gvsu.edu/grad/mpnl](http://www.gvsu.edu/grad/mpnl)

Grand Valley State University's Master of Philanthropy and Nonprofit Leadership (M.P.N.L.) is offered through the School of Public, Nonprofit, and Health Administration and develops both the general knowledge and specific abilities needed for leadership in a fast-changing world.

The M.P.N.L. curriculum is designed to prepare students to act ethically and effectively in leading and managing philanthropic and nonprofit organizations, and to transcend traditional boundaries in the pursuit of prosperous, safe, and healthy communities.

- **Versatile.** Students may choose from emphases in community impact, mission advancement, nonprofit healthcare, or they may create a custom emphasis area with the guidance and approval of their advisor.
- **Convenient.** Courses are offered on the Pew Grand Rapids Campus in downtown Grand Rapids.
- **Flexible.** Available to full- or part-time students. Many classes are offered at times to accommodate working professionals, including evening and weekend courses and workshops, and Internet-enhanced learning.

The M.P.N.L. degree is available to working professionals with at least three years of full time experience in management, or employment within the nonprofit sector. It consists of 36 credit hours of coursework, and students must meet with an advisor upon entry into the program to develop a program of study.

**Minimum Number of Hours for Graduation:** 36

### Admissions

The admissions policies of the school follow the mission by our commitment to attract and educate a diverse student population that is dedicated to public service as a career. We seek students from diverse backgrounds, with various baccalaureate educations and professional experience in diverse public service activities.

A complete application to the M.P.N.L. program requires:

1. A completed graduate application
2. A nonrefundable application fee unless the applicant has previously applied to Grand Valley State University and has paid this fee
3. An official transcript from each undergraduate and graduate institution
4. Three letters of reference from informed sources
5. An essay on career and educational objectives (250 to 750 words)
6. A resume
7. Submission of an official TOEFL or IELTS score report is required of applicants whose native language is not English

Applications will not be reviewed until they are complete. The admissions committee may request additional information or a personal interview if it deems them appropriate and necessary.

The admissions committee is looking for the evidence that an applicant will be successful if admitted into the M.P.N.L. program. This evidence can take several forms. Furthermore, the admissions committee considers each applicant as a whole student. No decision is based solely on any single factor. A strong applicant for the M.P.N.L. program will have the following:

- A 3.0 grade point average from an accredited college or university, calculated on the last 60 credits of undergraduate work. (This GPA will include all courses, including those classes that may have been repeated or transferred.) Also, holding a graduate degree, a graduate

certificate, or having successfully completed at least 12 semester hours in another graduate program, will be considered as strong evidence of an applicant's academic competency to do graduate level work in the M.P.A. program.

- The equivalent of three years of managerial experience
- Three years of service with a nonprofit organization
- Three positive recommendations from well-informed sources such as current and/or former professors or supervisors. These letters will address the applicant's academic skills, analytical and problem solving abilities, professionalism, reliability, and/or work ethic.
- A demonstrated commitment to community and public service. This would normally be in the form of three or more years of professional work experience since receiving a baccalaureate degree.

An applicant concerned about falling short on the preceding criteria may want to consider these recommendations for securing favorable evidence of their competency to do graduate level work in the M.P.A. program.

- Submitting a GRE score is recommended for applicants who lack a 3.0 undergraduate GPA. The GRE is also recommended for applicants applying for a graduate assistantship with SPNHA. GRE scores of at least 550 verbal and 620 quantitative will be considered favorably.
- Successfully completing graduate-level coursework as a nondegree-seeking student is recommended for applicants who lack a 3.0 undergraduate GPA. However, 12 credits taken as a nondegree seeking student is the limit that can be applied to the M.P.N.L. program upon admission. Receiving a B or better as a nondegree-seeking student will be considered favorably.

In some cases, an applicant that is seen as strong except for a specific area of deficiency may be offered admission on a condition that they take a course to rectify that deficiency before proceeding with the M.P.N.L. coursework.

### Requirements for the M.P.N.L. Degree

The M.P.N.L. degree consists of 36 credit hours for working professionals with at least three years of full time experience in management, or employment within the nonprofit sector.

### Core Courses

The program core includes 21 credit hours, as follows:

- PA 611 - Research Methods Credits: 3
- PA 612 - Human Resources in Organizations Credits: 3
- PA 614 - Organization Theory Credits: 3
- PA 660 - Philanthropy and the Nonprofit Sector: History and Ethics Credits: 3
- PA 661 - Nonprofit Management: Practices Credits: 3
- PA 662 - Nonprofit Financial Management Credits: 3
- PA 667 - Fund Development Credits: 3
- PA 669 - Leadership Capstone Credits: 3

### Emphases

Students select one emphasis area of study of nine credit hours. The choices of emphases are as follows:

#### Community Impact

- MGT 672 - Creativity and Social Entrepreneurship Credits: 3
- PA 666 - Foundations and Strategic Grantmaking Credits: 3
- PA 664 - Program Evaluation Credits: 3

#### Mission Advancement

- PA 643 - Strategic Management and Planning Credits: 3
- PA 665 - Nonprofit and Foundation Boards, Trustees and Governance Credits: 3
- PA 663 - Nonprofit Organizations, Advocacy and Public Policy Credits: 3 **OR** PA 670 - International NGO Management Credits: 3

#### Nonprofit Healthcare

- PA 630 - Health Administration and Service Credits: 3
- PA 640 - Marketing Health and Human Services Credits: 3

## Philosophy

### Custom Emphases

- To meet specific learning and career goals, a student may create a custom emphasis area with the guidance and approval of their advisor.

### Electives

Students choose three credit hours from the philanthropy topics, trends, and thought leaders workshop series.

- PA 554 - Philanthropic Topics, Trends and Thought Leaders Workshop Credits: .5 to 3  
x3 (1 credit each)

## Philosophy - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Philosophy is an activity, a practice, and a way of life that is intimately associated with the ideal of liberal education. Philosophy is also a discipline and a subject matter, one that arises from the history of its primary activity of asking and answering questions about reality, meaning, and value. Through both the activity and the discipline aspects, the study of philosophy contributes to the development of the whole person. Philosophy cuts across other disciplines by uncovering the basic assumptions of our various ways of understanding reality, making it possible for us to be alert and responsive at this level. This same inherently interdisciplinary quality also makes it possible for us to achieve a conception of the world as a whole, which supports an informed scale of value. The ongoing study of philosophy is not only informative, but transformative, enabling us to live an examined life and to grow toward the way of being that the liberally educated person and the philosopher exemplify.

**Website:** [www.gvsu.edu/philosophy](http://www.gvsu.edu/philosophy)

### Graduate and Professional School Opportunities

Any graduate, professional, or career program depending on a liberal arts curriculum will welcome work done in philosophy. Schools of law, theology, and religious studies are particularly enthusiastic about philosophy as an undergraduate major. Students interested in attending law school should contact Professor John Uglietta, the department's pre-law advisor.

### Participating Programs

#### Special Programs

Study abroad programs directed by philosophy faculty are especially beneficial for philosophy students. The GVSU Summer School in China represents a rare opportunity to study many aspects of Chinese culture, including Buddhist, Daoist, and Confucian philosophy, in China.

Community Working Classics (PHI 375) is a philosophy seminar dedicated to combining traditional classroom discourse with elements of community organizing, urban study, and student teaching. Each semester, students enrolled in the CWC program offer courses of study in the liberal arts to residents in both the downtown Grand Rapids area and the Muskegon Correctional Facility. The program has been recognized by the American Philosophical Association through the "Excellence and Innovation in Philosophy Programs" award, and by the Kellogg Foundation, among others.

The undergraduate teaching apprentice program is directed toward philosophy majors planning to attend graduate school, and is designed to provide an opportunity for selected students to apprentice in teaching philosophy. For such students, experience in this aspect of the practice of philosophy is an important complement to the undergraduate major.

## Bachelor of Arts in Philosophy

### Requirements for a Major in Philosophy

In an era when many majors are inflated because of the influence of careerism, specialization, and external accrediting agencies, the credit

hour requirements for the philosophy major remain modest at only 30. This is because we take seriously the value of electives in the student's college program, the value of exploring and discovering one's real interests. The number of required hours in philosophy is also modest because we wish to encourage students to discover the importance of relating philosophy to other fields through double majors, minors, and clusters of elective courses indicating developed proficiencies.

The previous information emphasizes the importance of the advising relationship. In order to facilitate this relationship, the philosophy major requires a study plan through which the student's work can be consciously developed and articulated. A first draft of the study plan must be completed with the advisor by the beginning of the junior year, revised each successive semester, and completed in the Capstone course.

### Degree Requirements

The philosophy B.A. requires third-semester proficiency in a foreign language (201). We strongly encourage completing the fourth semester of the language (202) as well.

### Major Course Requirements

Students majoring in philosophy must complete a minimum of 30 hours in the department.

- PHI 103 - Logic Credits: 3

Select four from:

- PHI 311 - Ancient Great Philosophers Credits: 3
- PHI 312 - Medieval Great Philosophers Credits: 3
- PHI 313 - Early Modern Great Philosophers Credits: 3
- PHI 314 - Late Modern Great Philosophers Credits: 3
- PHI 315 - Recent Great Philosophers Credits: 3

Select one from:

- PHI 210 - Eastern Philosophy Credits: 3
- PHI 240 - Middle Eastern Philosophy Credits: 3
- PHI 306 - Wisdom of the East: Asian Philosophy Credits: 3

Capstone:

- PHI 495 - Reality, Knowledge, and Value (Capstone) Credits: 3

### Electives

Students may choose electives from any other courses in the philosophy program course listings. Courses numbered PHI 306, 311, 312, 313, 314, 315, and 380 may be repeated for credit when their content varies.

### Suggested Order of Coursework for a Major in Philosophy

#### First Year

- PHI 103 - Logic
- PHI 101 - Introduction to Philosophy, PHI 102 - Ethics, or PHI 220 - Aesthetics
- Beginning language (101 and 102) for B.A. degree

#### Second through Fourth Years

- Additional required PHI courses
- PHI electives
- Intermediate language (201) for B.A. degree; fourth semester language (202) is recommended

#### Final Year

- PHI 495 - Reality, Knowledge, and Value (Capstone)

## Philosophy Minor

### Requirements for a Minor in Philosophy

Students seeking a minor in philosophy are invited to work out an appropriate program with any member of the department. The program must include a minimum of 18 hours of philosophy, at least six hours of which must be upper-division (300 or 400 level).

## Photography - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/photography](http://www.gvsu.edu/photography)

Studies in photography at Grand Valley State University encompass the history, critical and aesthetic theory, and varied practice of photography as a medium of visual communication and expression in culture and society.

The photography program, in supporting the mission of the Department of Visual and Media Arts and the university, develops liberally-educated professional image-makers and media scholars through student-centered inquiry and practice in visual communication and the history, theory, criticism, and production of photographic images using state of the art methods, tools and facilities.

Students are encouraged to explore a variety of photographic formats, including 35mm and 4x5 view camera, and to acquire experience in black-and-white, color, and digital imaging processes.

Working closely with a faculty advisor, students plan at least 37 semester credits directly relating to photography, plus the communications core (nine credits), and the Capstone (three credits). Students connect photography to related fields in the visual arts, performing arts, business, media and publications, and the humanities. The emphasis of the photography program is on the students' growth as educated picture makers who not only know photography, but also know something about themselves, about the world around them, and about the culture that has shaped them. Students are expected to develop a working knowledge in many areas of visual communication and are encouraged to pursue elective studies in areas that provide a broad understanding of social and cultural issues and the role of the visual communicator in contemporary society.

Students beginning the photography curriculum with no prior credits toward the major are encouraged to take CPH 171 Photo I and CPH 266 History of Photography I in the fall semester, and CPH 172 Photo II and ART 149 Intro to Visual Composition in the winter semester of their first year. All others are encouraged to meet with their advisor before scheduling courses in the photography sequence. A 35mm film camera is required. A digital SLR and a laptop are recommended for the program.

#### Accreditation

The photography program is accredited by the National Association of Schools of Art and Design (NASAD).

## Bachelor of Arts or Bachelor of Science in Photography

Requirements for a Major in Photography

### 1. School of Communications Core (credits: 9)

All students majoring in the School of Communications must complete the following core courses, for a total of nine credits:

- COM 101 - Concepts of Communication Credits: 3
- COM 295 - Communication Theory Credits: 3
- COM 201 - Speech Credits: 3
- OR COM 215 - Story Making Credits: 3

### Program Requirements for a B.A. in Photography

The Bachelor of Arts degree in photography requires a third-semester proficiency in a foreign language of the student's choice.

### Program Requirements for a B.S. in Photography

The Bachelor of Science degree in photography requires the following three courses:

- STA 215 - Introductory Applied Statistics Credits: 3
- COM 275 - Foundations of Communication Research Credits: 3
- COM 375 - Communication Research Credits: 3

### 2. Photography Core

Nine courses, for a minimum of 31 credits.

- ART 149 - Introduction to Visual Composition Credits: 3
- CPH 171 - Photography I Credits: 4
- CPH 172 - Photography II Credits: 3
- CPH 266 - History of Photography I Credits: 3
- CPH 272 - Digital Photography 1 Credits: 3

- CPH 273 - Classic 4 x 5 Photography Credits: 3
- CPH 279 - Color Photography 1 Credits: 3
- CPH 366 - History of Photography II Credits: 3
- CPH 375 - Studio Photography Credits: 3
- CPH 495 - Photography Capstone and Thesis Seminar Credits: 1 to 6

### 3. Elective Credits: Minimum of 9

- CPH 371 - Experimental Black and White Photography Credits: 3
- CPH 373 - Digital Photography 2 Credits: 3
- CPH 374 - Color Photography 2 Credits: 3
- CPH 377 - The Social Eye Credits: 4 (offered in Fall of even years)
- CPH 378 - Advanced Problems in Photography Credits: 3
- CPH 399 - Independent Study Credits: 1 to 6
- CPH 490 - Internship Credits: 1 to 6
- CPH 280/380/480 Special Topics (TBA) Credits: 3

### Suggested Order of Coursework

Students should take:

- CPH 171 - Photography I
- AND CPH 266 - History of Photography I their first semester and
- ART 149 - Introduction to Visual Composition
- AND CPH 172 - Photography II in the second semester of their first year

## Photography Minor

### Required Courses

- CPH 171 - Photography I Credits: 4
- OR CPH 175 - Understanding Still Photography Credits: 3
- CPH 266 - History of Photography I Credits: 3
- CPH 272 - Digital Photography 1 Credits: 3

### Elective Courses (select 4)

- CPH 172 - Photography II Credits: 3
- CPH 273 - Classic 4 x 5 Photography Credits: 3
- CPH 279 - Color Photography 1 Credits: 3
- CPH 366 - History of Photography II Credits: 3
- CPH 371 - Experimental Black and White Photography Credits: 3
- CPH 373 - Digital Photography 2 Credits: 3
- CPH 374 - Color Photography 2 Credits: 3
- CPH 375 - Studio Photography Credits: 3
- CPH 377 - The Social Eye Credits: 4
- CPH 378 - Advanced Problems in Photography Credits: 3

## Physical Therapy - Program Description

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

### Accreditation

The Doctor of Physical Therapy (D.P.T.) program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; Telephone: 703-706-3245; email: accreditation@apta.org; website: www.capteonline.org.

### Career Description

Physical therapy is the care and services provided by or under the direction and supervision of a physical therapist, including (1) examining clients with physical impairments, functional limitations, and disabilities or other health-related conditions in order to determine a diagnosis, prognosis, and intervention; (2) designing, implementing and modifying therapeutic interventions to address impairments and functional limitations; (3) preventing injury, impairments, functional limitations, and disability, including the promotion and maintenance of fitness, health, and quality of life in all age groups; and (4) engaging in consultation, education, and research.

Physical therapists provide clients, infants through elderly adults, with services at the preventive, acute, and rehabilitative stages directed toward achieving enhanced functional independence. Physical therapists interact and practice in collaboration with a variety of health professionals. They

## Physical Therapy

educate and inform others about the services they offer and their effective and cost-efficient delivery. Physical therapists are required to be licensed by the states in which they practice.

### Mission

To advance the profession of physical therapy through excellence in education, scholarship and service.

### Vision

Our vision is to produce reflective physical therapy practitioners who demonstrate excellence in clinical practice, education, consultation, and research to meet the physical therapy needs of society. We strive to transform students personally and professionally. We challenge our students to achieve distinction in examination, evaluation, intervention, outcomes, and prevention of movement dysfunction. In addition, we nurture the development of leadership, for both faculty and students, to address societal health care needs, link evidence to practice, and make ethical decisions.

### Core Values

- Professional and ethical behavior
- Respect and appreciation of differences
- Lifelong learning
- Excellence in teaching, scholarship, and practice
- Appreciation of personal well-being
- Collegiality and collaboration
- Social responsibility
- Evidence-based practice
- Reflective practice
- Advocacy
- Leadership

### Undergraduates Interested in Physical Therapy

Incoming freshmen should select a major and work with a faculty advisor in that department, as well as with the College of Health Professions Student Services prephysical therapy academic advisor. Suggested majors include but are not limited to allied health sciences, biology, biomedical science, behavioral neuroscience, exercise science, and athletic training. All of the physical therapy prerequisite curriculum course requirements must be taken for a letter grade.

### Reasons to Attend PT at GVSU

- Faculty credentials include 10 with doctoral degrees, and 11 with clinical specializations in orthopedics, neurology, geriatrics, manual therapy, pediatrics and sports
- 35+ part-time instructors
- Curriculum includes research experience for all students
- Four advanced electives (sports PT, spinal manual therapy, neurologic PT and pediatric PT)
- Thirty-eight weeks of full-time clinical internship in five settings across the U.S. International opportunities may also be available.
- State-of-the-art facilities and equipment
- Four major hospitals close by to provide educational experiences
- 100-percent ultimate pass-rate on licensure examination

### Graduate Assistantships

Graduate assistants work with physical therapy faculty, administrators and staff to provide quality education, research and service. Qualified candidates are selected on the basis of aptitude, interest, and background.

### Professional Conduct

The physical therapy faculty values and will mentor the following student abilities: commitment to learning, interpersonal skills, communication skills, effective use of time and resources, use of constructive feedback, problem-solving, professionalism, responsibility, critical thinking, and stress management. Definitions and criteria will be provided upon entry into the program.

### D.P.T. Completion Requirements

Demonstration of completion of the 119 credits in the professional curriculum is required for completion of the Doctor of Physical Therapy.

### General Degree Requirements

General graduate academic policies and regulations can be found in the Undergraduate and Graduate Catalog.

Criminal background check, drug screen check, proof of immunizations and antibody titer checks are required prior to participation in full-time clinical experiences. The cost of this evaluation will be the responsibility of the student.

### Admission to the Doctorate in Physical Therapy Program

Grand Valley State University's clinical Doctorate of Physical Therapy (D.P.T.) program utilizes the Physical Therapist Centralized Application System (PTCAS) for the application process. Please refer to [www.ptcas.org](http://www.ptcas.org) to get general information about the PTCAS process. GVSU specific information is posted on the PTCAS website. Students may begin applying when the application portal opens in July of each year.

All application and supporting documents for PTCAS and GVSU have a receipt deadline of October 15. It is strongly recommended that applicants submit application materials 4-6 weeks prior to October 15 to allow for PTCAS processing time.

Program eligibility requires the following:

Completion of bachelor's degree

Completion of prerequisite courses

All prerequisites must be taken for letter grades. The prerequisites and undergraduate degree must be completed by the first day of classes of the professional program. For each course, a grade of C or higher is required.

Prerequisite Course Name	GVSU Course Equivalent
Introductory biology (that includes cellular structure and function) with lab	BIO 120
Anatomy with lab	BMS 208 and 309, strongly preferred
Physiology with lab	BMS 290 and 291, strongly preferred
Anatomy and Physiology I and II may substitute for the preceding two requirements	BMS 250 and 251
Exercise physiology	MOV 304
College algebra or trigonometry or calculus	MTH 122 or 123 or 125 or 201
Statistics	STA 215
Two sequential courses in physics with lab	PHY 220 and 221
Introductory psychology	PSY 101
Lifespan developmental psychology	PSY 364
Introductory sociology or social problems or cultural anthropology	SOC 101 or 205 or ANT 204

### Ability to Perform all Essential Functions of the Physical Therapy Program

Program eligibility requires **submission** of the following:

**PTCAS admission materials:** [www.ptcas.org](http://www.ptcas.org)

- **PTCAS online application**
- **Official transcripts from ALL colleges and universities attended**  
Students must have a minimum average GPA of 3.2 on a 4.0 scale in prerequisite course requirements, and a 3.2 overall GPA to be considered for admission.
- **Two recommendations**  
Submit the names and email addresses of your two references on the PTCAS electronic application. Your references complete and return the electronic form directly to PTCAS. A licensed physical therapist with whom you have worked / job shadowed / volunteered must complete one of the two recommendations. The deadline for receipt is October 15.

- **PTCAS application fees**
- **Documentation of volunteer / work / job shadow PT hours on the PTCAS application**

A minimum of 50 hours of observational experience in physical therapy is required at the time of application. The experience may be volunteer or paid. Observational experience in a variety of clinical settings is valued. Examples of clinical settings include in-patient, out-patient, extended care, and school. GVSU does not require students to submit PTCAS Verification forms.

- **Educational, professional, leadership, scholarly and volunteer activities**

These are valued and taken into consideration in the admission process. All activities should be documented on the PTCAS application.

#### **GVSU Admission Materials:**

- **GVSU Graduate Application Form (Physical Therapy)**  
This form is available through the PTCAS online application (PTCAS Supplemental Form) or you may access it directly via GVSU.
- **\$30 application fee.** Note: Students who have previously paid an undergraduate or graduate application fee to GVSU do not need to pay this fee again.
- **\*Official results from the GRE general and written test (Graduate Record Exam).** Subject tests are not required. GRE scores must be sent directly to PTCAS; using GVSU's PTCAS GRE code 0282.

#### **International Student Admission Materials:**

In addition to the required PTCAS and GVSU admissions materials, the following items must be sent directly to GVSU's Admission's Office.

- **\*Original or certified original transcripts**
- **\*Official TOEFL test score**  
Minimum of 610 (paper-based) or 253 (computer-based) or 102 (internet-based) required
- **\*Statement of financial support** (refer to GVSU Physical Therapy Supplemental Form)
- **\*Official credential evaluation** (WES, ECE)

\*These test scores and documents must be sent directly to:

Grand Valley State University  
Admissions Office  
1 Campus Drive  
Allendale, MI 49401-9403

#### **Graduate Outcomes**

Students graduate in 36 months. Students may take the national licensing exam during their last semester or after graduation. 90-percent pass the exam on the first attempt. 100-percent pass with subsequent attempts. 100-percent are successful at job placement in Michigan and across the United States.

#### **Progression, Retention and Termination**

A student must achieve passing grades in every course to meet the prerequisite requirement of the next semester's courses. Any course grade that results in probation may result in the student being held back one year. A grade of F always results in the student being held back a year. A graduate GPA less than 3.0 results in dismissal from the graduate school.

#### **Grounds for Probation**

1. A final grade below a 2.7 (B-) in any required course in the DPT program. [Note: an instructor, or the DPT faculty at-large, is afforded this option, at his/her, discretion, and is not required to offer remediation.
2. A cumulative graduate level GPA less than 3.0 (B) after completion of nine or more hours of graduate level coursework (i.e., at the end of semester one).
3. A GPA below 3.0 for any semester in the D.P.T. program
4. Failure to remediate a specific course requirement at the required level that leads to faculty recommendation for probation.

5. A final grade of "no credit" in PT 636, PT 656, PT 675, PT 677, PT 681 or PT 696
6. Having three faculty letters of reprimand regarding professional conduct on file.
7. Faculty recommendation to withhold student from clinical education experience due to deficient professional behavior.

#### **Clinical Education**

Students will not be allowed to participate in clinical experiences if there is a reason to believe that they are unprepared for this type of experience.

Sufficient reasons include:

1. Probationary status
2. Questions about the student's ability to safely manage patients
3. Evidence of unethical or illegal behavior
4. Medical or psychological conditions that could endanger the safety of the student or the patients entrusted to them, or that prevent the student from fully participating in the clinical experience
5. Problems identified with professional behaviors may result in a student being regarded by faculty as unprepared for clinical assignment. With the assistance of faculty, the student must resolve the problem area prior to the clinical assignment.
6. Clinical education courses are sequenced (I, II, III, IV, V). If a student does not satisfactorily complete one course, he/she may not progress to the next course without completion of remedial work or repeat of the course.

#### **Grounds for Removal from the PT Program**

Any one of the following items may constitute grounds for removal from the program:

1. Failure to complete required remedial work at the required level, and in a timely fashion, while on probation.
2. Failure to complete items required in a remediation contract at the required level, and in a timely fashion, while on probation.
3. Final grades in 2 semesters that result in probation.
4. Failure to demonstrate "continued competency," per VII. B.
5. At the time of application to physical therapy, and throughout matriculation as a PT student, failure to report a felony record or arrest for a crime for which criminal charges are pending.
6. Evidence of unethical, illegal or dishonest behavior in academic or community life from the date that GVSU's offer of admission is accepted to the date of graduation.
7. See IX below for automatic removal.

#### **Program Location**

- Semester 1 is at Pew Grand Rapids in the Campus Cook-DeVos Center for Health Sciences and Allendale Campus.
- Semester 2-6 and 8 are at Pew Grand Rapids in the Campus Cook-DeVos Center for Health Sciences.
- Clinical experiences are in Michigan and other selected states during semesters 3, 5, 7, and 9.

**Website:** [www.gvsu.edu/pt](http://www.gvsu.edu/pt)

## **Doctor of Physical Therapy**

**Website:** [www.gvsu.edu/grad/dpt](http://www.gvsu.edu/grad/dpt)

#### **Professional Program Requirements for the D.P.T.**

Demonstration of completion of the 119 credits in the professional curriculum is required for completion of the Doctor of Physical Therapy.

- BMS 538 - Advanced Neuroscience Credits: 3
- BMS 561 - Prosected Regional Anatomy Credits: 4
- PSY 668 - Health Profession Disability Psychology Credits: 3
- PT 510 - Lifespan Motor Development Credits: 2
- PT 511 - Foundations in Physical Therapy Examination Credits: 3
- PT 512 - Introduction to Evidence Based Practice in Physical Therapy Credits: 1
- PT 513 - Clinical Science I Credits: 2
- PT 515 - Professional Topics I Credits: 1

## Physician Assistant

- PT 517 - Kinesiology and Biomechanics I Credits: 3
- PT 521 - Musculoskeletal Examination Credits: 4
- PT 522 - Musculoskeletal Interventions Credits: 4
- PT 523 - Clinical Science II Credits: 3
- PT 526 - Clinical Seminar I Credits: 2
- PT 528 - Kinesiology and Biomechanics II Credits: 3
- PT 610 - Research in Physical Therapy Credits: 2
- PT 631 - Cardiopulmonary Physical Therapy I Credits: 2
- PT 632 - Integumentary Practice Management Credits: 2
- PT 634 - Clinical Seminar II Credits: 1
- PT 636 - Clinical Education I Credits: 4
- PT 641 - Neuromuscular Examination Credits: 4
- PT 642 - Interventions in Neuromuscular Physical Therapy Credits: 4
- PT 643 - Clinical Science III Credits: 3
- PT 644 - Clinical Seminar III Credits: 2
- PT 647 - Cardiopulmonary Physical Therapy II Credits: 2
- PT 651 - Spinal Exam and Intervention Credits: 4
- PT 654 - Applied Geriatric Practice Credits: 2
- PT 655 - Professional Topics II Credits: 1
- PT 656 - Clinical Education II Credits: 5
- PT 657 - Teaching for Physical Therapists Credits: 2
- PT 661 - Exam and Intervention for Rehabilitation Credits: 4
- PT 662 - Pediatric Practice Management Credits: 3
- PT 665 - Professional Topics III Credits: 2
- PT 675 - Clinical Education III Credits: 6
- PT 677 - Clinical Education IV Credits: 6
- PT 681 - Advanced Clinical Decision-Making Credits: 2
- PT 682 - Health and Wellness Credits: 3
- PT 685 - Professional Topics IV Credits: 2
- PT 698 - Clinical Education V Credits: 6
- PT 790 - Physical Therapy Research I Credits: 1 (two semesters required)
- PT 793 - Physical Therapy Research II Credits: 2
- STA 610 - Applied Statistics for Health Professions Credits: 3

### Elective Courses

- PT 580 - Special Topics in Physical Therapy Credits: 1 to 3
- PT 680 - Special Topics in Physical Therapy Credits: 1 to 3
- PT 684 - Advanced Topics: Sports Physical Therapy Credits: 3
- PT 686 - Advanced Topics: Pediatric Physical Therapy Credits: 3
- PT 687 - Advanced Topics: Spinal Manual Therapy Credits: 3
- PT 688 - Advanced Topics: Neurologic Physical Therapy Credits: 3
- PT 699 - Independent Study in Physical Therapy Credits: 1 to 3

## Curriculum for Doctor of Physical Therapy

### First Year

#### Fall Credits: 14

- BMS 561 - Prosected Regional Anatomy Credits: 4
- PT 511 - Foundations in Physical Therapy Examination Credits: 3
- PT 512 - Introduction to Evidence Based Practice in Physical Therapy Credits: 1
- PT 513 - Clinical Science I Credits: 2
- PT 515 - Professional Topics I Credits: 1
- PT 517 - Kinesiology and Biomechanics I Credits: 3

#### Winter Credits: 16

- PT 521 - Musculoskeletal Examination Credits: 4
- PT 522 - Musculoskeletal Interventions Credits: 4
- PT 523 - Clinical Science II Credits: 3
- PT 526 - Clinical Seminar I Credits: 2
- PT 528 - Kinesiology and Biomechanics II Credits: 3

#### Spring/Summer Credits: 17

##### First five weeks:

- PT 636 - Clinical Education I Credits: 4

##### Next eight weeks:

- BMS 538 - Advanced Neuroscience Credits: 3
- PT 510 - Lifespan Motor Development Credits: 2

- PT 631 - Cardiopulmonary Physical Therapy I Credits: 2
- PT 632 - Integumentary Practice Management Credits: 2
- PT 634 - Clinical Seminar II Credits: 1
- STA 610 - Applied Statistics for Health Professions Credits: 3

### Second Year

#### Fall Credits: 17

- PT 610 - Research in Physical Therapy Credits: 2
- PT 641 - Neuromuscular Examination Credits: 4
- PT 642 - Interventions in Neuromuscular Physical Therapy Credits: 4
- PT 643 - Clinical Science III Credits: 3
- PT 644 - Clinical Seminar III Credits: 2
- PT 647 - Cardiopulmonary Physical Therapy II Credits: 2

#### Winter Credits: 15

##### First six weeks:

- PT 656 - Clinical Education II Credits: 5

##### Next eight weeks:

- PT 654 - Applied Geriatric Practice Credits: 2
- PT 655 - Professional Topics II Credits: 1
- PT 657 - Teaching for Physical Therapists Credits: 2
- PT 661 - Exam and Intervention for Rehabilitation Credits: 4
- PT 790 - Physical Therapy Research I Credits: 1

#### Spring/Summer Credits: 13

- PSY 668 - Health Profession Disability Psychology Credits: 3
- PT 651 - Spinal Exam and Intervention Credits: 4
- PT 662 - Pediatric Practice Management Credits: 3
- PT 665 - Professional Topics III Credits: 2
- PT 790 - Physical Therapy Research I Credits: 1

### Third Year

#### Fall Credits: 12

- PT 675 - Clinical Education III Credits: 6
- PT 677 - Clinical Education IV Credits: 6

#### Winter Credits: 9

- PT 681 - Advanced Clinical Decision-Making Credits: 2
- PT 682 - Health and Wellness Credits: 3
- PT 685 - Professional Topics IV Credits: 2
- PT 793 - Physical Therapy Research II Credits: 2

#### Winter-Optional:

- PT 684 - Advanced Topics: Sports Physical Therapy Credits: 3
- PT 686 - Advanced Topics: Pediatric Physical Therapy Credits: 3
- PT 687 - Advanced Topics: Spinal Manual Therapy Credits: 3
- PT 688 - Advanced Topics: Neurologic Physical Therapy Credits: 3

#### Spring/Summer Credits: 6

- PT 698 - Clinical Education V Credits: 6

## Physician Assistant Studies - Program Description

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

**Website:** [www.gvsu.edu/pas](http://www.gvsu.edu/pas)

### Degree Offered

Master's in physician assistant studies.

Physician assistants (PAs) are valued members of the health care team. PAs are currently certified and licensed in the United States by delegation or regulatory authority. Working in collaboration with doctors of allopathic medicine and/or doctors of osteopathic medicine, PAs obtain medical histories, perform physical examinations, establish diagnoses, treat illnesses, provide patient education, counsel patients, assist in surgery, dictate proper treatment orders, and interpret laboratory/diagnostic studies. In all 50 states, as well as the District of Columbia and Guam, laws are in place which authorize PAs to prescribe medications or transmit orders for dispensing medication, including controlled

substances. Educated in the medical model, PAs have close working relationships with physicians and the other members of the health care team. PAs see many of the same types of patients and perform many of the same tasks as physicians. The responsibilities of PAs depend upon a number of factors, including state laws and regulations, years of experience and training, and the setting in which the PA practices. These factors all comprise a PA's scope of practice.

### Grand Valley Physician Assistant Studies

Grand Valley State University established its physician assistant studies (PAS) program in the 1990s, accepting its first class for entry in 1995 and graduating the inaugural class into the profession in 1998. The program awards a Master of Physician Assistant Studies degree following completion of a 28-month (7 semesters) curriculum of professional studies.

Applicants to the PAS program must possess or be in the process of completing a baccalaureate degree from either GVSU or another institution of higher learning. All applicants must complete prerequisite courses, minimum health care experience hours, GRE, and submit letters of recommendation. Please see as follows for further details.

Students begin the professional curriculum after they have been admitted to the program (see Application Procedures). During the PAS didactic curriculum, students take coursework in human anatomy, medical physiology, clinical applications, clinical medicine, pathophysiology, practical therapeutics, PA professional issues, and evidence based medicine. The curriculum combines traditional classroom sessions with Web-based instruction, case studies, laboratory, and problem-based learning (PBL) to provide students with the knowledge and clinical acumen to sit for their national certification examination and practice medicine competently upon graduation. Students spend the final three semesters completing rotations in various clinical specialties, by working in clinics, emergency departments, and hospitals throughout Michigan, out of state communities, and potentially international communities.

### Accreditation Statement

The PAS program is accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). In September 2016, the ARC-PA placed the GVSU PAS program on Accreditation-Probation status until its next validation review in September 2018. Probation is a temporary status of accreditation conferred when a program does not meet Accreditation Standards and when the capability of the program to provide an acceptable educational experience for its students is threatened. Once placed on probation, programs that still fail to comply with accreditation requirements in a timely manner, as specified by the ARC-PA, may be scheduled for a focused site visit and/or risk having accreditation withdrawn.

Specific questions regarding accreditation should be directed to the program director and/or the appropriate institutional official(s).

### Application Procedures

Admission to the PAS program is competitive. Please visit the website at [www.gvsu.edu/pas](http://www.gvsu.edu/pas) for detailed application requirements and to apply. Applicant may contact the PAS program at (616) 331-5700 for additional questions.

Selected prerequisite courses, all health care experience hours, GRE, and letters of recommendation must be completed by the application deadline unless a rare extension has been granted by appeal to the PAS Admissions Committee (see as follows for details). All application criteria and completion of undergraduate degree requirements must be completed by the month of May before starting the professional program.

High school seniors interested in a PAS degree must complete an undergraduate application to GVSU. During their freshman year students will begin their pre-professional studies and declare a major. The most common majors for students admitted to the program from GVSU are biomedical sciences (BMS) and allied health sciences (AHS).

Transfer students (from community or four-year colleges) must complete an undergraduate application to Grand Valley State University. We strongly encourage students to transfer to GVSU by the beginning of their junior year to ensure completion of their undergraduate degree and preprofessional requirements. Transfer students are encouraged to consult with an advisor from the Grand Valley College of Health Professions before entering Grand Valley or very soon thereafter, in addition to their assigned undergraduate faculty/advisor based upon the major declared.

The application deadline is **September 15** for the admission cycle of the calendar year preceding the year the student wishes to begin the professional curriculum. All application forms and supplementary materials must be received and dated on or before **September 15** for the application to be considered. The PAS Admissions Committee will then review completed applications and grant interviews after mid-October. Once interviews are complete, the PAS Admission committee will offer positions in the program to the most qualified applicants.

### Admission to the Master of Physician Assistant Studies Program

- **Transcripts.** Applicants must submit official transcripts for all colleges and/or university attended directly to the GVSU Admission Office. Note: We do not require official transcripts from GVSU.
- **Academic achievement.** Applicants must demonstrate a minimum 3.0 GPA in overall GPA prerequisite coursework, and in the last 60 hours of coursework to be considered for admission.
- **Prerequisite coursework:** Please see [www.gvsu.edu/pas](http://www.gvsu.edu/pas) for a complete list of prerequisite coursework. A minimum grade of C must be attained in all prerequisite coursework.
- Human anatomy, human physiology, organic chemistry, biochemistry, and microbiology must be completed prior to application. All prerequisite coursework and a bachelor's degree must be completed by the month of May prior to fall semester before beginning the process.
- **The following prerequisite courses must be completed within 5 calendar years preceding and including the year of application:** human anatomy, human physiology, microbiology and biochemistry.
- **GRE must be completed within five years of application.** GVSU school code is 1258.
- **Two recommendations from health professionals must be submitted.** Recommendation forms will be emailed to references at the time of application submission. At least one recommendation form must be completed by a health care professional. The other recommendation form may be completed by either a second health care professional or a professor. Separate letters of references are NOT acceptable substitutes for the recommendation form. Only TWO references are required.
- **Healthcare experience.** Applicants must show evidence of 500 hours of significant volunteer, work, and/or observational experience in a health care environment. This experience must be hands on patient care activities. This information must be documented on the graduate application.
- Students whose first language is not English should be able to speak and write in fluent English and submit the following materials:
  - Official TOEFL, IELTS, or MELAB score reports. The minimum TOEFL score is 80 Internet-based, the minimum IELTS score is 6.5, and the minimum MELAB score is 77. Only original score reports will be accepted.
  - Original or certified original transcripts.
  - Official transcript credential information (e.g. WES, ECE).
  - Transcripts demonstrating 30 hours of higher education coursework taken at an established and accredited U.S. institution.
- Note: If there is a student who thinks they have highly unusual circumstances that impact his/her ability to meet the previously listed criteria, he/she may appeal in writing to the PAS Admissions Committee by submitting an Academic Request Form (ARF). An ARF only needs to be filled out if a student does NOT meet all application requirements and has extenuating circumstances that have

## Physician Assistant

either mitigated the necessary requirements (as in a five-year course waiver) or prevented the completion of a course (as in a course extension). An ARF expires after the completion of the cycle in which the student applies. All ARFs are due on or before July 15 in the year of application. No late ARF forms will be accepted.

### Selection Factors

Grand Valley State University is an affirmative action/equal opportunity institution. It encourages diversity and provides equal opportunity in education, employment, all of its programs, and the use of its facilities. Applicants are considered without regard to age, color, disability, familial status, height, marital status, national origin, political affiliation, race, religion, sex/gender, sexual orientation, veteran status, or weight.

Factors used to select applicants for interview may include any or all of the following: GPA, GRE, recommendation forms, and healthcare experience hours. Motivational factors, life experiences, patient care experience, maturity, and personal characteristics are during the personal interviews. Applicants must meet health and technical standards that demonstrate their capacity to function as a physician assistant. Copies of these standards may be obtained from the PAS program office or from the PAS website: [www.gvsu.edu/pas/](http://www.gvsu.edu/pas/).

### Degree Requirements

Demonstration of completion of the 103 credits in the professional curriculum is required for the student to be granted the M.P.A.S. degree. General graduate academic policies and regulations can be found elsewhere in this catalog or in the GVSU graduate bulletin.

In addition, each PAS course or discrete unit of instruction within the professional curriculum, has a minimum proficiency level established. A minimum of a grade B is required for passing all PAS courses. Additionally, the student's overall GPA must not fall below 3.0 in any semester or the student may be placed on academic probation or dismissed from the PAS program.

### Professional Conduct

Interpersonal skills, communication skills, responsibility, and professionalism, among others, are identified as being crucial for success in the profession. Advancement in skill and behavior applicable to such abilities is expected during the professional curriculum. A complete copy of these abilities is available from the program and may also be viewed on the program website under core competencies: [www.gvsu.edu/pas/](http://www.gvsu.edu/pas/).

All students in the program are expected to comply with the ethical principles that embody the practice of medicine and the physician assistant profession. A complete copy of the PA profession's code of ethics are available from the program and may also be viewed under the PA profession tab: [www.gvsu.edu/pas/](http://www.gvsu.edu/pas/).

Criminal background checks and/or drug screens are required prior to admission into the PA Studies program. After enrollment, certain clinical placements during the clinical phase of the program, or state licensing requirements after graduation now require criminal background checks and drug screens. Positive findings for either the criminal background check and/or drug screen may negatively impact the educational process at GVSU or future licensure as a physician assistant. The costs of these evaluations or any other required clinical placement evaluations are the responsibility of the applicant or student.

## Master of Physician Assistant Studies

**Website:** [www.gvsu.edu/grad/mpas](http://www.gvsu.edu/grad/mpas)

### Preprofessional Curriculum Course Requirements

- One course in general biology
- One course in general chemistry
- One course in human genetics
- One course in organic chemistry
- One course in biochemistry\*
- One course in human anatomy\*

- One course in human physiology\*
- One course in statistics
- One course in psychology
- One course in microbiology
- One course in physics

\*This course must have been completed within the last five years or must be retaken. Applicants may also take higher level courses or competency examinations for credit. Waivers of the five-year rule may be granted on a case-by-case basis for candidates with documented academic excellence and appropriate clinical experience at the discretion of the admissions committee or the PAS program director.

### Professional Curriculum Course Recommendations\*\*

- One course in medical ethics
- One course in pharmacology
- One course in pathophysiology
- One course in nutrition
- One course in computer science
- One lab course in human cadaver anatomy

\*\*These courses have been found beneficial for success in the program, but are not required to apply.

### Professional Curriculum Course Requirements for the M.P.A.S. Degree

- BMS 561 - Prosected Regional Anatomy Credits: 4
- PAS 501 - Clinical Applications I Credits: 2
- PAS 502 - Clinical Applications II Credits: 1
- PAS 503 - Clinical Applications III Credits: 1
- PAS 504 - Clinical Applications IV Credits: 1
- PAS 511 - Foundations of Clinical Medicine Credits: 4
- PAS 512 - Clinical Medicine I Credits: 6
- PAS 513 - Clinical Medicine II Credits: 6
- PAS 514 - Clinical Medicine III Credits: 6
- PAS 521 - Medical Physiology Credits: 3
- PAS 522 - Clinical Pathophysiology I Credits: 1
- PAS 523 - Clinical Pathophysiology II Credits: 1
- PAS 524 - Clinical Pathophysiology III Credits: 3
- PAS 532 - Practical Therapeutics I Credits: 2
- PAS 533 - Practical Therapeutics II Credits: 2
- PAS 534 - Practical Therapeutics III Credits: 2
- PAS 542 - Clinical Problem Solving Sessions I Credits: 1
- PAS 543 - Clinical Problem Solving Sessions II Credits: 1
- PAS 544 - Clinical Problem Solving Sessions III Credits: 1
- PAS 551 - Physician Assistant Profession Issues I Credits: 1
- PAS 554 - Physician Assistant Profession Issues II Credits: 1
- PAS 561 - Clinical Applications Lab I Credits: 1
- PAS 562 - Clinical Applications Lab II Credits: 1
- PAS 563 - Clinical Applications Lab III Credits: 1
- PAS 564 - Clinical Applications Lab IV Credits: 1
- PAS 572 - Hospital Community Experience I Credits: 1
- PAS 573 - Hospital Community Experience II Credits: 1
- PAS 574 - Hospital Community Experience III Credits: 1
- PAS 582 - Evidence-Based Medicine I Credits: 3
- PAS 583 - Evidence-Based Medicine II Credits: 2
- PAS 584 - Evidence-Based Medicine III Credits: 2
- PAS 610 - Clinical Rotations I Credits: 12
- PAS 620 - Clinical Rotations II Credits: 12
- PAS 630 - Clinical Rotations III Credits: 12
- STA 610 - Applied Statistics for Health Professions Credits: 3

### Professional Level Curriculum

#### First Professional Year

#### Fall-Semester One (credits: 17)

- BMS 561 - Prosected Regional Anatomy Credits: 4
- PAS 501 - Clinical Applications I Credits: 2
- STA 610 - Applied Statistics for Health Professions Credits: 3

- PAS 511 - Foundations of Clinical Medicine Credits: 4
- PAS 521 - Medical Physiology Credits: 3
- PAS 561 - Clinical Applications Lab I Credits: 1

#### Winter-Semester Two (credits: 17)

- PAS 502 - Clinical Applications II Credits: 1
- PAS 512 - Clinical Medicine I Credits: 6
- PAS 522 - Clinical Pathophysiology I Credits: 1
- PAS 532 - Practical Therapeutics I Credits: 2
- PAS 542 - Clinical Problem Solving Sessions I Credits: 1
- PAS 551 - Physician Assistant Profession Issues I Credits: 1
- PAS 562 - Clinical Applications Lab II Credits: 1
- PAS 572 - Hospital Community Experience I Credits: 1
- PAS 582 - Evidence-Based Medicine I Credits: 3

#### Spring/Summer-Semester Three (credits: 15)

- PAS 503 - Clinical Applications III Credits: 1
- PAS 513 - Clinical Medicine II Credits: 6
- PAS 523 - Clinical Pathophysiology II Credits: 1
- PAS 533 - Practical Therapeutics II Credits: 2
- PAS 543 - Clinical Problem Solving Sessions II Credits: 1
- PAS 563 - Clinical Applications Lab III Credits: 1
- PAS 573 - Hospital Community Experience II Credits: 1
- PAS 583 - Evidence-Based Medicine II Credits: 2

#### Second Professional Year

##### Fall-Semester Four (credits: 18)

- PAS 504 - Clinical Applications IV Credits: 1
- PAS 514 - Clinical Medicine III Credits: 6
- PAS 524 - Clinical Pathophysiology III Credits: 3
- PAS 534 - Practical Therapeutics III Credits: 2
- PAS 544 - Clinical Problem Solving Sessions III Credits: 1
- PAS 554 - Physician Assistant Profession Issues II Credits: 1
- PAS 564 - Clinical Applications Lab IV Credits: 1
- PAS 574 - Hospital Community Experience III Credits: 1
- PAS 584 - Evidence-Based Medicine III Credits: 2

##### Winter-Semester Five (credits: 12)

- PAS 610 - Clinical Rotations I Credits: 12

##### Spring/Summer—Semester Six (credits: 12)

- PAS 620 - Clinical Rotations II Credits: 12

#### Third Professional Year

##### Fall-Semester Seven (credits: 12)

- PAS 630 - Clinical Rotations III Credits: 12

#### Total Professional Curriculum

103 Credits

## Physics - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/physics](http://www.gvsu.edu/physics)

Physicists are explorers of the physical universe. They seek to know and understand the fundamental behavior of nature, from elementary particles to the galaxies. Physicists must develop both experimental and analytical skills to carry out their search for a detailed description of the behavior of matter and energy.

The Physics Department offers a bachelor's degree with a major in physics. This is a well-defined program of observation, experimentation, and theoretical study of the various phenomena of nature. A highlight of our program is the senior project, which requires each student to perform an independent research project in collaboration with a faculty mentor.

The department also offers a minor in physics and the option for secondary teacher certification with the major or minor. In addition, the College of Education in cooperation with the department of physics offers the M.Ed. degree with an emphasis in physics.

The undergraduate physics curriculum requires careful planning because most courses in physics and the required cognates can be taken only in sequence. Students who expect to major or minor in physics should consult a faculty member of the Physics Department to plan their programs at the earliest opportunity, preferably before registration for their first term. It is especially important that transfer students meet with a department faculty advisor to evaluate previous work and plan an appropriate program of study.

#### Participating Programs

M.Ed. with emphasis in physics

#### Honors Organization

Sigma Pi Sigma: Sigma Pi Sigma is the national honor society of the SPS. Students who have 80 credits (with a minimum of one year at GVSU) may be elected to become Sigma Pi Sigma members based on academic achievement and service. An annual induction ceremony is held in April.

## Bachelor of Science in Physics

### Requirements for a Major in Physics

The following courses fulfill the B.S. course requirements:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5

Completion of the general university degree requirements as identified in the General Academic Policies section of the catalog.

#### Major Course Requirements

Thirty nine semester credit hours of required physics courses with a minimum grade of C (2.0) in each course. Transfer students must complete at least 11 credit hours in physics courses taken at Grand Valley at the 300 level or above.

- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5
- PHY 302 - Introduction to Modern Physics Credits: 4
- PHY 309 - Experimental Methods in Physics Credits: 4
- PHY 311 - Advanced Laboratory II Credits: 2
- PHY 330 - Intermediate Mechanics Credits: 4
- PHY 340 - Electromagnetic Fields Credits: 4
- PHY 350 - Introduction to Quantum Mechanics Credits: 4
- PHY 360 - Statistical Thermodynamics Credits: 4
- PHY 485 - Senior Physics Project (Capstone) Credits: 1
- PHY 486 - Senior Physics Project (Capstone) Credits: 2

#### Major Cognate Requirements

Thirty semester credit hours of required cognate courses with a minimum grade of C (2.0) in each course.

- CHM 115 - Principles of Chemistry I Credits: 4
  - CIS 162 - Computer Science I Credits: 4
  - **OR** CIS 261 - Structured Programming in C Credits: 3
  - MTH 201 - Calculus I Credits: 4
  - MTH 202 - Calculus II Credits: 4
  - MTH 203 - Calculus III Credits: 4
  - Option 1: MTH 227 - Linear Algebra I Credits: 3
  - **AND** MTH 304 - Analysis of Differential Equations Credits: 3 (Recommended, especially for graduate school bound students)
  - **OR** Option 2: MTH 302 - Linear Algebra and Differential Equations Credits: 4
  - MTH 300 - Vector Analysis Credits: 3
  - **OR** MTH 401 - Mathematics for the Physical Sciences Credits: 4
- Note: Physics majors intending to go to graduate school should take MTH 227 and MTH 304 rather than the MTH 302 option.

#### Science Electives

Six hours of required science electives with a minimum grade of C (2.0) in each must be chosen from the following list:

- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1

## Political Science

- CHM 356 - Physical Chemistry I Credits: 3
- CHM 358 - Physical Chemistry II Credits: 3
- PHY 105 - Descriptive Astronomy Credits: 3
- Any 300 level physics elective, excluding PHY 306
- Any 400 level physics elective

### Suggested Order of Coursework for a Major in Physics

The following example course sequence assumes a good mathematics background. F indicates course should be taken in the fall semester, W for winter.

#### First Year

- Three general education courses
- CHM 115 - Principles of Chemistry I Credits: 4 (NS/A) (F)
- MTH 201 - Calculus I Credits: 4 (F)
- MTH 202 - Calculus II Credits: 4 (W)
- PHY 230 - Principles of Physics I Credits: 5 (W)
- WRT 150 - Strategies in Writing Credits: 4

#### Second Year

- Two general education courses
- CIS 261 - Structured Programming in C Credits: 3
- MTH 203 - Calculus III Credits: 4 (F)
- **BOTH** MTH 227 - Linear Algebra I Credits: 3 (F)  
**AND** MTH 302 - Linear Algebra and Differential Equations Credits: 4 (W)  
**OR ONLY** MTH 304 - Analysis of Differential Equations Credits: 3 (W)
- PHY 231 - Principles of Physics II Credits: 5 (F)
- PHY 302 - Introduction to Modern Physics Credits: 4 (W)

#### Third Year

- General education courses (begin Issues courses)
- One science elective
- Elective
- MTH 300 - Vector Analysis Credits: 3 (F)
- PHY 309 - Experimental Methods in Physics Credits: 4 (F)
- PHY 311 - Advanced Laboratory II Credits: 2 (W)
- PHY 330 - Intermediate Mechanics Credits: 4 (F)
- PHY 340 - Electromagnetic Fields Credits: 4 (W)

#### Fourth Year

- General education courses (finish Issues)
- One science elective
- Electives
- PHY 350 - Introduction to Quantum Mechanics Credits: 4 (W)
- PHY 360 - Statistical Thermodynamics Credits: 4 (F)
- PHY 485 - Senior Physics Project (Capstone) Credits: 1 (F)
- PHY 486 - Senior Physics Project (Capstone) Credits: 2 (W)

### Certification for Secondary Teaching

All students seeking certification to teach at the secondary level with a major in physics must complete the major requirements for a physics degree as previously noted, as well as four additional courses:

- BIO 120 - General Biology I Credits: 4
- PHY 105 - Descriptive Astronomy Credits: 3
- A history of science course; either  
HSC 201 - The Scientific Revolution  
**OR** HSC 202 - The Technological Revolution
- An ethics course in science, for example:  
BIO 328 - Biomedical Ethics  
**OR** BIO 338 - Environmental Ethics

A minimum GPA of 2.7 in the major is required to be recommended for teacher certification. Certification for secondary teaching also requires meeting the admission and professional requirements of the College of Education as outlined in this catalog. Note that the extra coursework necessary for teaching certification normally requires a full fifth year of work.

All students seeking teacher certification are also required to assist for at least 30 clock-hours in the department's tutoring program or as a

laboratory assistant setting up equipment and demonstrations as well as helping students in a laboratory setting, which includes required reading and experience in laboratory safety.

### Integrated Science Major for the B.S. Degree

The integrated science major is designed for students seeking certification to teach at the elementary school level. It provides the preservice teacher broad exposure in all the sciences and emphasizes the connections among the scientific disciplines, their relationship with technology, and their relevance to society. In order to be certified, students must complete this major and the elementary teaching minor with at least a 2.7 GPA in each. Students are advised to take the MDE subject area test after they have completed the major with a 2.7 GPA.

### Integrated Science Secondary Endorsement

Students who have declared or completed a major and minor in a science discipline may complete additional courses for an integrated science secondary endorsement. The Michigan Department of Education will allow teachers with the integrated science secondary endorsement to teach biology, chemistry, earth science or physics at the secondary level.

## Physics Minor

### Requirements for a Minor in Physics

A minimum of 24 credit hours in physics and a GPA of 2.0 in physics are required for a minor.

### Required Courses

- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5
- PHY 302 - Introduction to Modern Physics Credits: 4

The remaining 10 hours in physics must be selected from the following courses:

- PHY 309 - Experimental Methods in Physics Credits: 4
- PHY 311 - Advanced Laboratory II Credits: 2
- PHY 320 - Optics Credits: 3
- PHY 330 - Intermediate Mechanics Credits: 4
- PHY 340 - Electromagnetic Fields Credits: 4
- PHY 350 - Introduction to Quantum Mechanics Credits: 4
- PHY 360 - Statistical Thermodynamics Credits: 4
- PHY 370 - Solid State Physics Credits: 3

### Students Seeking Certification to Teach at the Secondary Level with a Minor in Physics

Must have a minimum GPA of 2.7 in the minor. Since students seeking certification for secondary teaching with a major in physics are required to take PHY 105 for certification, students seeking certification for secondary teaching with a minor in physics are also encouraged to take PHY 105. Therefore, PHY 105 may be counted as part of the additional 10 hours in physics courses for those students. This option is not open to students seeking a minor in physics in programs other than secondary education.

Note: Most of the physics courses require prerequisites in mathematics.

Those students seeking certification to teach at the secondary level with a minor in physics must have a minimum GPA of 2.7 in the minor. Students must also meet the same requirement for laboratory and tutoring experience as outlined for certification with a major in physics.

## Political Science - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/polisci](http://www.gvsu.edu/polisci)

At GVSU, political science students learn to analyze political phenomena from the perspectives of the four major disciplinary subfields: political theory, American politics, comparative politics, and international relations.

The department offers a wide range of elective courses in each subfield. American politics courses include Congress and the presidency, environmental policy, state politics, American election campaigns, mass media and constitutional law. The department also offers courses in international relations, including human rights, international political economy, and international law. Course offerings in comparative politics include European politics, Chinese politics, African politics and politics of developing areas. Political theory courses include courses in classical, modern, contemporary and U.S. political thought. In almost all cases, classes are small and students receive much individual attention.

### Internships

In addition to classroom work, students participate in a variety of internship opportunities, including working in local law firms, the Michigan office of U.S. representatives and senators, or in a variety of political offices in Lansing, including the state house and state senate, the Governor's office, state political parties, and legislative research offices. Students also serve as interns for local, national, and international non-profit organizations. Students can earn up to six credits in the intern program. The emphasis of the program is on broadening students' experience and knowledge about politics through a practical involvement that is firmly founded on and tied to strong academic curricula.

A faculty member coordinates the internship program. Students also have the opportunity to perform an internship and learn in Washington, D.C., through our GV in DC program, a partnership program with The Washington Center.

GVSU political science and international relations majors have access to GVSU's Laker Jobs site.

To get started, view the internships link at [www.gvsu.edu/polisci/](http://www.gvsu.edu/polisci/).

For information on the GV in DC program see: [www.gvsu.edu/gvdc/](http://www.gvsu.edu/gvdc/).

### Honors Organizations

Phi Sigma Alpha, the National Political Science Honor Society, was established at the University of Texas in 1920. It is the only national honor society for college and university students of government. There are currently 621 chapters of Pi Sigma Alpha around the United States, including the Kappa Phi chapter at Grand Valley State University. [www.pisigmaalpha.org](http://www.pisigmaalpha.org).

Initiation into Pi Sigma Alpha is a prestigious award for upper division students who have demonstrated consistent excellence in political science and related majors and minors. Initiation into Pi Sigma Alpha also establishes one's eligibility to participate in Pi Sigma Alpha scholarship and internship grant programs, and to publish research in the Pi Sigma Alpha Undergraduate Journal of Politics. For information about eligibility requirements and campus activities contact Paul J. Cornish, Advisor to the Kappa Phi chapter of Pi Sigma Alpha at (616) 331-3502 or [cornishp@gvsu.edu](mailto:cornishp@gvsu.edu).

## Bachelor of Arts or Bachelor of Science in Political Science

### Requirements for a Major in Political Science

Students seeking the B.A. or B.S. degree are required to take at least 36 credits in political science, including PLS 102, 103, 211, 231 or 232, 495, and seven additional courses, two of which must be in American politics, one in international relations, one in comparative politics, one in political thought (200-level or higher). Please see a list of elective courses by category as follows. At least four of these courses must be at the 300 level; independent studies, internships, PLS 300, PLS 350, and PLS 495 do not count toward the 300-level requirement. A total of no more than nine credits of internship and independent study may count toward the major, with no more than six credits in either category. Public Administration (PA) 307 may count as an American politics elective.

Students seeking a B.A. degree must demonstrate third-semester proficiency in a foreign language. Students seeking a B.S. degree must

complete the following courses: STA 215, PLS 300, and PLS 350. When taken for the B.S. degree, PLS 300 and PLS 350 do not count toward the 36 required credits for the major.

### Political Science Required Courses

- PLS 102 - American Government and Politics Credits: 3
- PLS 103 - Issues in World Politics Credits: 3
- PLS 211 - International Relations Credits: 3
- PLS 231 - Classical Political Thought Credits: 3 **OR**  
PLS 232 - Modern Political Thought Credits: 3
- PLS 495 - Seminar in the Study of Politics (Capstone) Credits: 3

### Additional Required Courses for the B.S. Degree

- STA 215 - Introductory Applied Statistics Credits: 3
- PLS 300 - Political Analysis Credits: 3
- PLS 350 - Comparative Public Opinion Credits: 3

### Additional Required Courses for the B.A. Degree

- Third-semester proficiency in a foreign language

### Political Science Elective Courses by Category

#### American Politics (take at least two courses)

- PLS 202 - American Election Campaigns Credits: 3
- PLS 203 - State Politics Credits: 3
- PLS 205 - The Policy Process Credits: 3
- PLS 206 - American Constitutional Foundations Credits: 3
- PLS 301 - Poverty, Inequality, and U.S. Public Policy Credits: 3
- PLS 302 - Women, Politics, and Public Policy Credits: 3
- PLS 303 - Introduction to U.S. Environmental Policy Credits: 3
- PLS 304 - Political Parties and Interest Groups Credits: 3
- PLS 305 - Congress and the Presidency Credits: 3
- PLS 306 - American Constitutional Law I Credits: 3
- PLS 307 - American Constitutional Law II Credits: 3
- PLS 308 - American Judicial Politics Credits: 3
- PLS 310 - Politics and Health Policy Credits: 3
- PLS 330 - Religion and Politics in America Credits: 3
- PLS 340 - Mass Media and American Politics Credits: 3
- PLS 341 - Elections and Voting Behavior Credits: 3

#### International Relations (take at least one course)

- PLS 212 - Great Decisions Credits: 3
- PLS 311 - International Conflict and Conflict Resolution Credits: 3
- PLS 312 - U.S. Foreign Policy Credits: 3
- PLS 313 - International Organization Credits: 3
- PLS 314 - International Law Credits: 3
- PLS 315 - International Political Economy Credits: 3
- PLS 316 - Human Rights in International Politics Credits: 3
- PLS 321 - The European Union Credits: 3

#### Comparative Politics (take at least one course)

- PLS 221 - Government and Politics of Western Europe Credits: 3
- PLS 240 - The Holocaust Credits: 3
- PLS 281 - Comparative Political Systems: Canada Credits: 3
- PLS 283 - Chinese Politics and U.S.-China Relations Credits: 3
- PLS 284 - Latin American Politics Credits: 3
- PLS 319 - African Politics Credits: 3
- PLS 320 - Comparative Politics of the Middle East Credits: 3
- PLS 327 - Politics of Developing Countries Credits: 3
- PLS 339 - Democracy and the Authoritarian Challenge Credits: 3

#### Political Thought (take at least one course at the 200- or 300-level)

- PLS 105 - Introduction to Human Rights Credits: 3
- PLS 231 - Classical Political Thought Credits: 3
- PLS 232 - Modern Political Thought Credits: 3
- PLS 333 - Contemporary Political Thought Credits: 3
- PLS 337 - U.S. Political Thought Credits: 3
- PLS 338 - Citizenship Credits: 3

#### Special Topics, Independent Study, Internship

- PLS 380 - Special Topics in Political Science Credits: 3
- PLS 399 - Readings in Political Science Credits: 1 to 3
- PLS 490 - Internship Credits: 2 to 6

## Political Science

- PLS 499 - Independent Research Credits: 2 to 6

### Suggested Order of Coursework for a Major in Political Science

The flexibility in course selection makes it important for students to seek the advice of a faculty member in the department when choosing courses to fit their specific needs and interests. No sample curriculum will be appropriate for everyone, although these general guidelines should be helpful to nearly everyone. It is also assumed that some counseling will take place to match the curriculum with career plans. We strongly recommend study abroad and an internship. We also advise students to take elective courses in history, economics, and in other social science disciplines.

#### First Year

- Basic skills as needed (WRT 150 and/or MTH 110)
- One or two general education courses in Arts and/or Philosophy and Literature
- One or two science general education courses
- Electives or foreign language. Choose foreign language if choosing B.A. (see B.A. section)
- PLS 102 - American Government and Politics
- PLS 103 - Issues in World Politics
- One general education social science course from another discipline (We recommend ECO 210 - Introductory Macroeconomics OR ECO 211 - Introductory Microeconomics as these courses are good background for PLS 315 - International Political Economy, an option for the B.S.)

#### Second Year

- PLS 211 - International Relations
- PLS 231 - Classical Political Thought  
OR PLS 232 - Modern Political Thought
- Two additional political science courses at 200-300 level
- Two general education courses (U.S. Diversity, Mathematical Sciences; We recommend STA 215 - Introductory Applied Statistics for students choosing B.S., or any remaining requirements)
- Electives (or foreign language)
- Additional writing skills if needed
- If choosing B.S.: STA 215 - Introductory Applied Statistics (counts for general education: Mathematical Sciences)
- PLS 300 - Political Analysis (Note: You must take STA 215 before PLS 300)

#### Third Year

- Three or four political science courses at 200-300 level
- Completion of general education courses
- Electives
- Political science internship
- If choosing B.S. (and upon completion of STA 215 and PLS 300), take PLS 350 - Comparative Public Opinion

#### Fourth Year

- PLS 495 - Seminar in the Study of Politics (Capstone)
- Political science internship
- Any remaining major or university requirements and electives

## Legal Education Admission Program (LEAP), Political Science

The Legal Education Admission Program (LEAP) provides an opportunity for Grand Valley State University's political science undergraduate students to earn both a bachelor's degree and a Juris Doctor (J.D.) degree in about six years of full-time study (three years of political science studies plus three years of legal studies). The program was developed by Grand Valley State University's Political Science department and Michigan State University College of Law (MSU Law).

Students accepted into the program may combine their last year of political science undergraduate work at Grand Valley State University

with their first year of law school at MSU Law, thereby saving a year in both time and money. Interested students complete a minimum of 91 credits comprising the required undergraduate courses in their first three years of study at Grand Valley State University. This includes all university-level requirements as well as the requirements for the political science major. Upon admission to the law school, PLS students complete their undergraduate electives with law school courses. Up to 29 credits of MSU Law work in which the student earned a 2.0 or above will be accepted. The B.S./B.A. will be awarded upon satisfactory completion of the number of credits and requirements necessary for the undergraduate program. It is anticipated that MSU Law will admit up to five Grand Valley State University PLS LEAP students per year.

Interested students may apply to LEAP after they have accumulated 30 credits or more with a GPA of 3.5 or higher. Students planning to apply to MSU Law under LEAP should plan to take the LSAT in the summer before their junior year, or in September of their junior year, and must not apply to MSU Law later than March 1 of their junior year. Applicants must also register with the LSDAS.

### MSU Law Requirements for LEAP with Political Science

1. Complete at least 91 credits at GVSU
2. Complete all GVSU university-level requirements
3. Complete all GVSU PLS major and cognate requirements
4. GPA of 3.6 or above
5. LSAT score of 156 or above
6. Any other current MSU Law requirements

### LEAP Admission Requirements

1. Matriculate as a first-year student at GVSU
2. Political Science Major (There are other LEAP programs for Legal Studies and Business majors.)
3. Accumulate at least 30 credits
4. GPA of 3.5 or above
5. To apply, send an e-mail to Professor Richards (richardm@gvsu.edu) with your: name, major(s), current GPA and number of credits, e-mail address, and phone number

### Sample Curriculum

#### First Year

- A writing skills course
- One or two humanities/Arts general education courses
- One or two science general education courses
- Electives (or foreign language)
- One PLS course at 200 level
- PLS 102 - American Government and Politics PLS Credits: 3
- AND PLS 103 - Issues in World Politics PLS Credits: 3

#### Second Year

- Three or four PLS courses at 200-300 level
- One or two general education courses
- Electives (or foreign language)
- Additional writing skills if needed
- PLS 300 - Political Analysis PLS Credits: 3
- AND STA 215 - Introductory Applied Statistics STA Credits: 3 (B.S. Majors)

#### Third Year

- Two or three political science courses at 200-300 level
- Completion of general education courses
- PLS internship
- PLS Capstone
- PLS 315 - International Political Economy PLS Credits: 3  
OR PLS 341 - Elections and Voting Behavior PLS Credits: 3

## Political Science and Law

The Political Science Department and Michigan State University College of Law have partnered to offer a "3+3" program that gives Grand Valley political science students the opportunity to earn a B.A. or a B.S. and a

Juris Doctor (J.D.) in approximately six years. For more information refer to the Political Science - Legal Education Admission Program (LEAP) section of this catalog.

## Political Science Minor

### Requirements for a Minor in Political Science: 21 credits

Students minoring in political science are required to complete at least 21 hours in political science, including PLS 102 and one of the following: 103 or 211. Of the remaining 15 credits, there must be one course in each of the following four fields: American politics, comparative politics, international relations, and political thought. Please see the list of elective courses by category in the Political Science, B.A., B.S. section of the catalog. At least nine credit hours must be at the 300 level; independent studies, internships, PLS 495 and the B.S. degree requirement courses do not count toward the 300 level requirement. No more than six credits of internship or independent study may count toward the minor. PA 307 may count as an American politics elective.

### Requirements for a Teachable Minor in Political Science: 24 credits

Students seeking a teachable minor in political science must take the following courses as part of the General Education Program: ECO 210 Introductory Macroeconomics and GPY 235 World Regional Geography, and complete the Political Science teachable minor requirements.

#### Required Courses (24 credits)

- PLS 102 - American Government and Politics
- PLS 103 - Issues in World Politics
- PLS 206 - American Constitutional Foundations
- PLS 303 - Introduction to U.S. Environmental Policy
- PLS 211 - International Relations
- PLS 232 - Modern Political Thought
- HST 204 - World History since 1500
- SST 310 - Teaching Social Studies: Secondary

## Prehealth Curriculum

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

## Prelaw - Program Description

For additional information about opportunities your particular college offers, please refer to that section in this catalog.

Grand Valley State University's prelaw program, in keeping with the recommendations of U.S. law schools, is not a single major that is defined as prelaw. As law school officials point out, students will learn the law in great detail once they attend law school. Grand Valley's approach to prelaw encourages students to pursue majors and elective courses that will complement their law degree while providing the diverse intellectual foundation necessary for success in the field of law. Grand Valley also recommends that students experience courses directly related to law (see list) in order to understand if they are suited for a career in law.

For more information, please contact Professors Mark J. Richards, Ph.D. (political science), Kristine Mullendore, J.D. (criminal justice/legal studies), John Uglietta, J.D., Ph.D. (philosophy), Star Swift, M.L.I.R., J.D. (business), Richard Harris, M.B.A., J.D., LL.M. (accounting and tax), MSU College of Law Admissions: (800) 844-9352, [admiss@law.msu.edu](mailto:admiss@law.msu.edu), or refer to [www.gvsu.edu/prelaw/](http://www.gvsu.edu/prelaw/).

**Website:** [www.gvsu.edu/prelaw](http://www.gvsu.edu/prelaw)

### Choice of Major

Students choose political science to gain an understanding of the politics of the institutions that make and implement the law. Students may choose legal studies to focus directly on the processes of law making, implementation, enforcement, and practice. The legal studies program also prepares students to be legal assistants, also known as paralegals,

who may not provide legal services directly to the public, except as permitted by law. Students interested in corporate law choose majors such as business, economics, engineering, computer science, and biology, among others. For international law, students may consider majoring in international relations or a foreign language, such as Chinese, French, or Spanish. Students who want to work in corrections management combine our criminal justice major with a law degree. Social science disciplines such as economics, psychology, sociology, and anthropology explain human behavior. History and classics provide lawyers with the context necessary to understand the development of our common law legal tradition. Philosophy cultivates the logical reasoning skills that are integral to a successful legal career. Communications, English, and writing refine oral and written communication skills.

### LEAP (Legal Education Admission Program)

Business, political science and legal studies majors at Grand Valley State University have the opportunity to participate in the Legal Education Admission Program, which enables students to earn a bachelor's degree from Grand Valley State University and a Juris Doctor from Michigan State University College of Law in about six years, saving a year of time and money. For more information, please consult the business, political science and legal studies sections of the Grand Valley State University Undergraduate and Graduate Catalog.

### Prelaw Advising

Grand Valley has formal prelaw advising available to all students by professors Mark J. Richards, Kristine Mullendore, and John Uglietta, who advise students on Grand Valley courses and majors, the law school application process, the LSAT, and legal careers. For a detailed prelaw FAQ (Frequently Asked Questions) and contact information for the advisors, please visit <http://gvsu.edu/prelaw/>.

### Courses Related to Law

Grand Valley advises prelaw students to take several classes related to law to gain a sense of the legal field and begin preparation for law school. Here are some examples of the many courses related to law at Grand Valley:

- CLA 367 - Thinking Like a (Roman) Lawyer
- PHI 330 - Law, Philosophy, and Society
- WGS 310 - Sexual Orientation and the Law
- WGS 320/CJ 320 - Crimes Against Women
- WGS 370/LS 370 - Women and the Law

### Criminal Justice and Legal Studies: Entire Curriculum

#### Examples Include:

- CJ 302 - Criminal Law
- CJ 305 - Constitutional Rights and Civil Liberties
- CJ 325 - Criminal Justice and Human Rights
- CJ 340 - Courts Process Credits: 3
- CJ 408 - White-Collar and Corporate Crime
- LS 201 - Introduction to Law
- LS 324 - Legal Research and Writing
- Graduate Course: CJ 602 - Legal and Ethical Issues

### Political Science:

- PLS 206 - American Constitutional Foundations
- PLS 306 - American Constitutional Law I
- PLS 307 - American Constitutional Law II
- PLS 308 - American Judicial Politics
- PLS 314 - International Law
- Many other political science courses cover how laws and policies are made.

### Seidman College of Business:

- ACC 317 - Individual Income Taxation
- ACC 318 - Entity Taxation
- BUS 201 - Legal Environment for Business
- MGT 334 - Employment and Labor Law
- MGT 355 - The Diversified Workforce
- MGT 432 - Grievance Administration, Arbitration, and Collective Bargaining

## Premedical and Predental

### Seidman College of Business Graduate Level Courses:

- ACC 612 - The Accountant's Legal Environment
- ACC 624 - Corporate Tax I
- ACC 625 - Corporate Tax II
- BUS 531 - Legal Environment of Business

## Premedical and Predental Studies

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Allopathic medical (M.D.), osteopathic medical (D.O.), pharmacy, and dental schools seek students who are not only prepared for the rigors of the professional school classroom, but who are also able to interact with patients in a sincere and understanding manner. Most schools require a relatively common core of science courses (one year of biology and/or biomedical sciences, one year each of inorganic and organic chemistry, biochemistry, and one year of physics). Because these courses are part of the requirements for a number of majors at Grand Valley, no one specific major is recommended for premedical, predental, and prepharmacy students. Most premedical students at Grand Valley since 1980 have been biomedical sciences, biology, or chemistry majors. However, any major is possible as long as the student meets the science core requirements. Students should consult individual school bulletins for specific additional requirements.

Students are encouraged to decide on a major as soon as possible in their undergraduate career and to contact the preprofessional program advisor or the College of Liberal Arts and Sciences Academic Advising Center (616) 331-8585 to ensure that all necessary information is available to them.

Medical and dental schools and many pharmacy schools require applicants to take a standardized admissions exam. Students normally take the Medical College Admissions Test (MCAT), the Dental Admissions Test (DAT), or the Pharmacy College Admissions Test (PCAT) in the spring of their junior year. Since these exams vary in their application deadlines, please see an advisor for more information. Students should plan their course scheduling so that they have met all required science courses before taking these tests.

For more specific information, please refer to the sections on biology, biomedical sciences, and chemistry. Information on a specific pharmacy dual-degree program is listed separately; please refer to the pharmacy dual-degree section.

## Prepharmacy

Pharmacists are the health professionals who serve patients in assuring appropriate use of medications. In addition to reviewing prescription orders, medication record screening and review, and the accurate dispensing of medications, pharmacists serve patients by providing information and advice. Pharmacists are well informed on the physical and chemical properties of drugs and the way they behave in the human body. Pharmacists must have excellent interpersonal and communications skills, and demonstrate the highest standard of professional ethics.

Most schools require a relatively common core of science courses (1 year of biology and/or biomedical sciences, one year each of inorganic and organic chemistry, biochemistry, one semester each of microbiology, anatomy and physiology, and one year of physics). Because these courses are part of the requirements for a number of majors at Grand Valley, no one specific major is recommended for prepharmacy students. Most prepharmacy students at Grand Valley have been biology, biomedical sciences, or chemistry majors. However, any major is possible as long as the student meets the science core requirements. Students should consult the individual pharmacy school bulletins and websites for specific additional requirements and regulations.

Students are encouraged to decide on a major as soon as possible in their undergraduate career and to contact the CLAS Advising Center at (616) 331-8585 to ensure that all necessary information is available to them.

Many pharmacy schools require applicants to take a standardized admissions exam. Students normally take the Pharmacy College Admissions Test (PCAT) in the spring of their junior year. Since this exam, as well as pharmacy schools vary in the application deadlines, please see an advisor for more information. Students should plan their course scheduling so that they have met all required science courses before taking these tests.

In 2010, Grand Valley State University and the College of Pharmacy at the University of Michigan signed an agreement establishing a program that offers preferred admission to the UM doctoral pharmacy program. The UM College of Pharmacy will reserve up to eight positions annually in its four year PharmD doctoral program for admittance of GVSU freshmen who have earned outstanding academic achievement in high school. High school students are considered competitive for the program if they: score a minimum of 29 on the ACT or 1280 on the SAT; maintain a 3.5 cumulative high school grade point average; complete at least three years of laboratory science (biology, chemistry, and physics) with grades of B or better; complete four years of college preparatory mathematics with grades of B or better and complete the competitive Declaration of Interest form for the program. To remain eligible to enter PharmD, students must complete a program of prepharmacy-pharmacy coursework, maintain an appropriate grade point average and achieve a score on the Pharmacy College Admission Tests that is consistent with the UM College of Pharmacy's admissions standards. In addition, they must maintain regular contact with a pre-professional adviser, complete one year of health care work experience, volunteer for community service and demonstrate the professional behavior expectations of competence, honesty, compassion, respect for others, and responsibility.

In 2002, Grand Valley State University and the College of Pharmacy at the University of Michigan signed an agreement that established a dual-degree undergraduate/professional program leading to both the Bachelor of Science degree from GVSU and the Doctor of Pharmacy degree from UM. Under the agreement, selected GVSU sophomores who meet specified criteria will be granted guaranteed admission to the College of Pharmacy at UM. After successfully completing their junior year at GVSU, the students will transfer to UM College of Pharmacy, where they will begin four years of the pharmacy program. After completing the first year of pharmacy studies at UM, the students will receive their bachelor's degree from GVSU. Upon completion of the remaining three years of pharmacy studies, the student will receive their doctor of pharmacy degree (PharmD) from UM. Initial students in this dual-degree program will earn their bachelor's degree in biomedical sciences; subsequent GVSU undergraduate degree options may include biology, chemistry and cell and molecular biology. Because of the selectiveness of the University of Michigan College of Pharmacy, the majority of student accepted into the pharmacy program already have completed their baccalaureate degrees. This dual-degree program with GVSU will save one year of undergraduate studies for the participating students.

For more specific information, please refer to the sections on biology, biomedical sciences, and chemistry.

## Professional Science Master's - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section of this catalog.

**Website:** [www.gvsu.edu/psm](http://www.gvsu.edu/psm)

**Degrees Offered**

Master of Science in medical and bioinformatics, Master of Science in cell and molecular biology, biotechnology emphasis and Master of Science in biostatistics.

The professional science master's (PSM) degree is characterized as postgraduate educational preparation that is more practical, applied, and focused on specific workforce needs than is a traditional master's degree. Currently 175 PSM degree programs exist at 89 universities in the U.S. and Canada ([www.sciencemasters.com](http://www.sciencemasters.com)).

The professional science master's (PSM) degree is an innovative new two-year graduate degree that offers advanced technical training while developing workplace skills - business, communications, teamwork, ethics - that employers are demanding.

A professional science master's degree has specific characteristics:

- Complete within itself, rather than a pathway to a Ph.D.
- Interdisciplinary or cross-disciplinary in nature
- Closely tied to the scientific workforce needs of business/industry
- Includes an intensive internship experience

**Professional Science Master's****Graduate Programs**

Each of these three M.S. programs is interdisciplinary, shares a common core of courses, has a similar curriculum design and a mandatory business/industry internship component, and can be characterized as a professional science master's degree program — a graduate degree closely related to scientific workforce needs of business/industry. Specific details of the programs and specific requirements for each of the PSM degrees can be found in the Grand Valley State University Undergraduate and Graduate Catalog under the individual School/Department/Program listings.

**Medical and Bioinformatics, M.S.****Bioinformatics Focus, Medical Informatics Focus**

Medical and Bioinformatics utilizes computer technology to manage and analyze information in the life and health sciences. This degree is granted by the School of Computing and Information Systems within the Seymour and Esther Padnos College of Engineering and Computing. More specific information about this program can be found in the Computer Information Systems section of the Grand Valley State University Undergraduate and Graduate Catalog.

**Cell and Molecular Biology, M.S.****Biotechnology Emphasis**

Biotechnology involves the industrial use of living organisms to produce food, drugs, and other products. This degree is granted by the Cell and Molecular Biology Department within the College of Liberal Arts and Sciences. More specific information about this program can be found in the Cell and Molecular Biology section of the Grand Valley State University Undergraduate and Graduate Catalog.

**Biostatistics, M.S.**

Biostatistics involves the application of statistical techniques to scientific research in the life and health sciences. This degree is granted by the statistics department within the College of Liberal Arts and Sciences. More specific information about this program can be found in the Statistics section of the Grand Valley State University Undergraduate and Graduate Catalog.

**Admission to Professional Science Master's**

- Grade point average of 3.0 on a 4.0 scale from all undergraduate coursework or a satisfactory score on the GRE or GMAT
- Resume detailing work experiences and accomplishments
- Personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives

- Written recommendations from at least two individuals who are in positions to attest to the applicant's potential for successful completion of the program
- Applicants must have a base of underlying knowledge relevant to graduate study in one of the appropriate disciplines: Medical informatics or bioinformatics, cell and molecular biology or biostatistics. This can be demonstrated by previous academic study or work experience. Consultation with a program faculty advisor is necessary to verify appropriateness of work experience as a substitute for academic preparation. Candidates without sufficient relevant background experience may satisfy any deficiency with appropriate graduate or undergraduate courses, as recommended by a faculty advisor in the program and approved by the Admissions Committee and the program director.

**Graduate Assistantships**

Graduate assistants work with PSM program faculty and staff. Qualified, full-time candidates are selected on the basis of aptitude, interests and background.

**Courses Required for all Three of the PSM Degree Programs**

Four common core courses (credits: 12)

- CMB 610 - Foundations of Biotechnology Credits: 3
- PSM 650 - Ethics and Professionalism in Applied Science Credits: 3

**Introduction to biostatistics (choose one of the following)**

- STA 610 - Applied Statistics for Health Professions Credits: 3
- STA 622 - Statistical Methods for Biologists Credits: 3

Common seminar course (credits: 2)

- PSM 662 - Seminar in Professional Science Practice Credits: 2

Internship (credits: 4)

- PSM 691 - Internship Credits: 1 to 9

**Psychology - Program Description**

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section of this catalog.

**Website:** [www.gvsu.edu/psychology](http://www.gvsu.edu/psychology)

Students should plan their studies in consultation with an academic advisor early in and throughout their college career. Students major in psychology for various reasons, and different sets of courses are likely to be appropriate for students with different goals. While some psychology courses are offered intermittently as evening courses, these are not sufficient in number or variety for completing the Psychology programs, so students should plan their schedules accordingly.

Psychological scientists specialize in many different areas, such as clinical psychology, counseling psychology, developmental psychology, physiological psychology, neuropsychology, industrial/organizational psychology, educational psychology, experimental psychology, cognitive psychology, social psychology, and cross-cultural psychology. Because the interests and training of the faculty members in the department cover all of these areas, we offer a wide range of courses in the undergraduate curriculum.

**Career Opportunities**

Students with undergraduate psychology majors attain an understanding of empirical discoveries, theoretical developments, and methodological approaches in psychological sciences that serves them in a variety of employment settings and graduate programs. Students who major in psychology and then seek employment with a bachelor's degree find jobs in business, industry, and human services settings. The latter include such settings as mental hospitals, residential facilities for developmentally disabled or emotionally disturbed children, alcohol and drug abuse centers, juvenile correctional facilities, and vocational rehabilitation centers.

## Psychology

Many of our graduates pursue graduate studies, in a wide variety of disciplines. Some pursue masters and doctorates in psychology, in specialties that cover the full range of psychological science, including clinical psychology, cognitive psychology, social psychology, human factors engineering, developmental psychology, industrial/organizational psychology, school psychology, psycholinguistics, developmental psychology, and behavioral neuroscience. Others pursue professional training in medicine or law, while still others do graduate work in social work, as well as in a broad range of other disciplines, including business, occupational therapy, library science, human resources management, and non-profit administration.

Psychology may be a minor combined with a teachable major leading to secondary certification and the teaching of psychology at the high school level.

## Bachelor of Arts or Bachelor of Science in Psychology

### Requirements for a Major in Psychology

Requirements include a minimum of 12 courses in psychology totaling 36 hours of credit, including:

- PSY 101 - Introductory Psychology Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- PSY 400 - Advanced Research in Psychology Credits: 3
- PSY 492 - Advanced General: The Capstone Credits: 3

### Category Requirements

In addition, one course must be taken from each of the six following categories:

#### I. Biological

- PSY 330 - Foundations of Behavioral Neuroscience Credits: 3
- PSY 375 - Comparative Psychology Credits: 3
- PSY 431 - Introduction to Neuropsychology Credits: 3
- PSY 432 - Psychopharmacology Credits: 3

#### II. Developmental

- PSY 301 - Child Development Credits: 3
- PSY 305 - Infant and Early Childhood Development Credits: 3
- PSY 331 - Adolescent Development Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3

#### III. Personality/Clinical

- PSY 303 - Psychopathology Credits: 3
- PSY 324 - Developmental Psychopathology Credits: 3
- PSY 420 - Theories of Personality Credits: 3
- PSY 452 - Counseling: Theories and Applications Credits: 3

#### IV. Social Context

- PSY 355 - Psychology and Culture Credits: 3
- PSY 360 - Social Psychology: Psychology's View Credits: 3
- PSY 381 - Group Dynamics Credits: 3
- PSY 445 - Industrial/Organizational Psychology Credits: 3

#### V. Cognitive

- PSY 357 - Psychology of Language Credits: 3
- PSY 361 - Perception Credits: 3
- PSY 365 - Cognition Credits: 3

#### VI. General

- PSY 311 - Controversial Issues in Psychology Credits: 3
- PSY 362 - Environmental Psychology Credits: 3
- PSY 366 - Perspectives on Aging Credits: 3
- PSY 370 - Cognitive Neuroscience Credits: 3
- PSY 405 - History and Systems Credits: 3
- PSY 410 - Tests and Measurements Credits: 3

### Electives

Students choose two additional psychology courses, totaling six credit hours, as electives.

### Course Restrictions in Major

For students who choose to take PSY 399 and/or 499, no more than six credit hours in these courses may be counted toward the major. Psychology majors must take at least one third of the psychology credits constituting their major from the psychology department. Students may earn either a B.A. or B.S. degree.

### Students may earn either a B.A. or B.S. degree

#### B.A.

The B.A. requires third-semester proficiency in a foreign language.

#### B.S.

The B.S. degree requirements:

- PSY 300 - Research Methods in Psychology Credits: 3
- PSY 400 - Advanced Research in Psychology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

## Psychology Minor

A minimum 2.0 GPA is required in the psychology minor. A minimum 2.7 GPA is required in the minor for students seeking teaching certification at the secondary level.

### Requirements for a Minor in Psychology

Psychology minors are required to take a minimum of six courses in psychology totaling at least 20 semester hours of credit. PSY 101 is required, as is a methods course chosen from PSY 300 or, if the student is a social work major, SW 430.

Psychology minors must take one course from three of the six following categories:

#### I. Biological:

- PSY 330 - Foundations of Behavioral Neuroscience
- PSY 375 - Comparative Psychology Credits: 3
- PSY 431 - Introduction to Neuropsychology Credits: 3
- PSY 432 - Psychopharmacology Credits: 3

#### II. Developmental:

- PSY 301 - Child Development Credits: 3
- PSY 305 - Infant and Early Childhood Development Credits: 3
- PSY 331 - Adolescent Development Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3

#### III. Personality/Clinical:

- PSY 303 - Psychopathology Credits: 3
- PSY 324 - Developmental Psychopathology Credits: 3
- PSY 420 - Theories of Personality Credits: 3
- PSY 452 - Counseling: Theories and Applications Credits: 3

#### IV. Social Context:

- PSY 355 - Psychology and Culture Credits: 3
- PSY 360 - Social Psychology: Psychology's View Credits: 3
- PSY 381 - Group Dynamics Credits: 3
- PSY 445 - Industrial/Organizational Psychology Credits: 3

#### V. Cognitive:

- PSY 357 - Psychology of Language Credits: 3
- PSY 361 - Perception Credits: 3
- PSY 365 - Cognition Credits: 3

#### VI. General:

- PSY 311 - Controversial Issues in Psychology Credits: 3
- PSY 362 - Environmental Psychology Credits: 3
- PSY 366 - Perspectives on Aging Credits: 3
- PSY 370 - Cognitive Neuroscience
- PSY 405 - History and Systems Credits: 3
- PSY 410 - Tests and Measurements Credits: 3

#### Electives:

- Students choose two additional psychology courses, totaling six credit hours, as electives.

**Course Restrictions in the Minor**

For students who choose to take PSY 399 and/or 499, no more than three credit hours in these courses may be counted toward the minor. Psychology minors must take at least one-third of the credits constituting their minor from the psychology department.

**Applied Behavior Analysis Graduate Certificate**

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/grad/aba](http://www.gvsu.edu/grad/aba)

The GVSU psychology department is offering an online graduate level certificate program in Applied Behavioral Analysis (ABA) that will allow students to pursue certification as a Board Certified Behavior Analyst (BCBA). Students complete six courses (18 credits) that meet the 4th Edition Task List coursework requirements of the Behavior Analyst Certification Board (BACB). Go to [bacb.com](http://bacb.com) for more information.

Board Certified Behavior Analysts design and implement behavior analytic interventions and conduct comprehensive behavioral assessments. A BCBA will train and supervise the work of Board Certified Assistant Behavior Analysts, Registered Behavior Technicians, and others who implement behavior analytic interventions.

**Applied Behavior Analysis at Grand Valley**

Students enrolled in the online program will earn a graduate certificate in applied behavior analysis that has been approved by the Behavior Analyst Certification Board (BACB) to meet coursework requirements for the BCBA. Experience requirements for the BCBA, as defined by the BACB, must be fulfilled in addition to the graduate certificate program coursework. Upon meeting the coursework and experience requirements defined by the BACB, students may apply to take the BCBA exam. A master's degree in psychology, education, or behavior analysis is required for admission to the program.

**Admission**

The applied behavior analysis certificate may be obtained while pursuing a master or specialist degree in school psychology (degree-seeking students), or without pursuing a degree and only pursuing the certificate (non-degree seeking students).

Students wishing to pursue the applied behavior analysis certificate alongside a master or specialist degree in school psychology should contact the program coordinator in school psychology.

Students wishing to pursue the applied behavior analysis certificate without admittance into the master or specialist degree programs must submit an official GVSU application.

Applications are accepted at any time but preference will be given to applications received by May 1st for fall admission. Applications need to be complete before they will be considered for admission. Students may enter the ABA graduate certificate program in two ways:

1. Applicants to the ABA graduate certificate program must demonstrate completion of a master's degree in psychology, education, or behavior analysis with a minimum 3.0 grade point average. To be eligible for consideration, applications must include submission of the following materials:

- All graduate admission materials required by the university
- A professional vita or resume
- Three professional letters of recommendation
- A two page personal statement outlining interest in the field of applied behavior analysis and the program at Grand Valley State University, relevant experience, and educational and professional goals

2. Students in the GVSU school psychology graduate program are automatically admitted to the ABA graduate certificate program.

**Requirements for the ABA Graduate Certificate**

Students who are admitted into the certificate program must complete 18 semester credit hours with a B- or higher in each course and finish with a minimum 3.0 grade point average. All courses are offered online. The first course in the program sequence starts in the fall, and students may take up to two courses per semester. PSY 522 must be completed during the first semester of the program. The coursework for the program must be completed within four years. The required curriculum consists of the following courses:

**Fall Semester**

- PSY 522 - Applied Behavior Analysis I (ABA): Foundational Principles Credits: 3
- PSY 624 - Behavioral Assessment and Intervention Credits: 3

**Winter Semester**

- PSY 527 - Ethics and Diversity in Professional Practice Credits: 3
- PSY 523 - Applied Behavior Analysis II: Application to Behavior Change Credits: 3

**Spring/Summer Semester**

- PSY 550 - Research in Applied Settings Credits: 3
- PSY 525 - Behavior Analysis Applied to Autism Spectrum Disorders and Developmental Disorders Credits: 3

**Optional Course**

- PSY 590 - Applied Behavior Analysis Practicum Credits: 1 to 3

**Public Health - Program Description**

College of Health Professions (CHP)  
Department of Public Health

**Degree:** Master of Public Health

**Emphases:** Epidemiology, Health Promotion, and Public Health Administration

The Master's of Public Health (M.P.H.) program focuses on coursework and community based high-impact service learning to provide advanced service and care that includes health promotion, disease management and education, or epidemiology to communities and groups across the life span. The M.P.H. program offers programs in both Grand Rapids and Traverse City. Each location emphasizes evidence-based practice, critical thinking and problem solving through rigorous research inquiry and project based work. The program is designed to develop knowledge and skills necessary to prevent and manage complex health issues. Graduates of this program are prepared for direct roles in public health and to be leaders in improving population health through a diverse range of roles across multiple industries including local, state and national sectors, non-profit organizations, government and research.

The M.P.H. program consists of 51-54 credit hours of coursework in a diverse learning environment that includes hybrid options and on campus face-to-face coursework that requires active and immersive, community based learning. Students complete a 200-hour practicum experience which may be completed in a variety of settings including local, state, national and global settings. In addition, students complete an individualized research project (or thesis option) as a culmination of the program.

Highlights of this program include an efficient completion time of 20 months as a full time student, a comprehensive program offering two emphasis areas of choice: health promotion or epidemiology, and 100 percent community-based learning in every course throughout the public health curriculum.

**Mission**

To transform students into public health leaders through application of practice-based skills.

## Public Health

### Philosophy

Advancing health by empowering future leaders, enhancing preventive practices, and promoting social justice.

### Values

Values that support the master of public health program and align with the university and College of Health Professions strategic goals and include:

- Community engagement
- Interprofessional practice
- Professional and ethical behavior
- Cultural humility and inclusiveness
- Respect for diversity
- Excellence in teaching, scholarship, and practice

### Accreditation

The M.P.H. program at GVSU is in the process of accreditation through the Council on Education for Public Health (CEPH). The estimated goal date of accreditation is spring 2019. CEPH accreditation assures students enrolled in institutions of higher education which offer public health degree-granting programs that these programs have met and maintain rigorous standards for teaching, research, and service. CEPH accreditation requires a rigorous self-study process by GVSU to assure that its proposed MPH program will meet, monitor, and evaluate its adherence to providing quality teaching, research, and service for its curriculum and curricular areas of core concentrations. Further, CEPH assures prospective employers of graduates from accredited M.P.H. programs that these graduates have met the required competencies to be deemed as qualified to seek gainful employment in the range of public health occupations.\*

\*Council on Education for the Public Health. (2011). Accreditation Criteria for public health programs (amended June 2011). CEPH: Washington, D.C. Retrieved from: [www.ceph.org/](http://www.ceph.org/).

### Minimum Number of Hours in Program: 51

#### Admission to the Master of Public Health Program

Students will be chosen for acceptance into the M.P.H. program by completing the following program requirements:

- A minimum grade point average of 3.0 on a 4.0 scale for all undergraduate coursework is required. A bachelor's degree is required, in a health-related field is preferred.
- Written recommendations from at least two individuals who are in positions to attest to the applicant's successful completion of the program. An academic reference as well as a health care professional reference is preferred.
- Resume or Cover letter.
- A written statement that addresses the following questions: What would make you an excellent candidate for the Grand Valley State University MPH program, and what are your expectations for a future career in public health.
- Formal interview process with the Program Admissions Committee.

#### Considerations:

- The Application Review Committee reserves the right to require additional information it deems appropriate, including GRE test scores.

The following university requirements must also be met:

- A baccalaureate degree from an accredited institution of higher education
- GVSU Graduate Application
- \$30 application fee. Note: Students who have previously paid an undergraduate or graduate application fee to GVSU do not need to pay this fee again.
- Official copies of transcripts from all institutions of higher education previously attended, sent directly from those institutions to the GVSU Admissions Office. Note: We do not require official transcripts from Grand Valley.
- Test scores from the TOEFL (Test of English as a Foreign Language), or IELTS (International English Language Assessment Battery) for

applicants whose native language is not English. Only original score reports will be accepted.

### Retention and Termination

#### Grounds for Probation

1. A final course grade below a 2.7 (B-) in a 500, 600, or 700 level course
2. A final grade below a 2.0 (C) in a 500-600 level course
3. A cumulative graduate level GPA less than 3.0 (B) after completion of twelve hours of graduate level coursework (i.e., at the end of semester one)
4. Evidence of unethical or illegal behavior while matriculating as a student in the M.P.H. program

#### Practicum Experience

Students will not be allowed to participate in practicum experiences if there is a reason to believe that they are unprepared for this type of experience. Sufficient reasons include:

1. Probationary status
2. Questions about the student's ability to safely work in the health care field
3. Evidence of unethical or illegal behavior
4. Medical or psychological conditions that could endanger the safety of the student or the patients entrusted to them, or that prevent the student from fully participating in the practicum experience
5. Problems identified with professional abilities may result in a student being regarded by faculty as unprepared for practicum. With the assistance of faculty, the student must resolve the problem area prior to the practicum assignment.
6. If a student does not satisfactorily complete the core coursework, he/she may not progress to the thesis/project or practicum courses.

#### Dismissal from the Program

Any one of the following items may constitute grounds for dismissal from the program:

1. Failure to complete required remedial work at the required level.
2. Failure to complete items required in a remediation contract.
3. Final grades that result in probation during two consecutive semesters.
4. Failure to demonstrate "continued competency," of past course content.
5. Evidence of unethical or illegal behavior while matriculating as a student in the M.P.H. program.
6. Cumulative graduate GPA of less than 3.0.

#### Program Location

Cook-DeVos Center for Health Sciences with faculty offices at 545 Michigan Street, Suite 300.

The M.P.H. health promotions program is also offered at the Traverse City Regional Center.

Practicum experiences can be within Michigan, other selected states or globally during the final year of the M.P.H. curriculum.

**Website:** [www.gvsu.edu/grad/mph](http://www.gvsu.edu/grad/mph)

## Master of Public Health

### M.P.H. Curriculum

- PH 500 - Introduction to Public Health Credits: 3
- PH 505 - Social and Behavioral Public Health Credits: 3
- PH 510 - Public Health Epidemiology Credits: 3
- PH 520 - Environmental and Occupational Health Credits: 3
- PH 525 - Quantitative Research Methods in Public Health Credits: 3
- PH 530 - Qualitative Research Methods in Public Health Credits: 3
- PA 650 - Health Administration, Services, and Policy Credits: 3
- STA 610 - Applied Statistics for Health Professions Credits: 3

## Tracks Options - Choose one

## 1. Epidemiology (21 credits)

## Core courses: (12 credits)

- PH 600 - Advanced Quantitative Research Methods in Public Health Credits: 3
- PH 602 - Chronic Disease Epidemiology Credits: 3
- PH 608 - Infectious Disease Epidemiology Credits: 3
- PH 612 - Public Health Genetics Credits: 3

## Elective courses: (9 credits)

- PH 603 - Epidemiology of Aging Credits: 3
- PH 604 - Women's and Children's Epidemiology Credits: 3
- PH 605 - Pharmacoepidemiology Credits: 3
- PH 606 - Environmental and Occupational Epidemiology Credits: 3
- PH 610 - Cancer Epidemiology Credits: 3
- PH 613 - Psychiatric Epidemiology Credits: 3
- PH 633 - Public Health and Environmental Impact Assessment Credits: 3

## 2. Health Promotion (21 credits)

## Core courses: (12 credits)

- PH 620 - Health Education Credits: 3
- PH 622 - Health Behavior and Promotion Credits: 3
- PH 628 - Health Program Evaluation Credits: 3
- PH 630 - Health and Disease Disparities in Diverse Communities Credits: 3

## Elective courses: (9 credits)

- COM 624 - Public Health Communication Credits: 3
- PH 621 - Introduction to Urban Health Studies Credits: 3
- PH 623 - Food, Health, and Justice Credits: 3
- PH 625 - Urban Health Field Studies Credits: 3
- PH 626 - Health Advocacy and Literacy Credits: 3
- PH 627 - Public Health Interest Groups Credits: 3
- PH 629 - Advocacy Strategies in Public Health Credits: 3
- PH 631 - Critical Issues in Public Health Advocacy and Policy Credits: 3
- PH 632 - Public Health Social Campaigning and Distribution Credits: 3
- PH 633 - Public Health and Environmental Impact Assessment Credits: 3
- PH 645 - Global Environmental and Occupational Health Credits: 3

## 3. Public Health Administration (21 credits)

## Core courses: (12 credits)

- PA 612 - Human Resources in Organizations Credits: 3
- PA 615 - Public Financial Administration Credits: 3
- PA 639 - Community Benefits Assessment and Management Credits: 3
- PA 674 - Health Advocacy and Built Environment in Public Administration Credits: 3

## Elective courses: (9 credits)

- PA 616 - Public Policy Analysis Credits: 3
- PA 633 - Health Economics Credits: 3
- PA 640 - Marketing Health and Human Services Credits: 3
- PA 664 - Program Evaluation Credits: 3

## Additional course requirement: (6-9 credits)

- PH 688 - Public Health Practicum Credits: 3
- **OR** PH 689 - Public Health Practicum in a Global Setting Credits: 3
- PH 693 - Public Health Master's Project Credits: 1 to 3
- **OR** PH 695 - Public Health Master's Thesis Credits: 3

## Explanation of the Emphasis Options

## Epidemiology

Epidemiology is the science that describes quantitative trends in health and disease for populations, with application in the biological, environmental, behavioral, and social sciences. Epidemiologists generally collaborate with multidisciplinary teams of health professionals, such as physicians, laboratory scientists, exercise physiologists, nutritionists, statisticians, veterinarians, and behavioral scientists.

Epidemiologists analyze public health trends, design and implement studies, and interpret study results for policy and program development. Beyond investigation into the causes of disease, epidemiologists also develop intervention strategies to prevent disease and promote health. Epidemiologists work at both the individual and community levels to translate medical and laboratory data into population trends.

## Health Promotion

The health promotion emphasis is to prepare students to be public health leaders who can design, implement, advocate for, and evaluate efforts to promote healthy behaviors and social conditions for specific populations. The program prepares students to use social science theories and individual, community, and policy-based intervention strategies.

## Health Administration

The health administration emphasis will prepare M.P.H. candidates with administrative positions in public health organizations at the local, state, federal, and international level in planning agencies, voluntary health organizations, mental health agencies, human services organizations, long-term care agencies, international health organizations, managed care plans, community clinics, and alternative health care delivery settings.

Graduates share a strong commitment to preventing disease, promoting health, and serving defined populations.

## Public and Nonprofit Administration - Program Description

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

**Website:** [www.gvsu.edu/spnha](http://www.gvsu.edu/spnha)

The mission of the School of Public, Nonprofit and Health Administration is to educate students for lives of active citizenship as contributing members of their local, regional, and global communities, and for professional careers in public and nonprofit organizations. We are committed to developing in undergraduate and graduate students the capabilities for ethical judgment, critical thinking, and the core competencies necessary to fulfill multiple roles as effective managers and public servants. We advance this mission with a faculty committed to teaching excellence and actively engaged in research and community service.

### Graduate School Opportunities

Various professional master degree programs are available to students interested in public service with government or nonprofit organizations. These include a Master of Public Administration (M.P.A.), Master of Health Administration (M.H.A.), Master of Public Policy (M.P.P.), Master of Urban Planning (M.U.P.), Master of Nonprofit Organizations (M.N.O.), Master of Arts in Philanthropic Studies (M.A.P.S.), Master of Science in Criminal Justice (M.S.C.J.) and Master of Social Work (M.S.W.). Grand Valley offers an M.P.A., M.H.A., M.S.C.J., and M.S.W.

### Internships

All undergraduate are required to enroll in an internship class in the latter part of their studies. The internship provides an opportunity for the student to sample prospective employment and for the agency to observe potential applicants for employment. A major objective of the program is to establish a mutually beneficial and reinforcing experience for the student to "learn by doing" and for the sponsoring organization to use the apprentice in studying problems and testing new ground.

Interns work under the direct supervision of agency staff on assignments that help them gain meaningful understanding about the nature and functioning of the organization. Throughout the internship, the agency supervisor evaluates the intern's field service, while the academic component (written reports) is evaluated by the academic coordinator.

## Public and Nonprofit Administration

### Honor Organization

Pi Alpha Alpha is the national honor society for the field of public affairs and public administration. The purpose of this society is to encourage and recognize outstanding scholarship and accomplishment in public affairs and administration. The society seeks to promote the advancement of quality in the education and practice of the art and science of public affairs and administration.

## Bachelor of Arts or Bachelor of Science in Public and Nonprofit Administration

The baccalaureate program provides professional orientation and career specialization upon a sound liberal arts foundation. It is an interdisciplinary program designed to provide students with the skills and knowledge necessary for successful careers in public and nonprofit organizations. The curriculum emphasizes general public and nonprofit administration knowledge but also requires students to concentrate in selected areas of emphasis.

Both freshmen and transfer students who are admitted to Grand Valley are eligible for admission to the program. Students interested in public and nonprofit administration should seek the advice of faculty in the program, especially when choosing courses to fit various needs and interests.

### Requirements for a Major in Public and Nonprofit Administration

The prerequisite for the public and nonprofit administration major is:

- PLS 102 - American Government and Politics Credits: 3

The major consists of 36 credit hours, which includes three credit hours of required internship:

- PA 490 - Public Administration Internship Credits: 3

Students must complete 24 credit hours of courses by taking:

- PA 270 - Public and Nonprofit Administration Credits: 3
- PA 307 - Local Politics and Administration Credits: 3
- PA 360 - Voluntarism and the Nonprofit Sector Credits: 3
- PA 375 - Public Budgeting and Finance Administration Credits: 3
- PA 376 - Public Personnel Policy and Administration Credits: 3
- PA 420 - Organization Theory and Dynamics Credits: 3
- PA 495 - Community Analysis (Capstone) Credits: 3

Students must also complete three credit hours of electives by taking one of the following:

- PA 311 - Public Sector Information Technology Credits: 3
- PA 330 - Health Care Financing Credits: 3
- PA 335 - Grant Writing Credits: 3
- **OR** PA 372 - International and Comparative Administration Credits: 3

### B.A.

Majors seeking a B.A. degree must demonstrate third-semester proficiency in a foreign language.

### B.S.

Majors seeking a B.S. degree must complete the course requirements:

- STA 215 - Introductory Applied Statistics Credits: 3
- PA 300 - Research Methods Credits: 3
- PA 449 - Policy Research and Evaluation Credits: 3

### Select One Specialty

Students must also select one specialty consisting of at least nine credit hours. **Some specialties also require that a specific PA course be taken as an elective.** PA 372, PA 380, PA 490 and PA 491 may count in any area with an academic advisor's approval.

#### Community Development and Planning

- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GPY 209 - Introduction to Urban and Regional Planning Credits: 3
- HST 327 - History of United States Urban Society Credits: 3
- PA 390 - Leadership Dynamics Credits: 3

- PLS 338 - Citizenship Credits: 3
- SOC 313 - Race and Ethnicity Credits: 3
- Also required, the B.S. course requirement: PA 449 - Policy Research and Evaluation Credits: 3

#### Public Personnel Management

- LIB 331 - Person and Profession Credits: 3
- MGT 334 - Employment and Labor Law Credits: 3
- MGT 355 - The Diversified Workforce Credits: 3
- MGT 432 - Grievance Administration, Arbitration, and Collective Bargaining Credits: 3
- PA 390 - Leadership Dynamics Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3

#### Information Technology

- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 237 - Introduction to Network Management Credits: 3
- CIS 238 - Internet Media and Programming Credits: 3
- GPY 307 - Introduction to Geographic Information Systems Credits: 3
- GPY 407 - Advanced GIS Credits: 4
- MGT 268 - Business Processes and Management Information Systems Credits: 3

#### Local Economic Development

- BUS 201 - Legal Environment for Business Credits: 3
- CAP 220 - Fundamentals of Public Relations Credits: 3
- ECO 200 - Business Economics Credits: 3
- HTM 101 - Introduction to Hospitality and Tourism Credits: 4

#### Public and Nonprofit Budgeting and Finance

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- FIN 331 - Risk and Insurance Credits: 3
- PA 335 - Grant Writing Credits: 3

#### Community Health

- BMS 222 - Introduction to Public Health Credits: 3
- COM 209 - Health Communication Systems Credits: 3
- AHS 340 - Health Care Management Credits: 3
- MKT 350 - Marketing Management Credits: 3
- OSH 300 - Introduction to Occupational Safety and Health Credits: 3
- PLS 310 - Politics and Health Policy Credits: 3
- REC 110 - Foundations of Recreation and Leisure Credits: 3
- Also required, the elective: PA 330 - Health Care Financing Credits: 3

## Master of Public Administration

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

**Website:** [www.gvsu.edu/grad/mpa](http://www.gvsu.edu/grad/mpa)

M.P.A. graduates are leaders. They lead their communities and organizations on the basis of advanced administrative skills with a dedication to democratic values and public service. In today's global society, such leadership takes many forms and occurs in a variety of settings. The mission of the master of public administration is to develop both the general knowledge and specific abilities needed for professional careers in public service organizations. The curriculum is designed to prepare students to act ethically and effectively in public management, urban and regional policy and planning, nonprofit management, criminal justice, and health care administration.

As a professional school in an urban setting, the School of Public, Nonprofit, and Health Administration is actively involved with the

community in professional service activities and applied research. The program offers flexibility and innovation in curriculum design to meet the diverse educational needs of part-time and full-time students, including evening and weekend courses and workshops, and Internet enhanced learning. Because careers in administration are varied and include the public, private, and nonprofit sectors, the curriculum is designed to develop advanced executive abilities through a combination of core competencies and specialized areas of concentration. Satisfactory completion of the program of study leads to the award of the M.P.A. degree.

#### Accreditation

National Association of Schools for Public Affairs and Administration.

**Minimum Number of Hours for Graduation:** 39 (42 for precareer students)

#### Admission to Master's of Public Administration Program

- An undergraduate grade point average of at least 3.0 on a 4.0 scale calculated on the last 60 credit hours of undergraduate coursework
- Three letters of reference from informed sources
- A detailed resume
- An essay on career and educational objectives (250-750 words)
- A demonstrated commitment to community and public service
- Submitting a GRE score is recommended for applicants who have neither a 3.0 undergraduate GPA nor five years of professional experience. The GRE is also recommended for applicants applying for a graduate assistantship with SPNHA.

#### Transfer Credit

A maximum of 12 semester hours of transfer credit will be given for appropriate graduate courses completed within the previous five-year period with a grade of B or better at another college or university. These transfer credits may be substituted for required courses or given general credit as determined by the faculty.

#### Requirements for the M.P.A. Degree

The M.P.A. degree consists of a minimum of 39 credit hours of coursework. Precareer students must take three credit hours of internship in addition to the 39 required hours of coursework for a total of 42 credit hours. Students must meet with an advisor upon entry into the program to develop a program of study.

The program core includes 15 credit hours, as follows:

- PA 520 - Foundations of Public Service Credits: 3
- PA 611 - Research Methods Credits: 3
- PA 612 - Human Resources in Organizations Credits: 3
- PA 614 - Organization Theory Credits: 3
- PA 619 - Public Management Seminar Credits: 3

#### Students Must Select One Concentration of 15 Credit Hours

##### Public Management

- PA 615 - Public Financial Administration Credits: 3
- PA 616 - Public Policy Analysis Credits: 3
- PA 620 - Metropolitan Politics and Administration Credits: 3

**AND** two of the following:

- PA 621 - Administrative and Regulatory Law Credits: 3
- PA 642 - Conflict Management Credits: 3
- PA 643 - Strategic Management and Planning Credits: 3
- PA 644 - GIS in the Public Service Credits: 3
- PA 664 - Program Evaluation Credits: 3

##### Sustainable Community Development

- PA 615 - Public Financial Administration Credits: 3
- PA 671 - Building Sustainable Communities Credits: 3

**AND** two of the following:

- PA 641 - Economic and Community Development Credits: 3
- PA 674 - Health Advocacy and Built Environment in Public Administration Credits: 3

##### Health Administration

- PA 630 - Health Administration and Service Credits: 3
  - PA 631 - U.S. Health Policy and Politics Credits: 3
  - PA 632 - Health Services Financial Management Credits: 3
- AND** two of the following:
- PA 633 - Health Economics Credits: 3
  - PA 634 - Health Care Law and Ethics Credits: 3
  - PA 640 - Marketing Health and Human Services Credits: 3
  - PA 645 - Aging in Society: Concepts, Controversies, and Challenges for Public Service Administrators Credits: 3
  - PA 639 - Community Benefits Assessment and Management Credits: 3

##### Nonprofit Management and Leadership

- PA 660 - Philanthropy and the Nonprofit Sector: History and Ethics Credits: 3
  - PA 661 - Nonprofit Management: Practices Credits: 3
  - PA 662 - Nonprofit Financial Management Credits: 3
- AND** two of the following:
- PA 640 - Marketing Health and Human Services Credits: 3
  - PA 643 - Strategic Management and Planning Credits: 3
  - PA 663 - Nonprofit Organizations, Advocacy and Public Policy Credits: 3
  - PA 664 - Program Evaluation Credits: 3
  - PA 665 - Nonprofit and Foundation Boards, Trustees and Governance Credits: 3
  - PA 667 - Fund Development Credits: 3
  - PA 670 - International NGO Management Credits: 3

##### Criminal Justice

- CJ 601 - Criminal Justice Leadership Credits: 3
- CJ 602 - Legal and Ethical Issues Credits: 3
- CJ 604 - Criminal Justice Policy and Program Evaluation Credits: 3
- CJ 607 - Criminology Credits: 3
- PA 615 - Public Financial Administration Credits: 3

##### Urban and Regional Policy and Planning

- PA 615 - Public Financial Administration Credits: 3
- PA 616 - Public Policy Analysis Credits: 3
- PA 620 - Metropolitan Politics and Administration Credits: 3
- PA 641 - Economic and Community Development Credits: 3
- PA 644 - GIS in the Public Service Credits: 3

#### Students Must Select Nine Credits of Electives

At least nine credits must be selected from other graduate courses, including PA courses in other concentration areas (preceding) and nonconcentration PA courses and workshops (following). Note that a maximum of three workshop credits may be applied to the degree. The number of elective credits is reduced by three if the student does a second three-credit internship.

- Any PA course in a concentration listed previously.
- PA 535 - Grant Writing Credits: 3
- PA 635 - Hospital Organization and Management Credits: 3
- PA 637 - Ambulatory Care Organization and Management Credits: 3
- PA 638 - Long-Term Care Organization and Management Credits: 3
- PA 646 - Managerial Epidemiology for Health Administrators Credits: 3
- PA 680 - Special Topics in Public and Nonprofit Administration Credits: 1 to 3
- PA 550 - Public Administration Workshop Credits: .5 to 3
- PA 551 - Public Administration Workshop Credits: 1 to 3
- PA 552 - Public Administration Workshop Credits: 1 to 3
- PA 553 - Public Administration Workshop Credits: 1 to 3

#### Precareer Students Must Take Three Credits of Internship

All precareer students are required to take at least three internship credits (in addition to 39 hours of coursework). They may take a second internship for a total of six credits:

- PA 690 - Public Administration Internship I Credits: 3
- PA 691 - Public Administration Internship II Credits: 3

## Radiation Therapy

### Students Must Take a Three-credit Capstone at the End of Their Studies

Most students will take PA 619 as their Capstone experience. They must have completed 30 credits of coursework before registering for PA 619. As an alternative to PA 619, students may opt for a research project as their Capstone experience.

- PA 619 - Public Management Seminar Credits: 3
- PA 693 - Research Project Credits: 3 or 6

## Nonprofit Administration Minor

What do neighborhood associations, local development corporations, children and youth groups, religious organizations, museums, advocacy and support groups, chambers of commerce, and community clinics all have in common? They are all nonprofit organizations that carry out important public service missions in health, recreation, culture, education, religion, or philanthropy. Thousands of large and small nonprofit organizations in Michigan employ people to work in program and event planning, grant writing, fundraising, public relations, program evaluation, and marketing. The minor in nonprofit administration provides students with knowledge and skills useful in understanding and participating in the work of the nonprofit sector.

### Requirements for a Minor in Nonprofit Administration

**The minor in nonprofit administration consists of 21 credits.**

The required courses:

- PA 270 - Public and Nonprofit Administration Credits: 3
- PA 335 - Grant Writing Credits: 3
- PA 360 - Voluntarism and the Nonprofit Sector Credits: 3
- PA 420 - Organization Theory and Dynamics Credits: 3
- PA 490 - Public Administration Internship Credits: 3

Two more courses are to be selected from the following:

- MGT 355 - The Diversified Workforce Credits: 3
- MKT 350 - Marketing Management Credits: 3
- PA 311 - Public Sector Information Technology Credits: 3
- PA 376 - Public Personnel Policy and Administration Credits: 3
- PA 390 - Leadership Dynamics Credits: 3
- PA 449 - Policy Research and Evaluation Credits: 3
- PA 491 - Public Administration Internship II Credits: 3
- SW 453 - Case Management Credits: 3

## Public Administration Minor

### Requirements for a Minor in Public Administration

To earn a minor in public administration, students are required to complete the following 21 credits:

- PA 270 - Public and Nonprofit Administration Credits: 3
- PA 360 - Voluntarism and the Nonprofit Sector Credits: 3
- PA 375 - Public Budgeting and Finance Administration Credits: 3
- PA 376 - Public Personnel Policy and Administration Credits: 3
- PA 420 - Organization Theory and Dynamics Credits: 3
- PA 495 - Community Analysis (Capstone) Credits: 3
- **EITHER** PA 307 - Local Politics and Administration Credits: 3  
**OR** PLS 203 - State Politics Credits: 3

## Graduate Certificate in Nonprofit Leadership

The graduate certificate in nonprofit leadership provides a unique opportunity to pursue a theoretically based and practically oriented education in leadership for nonprofit professionals. This program offers nonprofit managers the up-to-date professional skills and perspectives required to lead their organizations in the rapidly changing and complex nonprofit sector of society.

The certificate in nonprofit leadership is designed for the experienced nonprofit manager who has an advanced degree or an undergraduate degree and several years of professional experience. It is intended for

those holding or seeking executive positions that wish to further their education without pursuing the full requirements for a graduate degree. However, courses and workshops taken in the certificate program may be applied toward the master of public administration.

### Admission

Applicants for the graduate certificate program in nonprofit leadership must:

1. Apply to the School of Public, Nonprofit and Health Administration
2. Hold an advanced degree or a bachelor's degree with a minimum GPA of 3.0 in the last two years of undergraduate work
3. Have at least three years of professional experience in nonprofit organizations
4. Submit official transcripts and an application essay

The certificate requires the completion of 15 credit hours of graduate study.

### Required courses (15 credit hours)

- PA 550 - Public Administration Workshop Credits: .5 to 3
- PA 551 - Public Administration Workshop Credits: 1 to 3
- PA 552 - Public Administration Workshop Credits: 1 to 3
- PA 661 - Nonprofit Management: Practices Credits: 3
- PA 662 - Nonprofit Financial Management Credits: 3
- PA 663 - Nonprofit Organizations, Advocacy and Public Policy Credits: 3
- PA 665 - Nonprofit and Foundation Boards, Trustees and Governance Credits: 3

## Radiation Therapy - Program Description

Radiation therapy is a radiologic and imaging sciences specialty that is one of the disciplines of radiation oncology. Radiation therapy is considered an entry-level profession in that students may enter GVSU without previous college experience and may aspire to complete the entire B.S. degree program in four years.

Radiation therapists practice in a collaborative effort between medical and radiation oncology physicians, medical physicists, dosimetrists, oncology nurses, dietitians, and social workers. Radiation therapists are responsible for accurately recording, interpreting, and administering the treatment prescribed by radiation oncologists. These responsibilities require highly specialized clinical skills as well as complex critical thinking in order to effectively contribute to the team approach to patient treatment.

Students receive didactic, laboratory, and clinical experiences in both existing and emerging radiation therapy practices in the university's energized laboratories and through a clinical education system that requires students to attend full days of clinical practice under the direct supervision of registered radiation therapists at clinical education sites located as far as about three hours from GVSU (although most clinical assignments are within one hour from campus). Students must have transportation available to these sites.

Clinical experiences are available in both existing and emerging radiation therapy practices and procedures. These experiences may include treatment planning, computed tomography simulation, conventional simulation, quality assurance, brachytherapy, external beam therapy, stereotactic radiosurgery, intraoperative procedures, intensity modulated radiation therapy, image guided radiation therapy, and total body irradiation. Students will rotate through a minimum of three clinical facilities to ensure exposure to emerging technologies.

Students should be aware that prior to the beginning of their clinical courses, they must complete comprehensive health compliance obligations including but not limited to a criminal background check, finger printing, and drug screening. It is the responsibility of the student to comply. If there is illegal activity in the background check/finger printing or if there is evidence of one or more prohibited substances in the drug test, the clinical sites have the right to refuse a student's placement, which may

negatively impact a student's ability to progress in the radiation therapy program. In addition, individuals who have been charged with or convicted of a crime may not be eligible for national certification by the American Registry of Radiologic Technologists (ARRT). Students to whom this may apply are strongly advised to work with the ARRT for preapplication review of eligibility for certification from their website at [www.arrt.org](http://www.arrt.org) (ethics and preapplication process). The ARRT may be contacted by phone at (651) 687-0048 for more information.

Students who receive a B.S. degree in radiation therapy from GVSU are eligible for the ARRT examination in radiation therapy. Granting of the baccalaureate degree is not contingent on passing the ARRT examination.

The radiation therapy program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The program adheres to JRCERT standards. Students have the right to notify the JRCERT if they believe the university is not adhering to these standards. The JRCERT is at 20 N. Wacker Dr., Suite 2850, Chicago, IL 60606-3182; phone (312) 704-5300.

## Bachelor of Science in Radiation Therapy

### Admission Criteria to the Radiation Therapy Program

#### Selection Factors

Grand Valley State University is an affirmative action/equal opportunity institution. It encourages diversity and provides equal opportunity in education, employment, all of its programs, and the use of its facilities. Applicants are considered without regard to age, color, disability, familial status, height, marital status, national origin, political affiliation, race, religion, sex/gender, sexual orientation, veteran status, or weight. Motivational factors, life experiences, patient care experience, maturity, and personal characteristics as assessed in personal interviews and recommendations are important factors in the selection process.

An applicant's academic record is important as an indicator of ability to succeed in an intensive and rigorous medical curriculum. A degree in radiation therapy involves a competitive admission process and completion of a secondary application. There are no waiting lists for these programs. Applications are due February 1. Admissions occur once per year beginning in the fall semester (August).

The application requires: ([www.gvsu.edu/rad](http://www.gvsu.edu/rad))

- GVSU undergraduate application - students must apply and be admitted to GVSU
- RT application
- Resume to include a specific section listing health care experience
- One to two page statement of professional goals
- Two recommendations on specific forms
- Official copies of all non GVSU transcripts

Specific selection criteria and their weight:

- Academic grade point average from prerequisite courses (40%)
- Academic grade point average from last two calendar years in college or university (10%)
- Interview / writing assessment completed on-site at the College of Health Professions (30%)
- Health care experience - minimum of 16 hours volunteer or paid; recommended 2-3 hours job shadow (5%)
- Recommendations (5%)
- Additional leadership considerations (10%)

Prerequisite Courses (47 credits)

- AHS 100 - Medical Terminology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4 (prerequisite \* BIO 120 - General Biology I Credits: 4)
- BMS 251 - Anatomy and Physiology II Credits: 4
- MTH 122 - College Algebra Credits: 3 (prerequisite \*\* MTH 110 - Algebra Credits: 4)
- \*PHY 220 - General Physics I Credits: 5 (prerequisite MTH 123 - Trigonometry Credits: 3)

- PHY 221 - General Physics II Credits: 5
- \*PSY 101 - Introductory Psychology Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- **OR** AHS 301 - Introduction to Health Care Research Credits: 3
- **OR** BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3
- \*SOC 105 - Social Problems Credits: 3
- \*STA 215 - Introductory Applied Statistics Credits: 3
- \*Also fulfills general education requirements.
- \*\*Math 110 may not be required based upon placement at time of admission.

### Requirements for a Major in Radiation Therapy

General Education Courses - Foundations and Cultures (22 credits)

Remaining general education courses not covered in the major coursework or major prerequisites:

- General education (Art) Credits: 3
- General education (History) Credits: 3
- General education (Philosophy) Credits: 3
- General education (World Perspectives) Credits: 3
- Issues Credits: 6 (two courses which can be taken when student has 55+ credits)
- WRT 150 - Strategies in Writing Credits: 4

Radiation Therapy Courses (66 credits, includes Issue courses)

- AHS 340 - Health Care Management Credits: 3 (fulfills one of two Issue courses)
- RIT 302 - Radiation Protection Physics Credits: 2
- RIT 310 - Radiation Therapy Patient Care Credits: 3
- RIT 322 - Radiation Biology Credits: 2
- RIT 330 - Radiation Therapy Principles and Practices I Credits: 4
- RIT 331 - Radiation Therapy Principles and Practices I Laboratory Credits: 1
- RIT 332 - Radiation Therapy Principles and Practices II Credits: 3
- RIT 333 - Radiation Therapy Principles and Practices II Laboratory Credits: 1
- RIT 361 - Radiation Therapy Clinical Education I Credits: 2
- RIT 362 - Radiation Therapy Clinical Education II Credits: 4
- RIT 401 - Radiologic Information Technology Credits: 3
- RIT 420 - Radiation Therapy Physics I Credits: 2
- RIT 422 - Radiation Therapy Physics II Credits: 2
- RIT 424 - Image Guided Principles of Radiation Therapy Credits: 4
- RIT 430 - Radiation Therapy Principles and Practices III Credits: 3
- RIT 431 - Radiation Therapy Principles and Practices III Lab Credits: 1
- RIT 432 - Radiation Therapy Principles and Practices IV Credits: 3
- RIT 433 - Radiation Therapy Principles and Practices Lab IV Credits: 1
- RIT 441 - Gross Human Sectional Anatomy Credits: 4
- RIT 458 - Neoplasms Credits: 3
- RIT 460 - Radiation Therapy Clinical Education III Credits: 3
- RIT 461 - Radiation Therapy Clinical Education IV Credits: 3
- RIT 470 - Radiation Therapy Treatment Planning Credits: 2
- RIT 471 - Radiation Therapy Treatment Planning Lab Credits: 1
- RIT 472 - Introduction to Medical Dosimetry Credits: 2
- RIT 473 - Introduction to Medical Dosimetry Lab Credits: 1
- RIT 495 - Advanced Clinical Problems in Radiation Therapy Credits: 3

### Suggested Order of Coursework for a Major in Radiation Therapy

Freshman Fall Semester (15 credits)

- BIO 120 - General Biology I Credits: 4
- MTH 110 - Algebra Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

## Religious Studies

### Freshman Winter Semester (16 credits)

- General education (Arts) Credits: 3
- AHS 100 - Medical Terminology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- MTH 122 - College Algebra Credits: 3
- SOC 105 - Social Problems Credits: 3

### Freshmen Spring Semester (3 credits)

- MTH 123 - Trigonometry Credits: 3

### Sophomore Fall Semester (15 credits)

- General education (History) Credits: 3
- BMS 251 - Anatomy and Physiology II Credits: 4
- PHY 220 - General Physics I Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

### Sophomore Winter Semester (14 credits)

- General education (Philosophy) Credits: 3
- General education (World Perspectives) Credits: 3
- PHY 221 - General Physics II Credits: 5

#### AND one of the following:

- AHS 301 - Introduction to Health Care Research Credits: 3
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3

### Junior Fall Semester: Enrolled in Radiation Therapy Program (16 credits)

- RIT 302 - Radiation Protection Physics Credits: 2
- RIT 310 - Radiation Therapy Patient Care Credits: 3
- RIT 330 - Radiation Therapy Principles and Practices I Credits: 4
- RIT 331 - Radiation Therapy Principles and Practices I Laboratory Credits: 1
- RIT 401 - Radiologic Information Technology Credits: 3
- RIT 458 - Neoplasms Credits: 3

### Junior Winter Semester (16 credits)

- RIT 332 - Radiation Therapy Principles and Practices II Credits: 3
- RIT 333 - Radiation Therapy Principles and Practices II Laboratory Credits: 1
- RIT 361 - Radiation Therapy Clinical Education I Credits: 2
- RIT 420 - Radiation Therapy Physics I Credits: 2
- RIT 424 - Image Guided Principles of Radiation Therapy Credits: 4
- RIT 441 - Gross Human Sectional Anatomy Credits: 4

### Junior Spring/Summer Semester (4 credits)

- RIT 362 - Radiation Therapy Clinical Education II Credits: 4

### Senior Fall Semester (15 credits)

- General education (Issues elective) Credits: 3
- RIT 422 - Radiation Therapy Physics II Credits: 2
- RIT 430 - Radiation Therapy Principles and Practices III Credits: 3
- RIT 431 - Radiation Therapy Principles and Practices III Lab Credits: 1
- RIT 460 - Radiation Therapy Clinical Education III Credits: 3
- RIT 470 - Radiation Therapy Treatment Planning Credits: 2
- RIT 471 - Radiation Therapy Treatment Planning Lab Credits: 1

### Senior Winter Semester (18 credits)

- AHS 340 - Health Care Management Credits: 3
- RIT 322 - Radiation Biology Credits: 2
- RIT 432 - Radiation Therapy Principles and Practices IV Credits: 3
- RIT 433 - Radiation Therapy Principles and Practices Lab IV Credits: 1
- RIT 461 - Radiation Therapy Clinical Education IV Credits: 3
- RIT 472 - Introduction to Medical Dosimetry Credits: 2
- RIT 473 - Introduction to Medical Dosimetry Lab Credits: 1
- RIT 495 - Advanced Clinical Problems in Radiation Therapy Credits: 3

## Religious Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/rel](http://www.gvsu.edu/rel)

The diverse and often contested religious/cultural perspectives in our contemporary world demonstrate the need for leaders who are educated in religious history and tradition and who have the capability of critically examining their own cultural assumptions while engaging in dialogue with global and local populations. An academic, critical understanding of the world's religions provides a foundation for understanding diverse ideas and cultures. This is particularly important in our post-9/11 culture, where religion is playing such a significant role in political movements and cross-cultural dialogue.

The religious studies major provides core courses along with flexibility. Students have the option of focusing on particular religious traditions through electives in a range of global traditions and disciplinary perspectives. Students are encouraged to work closely with their advisor to determine the electives portion of the major. Close collaboration with faculty in the program through advising, student-centered coursework and independent study opportunities is an important part of the religious studies major.

Religious studies strongly encourages students to take advantage of a wide range of study abroad programs offered by the university. Appropriate courses taken abroad can be credited toward the requirements for the major or the minor. Contact the Padnos International Center or religious studies for more information.

### Honors Organization

Theta Alpha Kappa (TAK) is the national Religious Studies Honor Society. To be nominated for membership in Theta Alpha Kappa a student must possess an overall GPA of at least 3.0 and a religious studies GPA of at least 3.5, after having completed a minimum of 12 credit hours toward the religious studies major. At least one year's worth of credits must have been completed at GVSU.

## Bachelor of Arts or Bachelor of Science in Religious Studies

### Requirements for a Major in Religious Studies

#### Core (credits: 12)

- REL 100 - Religions of the World Credits: 3
- REL 200 - Introduction to Religious Studies: Concepts and Methods Credits: 3
- REL 300 - Contemporary Theories and Issues in Religious Studies Credits: 3
- REL 495 - Religious Studies Senior Seminar Credits: 3

#### Global Perspectives on Traditions Courses (credits: 9)

Select three from the following list of global perspectives courses:

- MES 350 - Islam: Scripture and Ritual Credits: 3
- PHI 210 - Eastern Philosophy Credits: 3
- REL 305 - Christianity: Scriptures and Tradition Credits: 3
- REL 306 - Hinduism and South Asian Religions Credits: 3
- REL 310 - Jewish Scriptures and Traditions Credits: 3

#### Disciplinary Approaches Courses (credits: 6)

Select two from the following list of disciplinary approaches courses:

- ANT 315 - Comparative Religions Credits: 3
- REL 335 - Sacred Texts - Global Contexts Credits: 3
- PHI 343 - Philosophy of Religion Credits: 3
- PLS 330 - Religion and Politics in America Credits: 3
- PSY 385 - Psychology of Religion Credits: 3
- SOC 287 - Sociology of Religion Credits: 3

**Electives (credits: 6)**

Select two from the following list of elective courses:

- CJ 405 - Terrorism Credits: 3
- CLA 315 - Ancient Religion Credits: 3
- ENG 204 - World Mythology Credits: 3
- HST 211 - History of Islamic Civilization Credits: 3
- HST 311 - History of Religion in the United States Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 342 - History of Buddhism and East Asian Religions Credits: 3
- HST 376 - History of Witch Hunts Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- PHI 306 - Wisdom of the East: Asian Philosophy Credits: 3
- PHI 312 - Medieval Great Philosophers Credits: 3
- PHI 341 - Philosophy of Death and Dying Credits: 3

**B.A. and B.S. Degree Requirements**

Religious studies majors may earn either a B.S. or a B.A.

**B.A. Course Requirements**

The B.A. course requirement demonstrates third semester proficiency in a foreign language.

**B.S. Course Requirements**

- STA 215 - Introductory Applied Statistics Credits: 3
  - LIB 301 - Interdisciplinary Research Methods Credits: 3
- AND** one of the following:
- ANT 315 - Comparative Religions Credits: 3
  - PLS 300 - Political Analysis Credits: 3
  - PSY 385 - Psychology of Religion Credits: 3
  - SOC 287 - Sociology of Religion Credits: 3

**Religious Studies Minor****Requirements for a Minor in Religious Studies**

- REL 100 - Religions of the World Credits: 3
- REL 200 - Introduction to Religious Studies: Concepts and Methods Credits: 3
- REL 300 - Contemporary Theories and Issues in Religious Studies Credits: 3

**Global Perspectives on Traditions Courses (credits: 6)**

Choose two courses from the following list of global perspectives courses:

- MES 350 - Islam: Scripture and Ritual Credits: 3
- PHI 210 - Eastern Philosophy Credits: 3
- REL 305 - Christianity: Scriptures and Tradition Credits: 3
- REL 306 - Hinduism and South Asian Religions Credits: 3
- REL 310 - Jewish Scriptures and Traditions Credits: 3

**Disciplinary Approaches Courses (Credits: 3)**

Choose one course from the following list of disciplinary approaches courses:

- ANT 315 - Comparative Religions Credits: 3
- REL 335 - Sacred Texts - Global Contexts Credits: 3
- PHI 343 - Philosophy of Religion Credits: 3
- PLS 330 - Religion and Politics in America Credits: 3
- PSY 385 - Psychology of Religion Credits: 3
- SOC 287 - Sociology of Religion Credits: 3

**Electives (Credits: 3)**

One course from the following list of elective courses:

- CJ 405 - Terrorism Credits: 3
- CLA 315 - Ancient Religion Credits: 3
- ENG 204 - World Mythology Credits: 3
- HST 211 - History of Islamic Civilization Credits: 3
- HST 311 - History of Religion in the United States Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 342 - History of Buddhism and East Asian Religions Credits: 3
- HST 376 - History of Witch Hunts Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3

- PHI 306 - Wisdom of the East: Asian Philosophy Credits: 3
- PHI 312 - Medieval Great Philosophers Credits: 3
- PHI 341 - Philosophy of Death and Dying Credits: 3

**School Psychology - Program Description**

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Degrees Offered**

Specialist in school psychology

**Website:** [www.gvsu.edu/psychology](http://www.gvsu.edu/psychology)

School psychologists are licensed professionals who provide academic, behavioral, and mental-health services within the school environment. Collaborating with teachers, school administrators, and other school professionals, they conduct evaluations and design intervention plans for students who are struggling with a range of academic and behavior problems. Recent legislative and financial shifts in education are driving schools to make significant systemic changes. Because of their training, school psychologists play crucial roles in transforming schools and evaluating outcomes for students, schools and communities.

**School Psychology at Grand Valley**

The three year, full time school psychology program at Grand Valley is designed to create leaders and innovators in the field of education. Students will receive extensive training through coursework, practicum, and research experiences in the assessment, prevention, and intervention of academic, social, and mental health problems in a wide range of students. We aim to create school psychologists who are databased problem solvers that make an impact on schools at the local, state, and national level.

Upon completion, students will earn a specialist degree in school psychology. Students are eligible for licensure at the state and national level. A marked distinction of our program is that upon graduation, following passing an examination and completing required supervision hours, students are also eligible to become Board Certified Behavior Analysts (BCBA).

**Admission to the Master's of School Psychology Program**

All admissions materials must be received by January 5. To be eligible for consideration, applicants must have:

1. Completed a bachelor's degree in psychology, special education, or a related field with a minimum 3.0 grade point average. Students with a bachelor's degree in an unrelated field are eligible for admission; however they may have to enroll in prerequisite courses (beyond those listed as follows) prior to beginning the program. The number and topic of courses will vary depending on the individual's degree and background experiences.
2. Successfully completed undergraduate prerequisite courses (research methods, statistics, and child development)
3. Achieved satisfactory GRE scores (verbal, quantitative, and writing)
4. Submitted a personal statement
5. Provided a professional vita or resume
6. Submitted three letters of recommendation

**Master of Science and Specialist in School Psychology****Requirements for the M.S. and Psy.S. in School Psychology**

Students admitted into the graduate program in school psychology must complete 66 semester credit hours over the course of three years, including a full time, yearlong internship. Students meet the requirements for the M.S. degree upon satisfactory completion of two years of coursework (six semesters), and are awarded the Psy.S. degree upon completion of the full year internship. The program accepts one cohort (beginning in the fall semester) each year. Students must enroll full time in the program. The required curriculum:

## Group Social Studies

### Semester 1: Fall

- PSY 500 - Introduction to School Psychology Credits: 3
- PSY 510 - Tests and Measurements Credits: 3
- PSY 522 - Applied Behavior Analysis I (ABA): Foundational Principles Credits: 3
- PSY 622 - Educational Assessment Credits: 3
- PSY 642 - Assessment Practicum Credits: 1

### Semester 2: Winter

- PSY 523 - Applied Behavior Analysis II: Application to Behavior Change Credits: 3
- PSY 524 - Developmental Psychopathology Credits: 3
- PSY 623 - Intellectual Assessment Credits: 3
- PSY 642 - Assessment Practicum Credits: 1
- PSY 644 - Clinical Practicum Credits: 1
- PSY 654 - School-based Intervention and Consultation Credits: 3

### Semester 3: Spring

- EDL 653 - Special Education Law Credits: 3
- PSY 550 - Research in Applied Settings Credits: 3

### Semester 4: Fall

- EDS 638 - Instructional Practices: Learning Disabilities II Credits: 3
- PSY 532 - Psychopharmacology Credits: 3
- PSY 624 - Behavioral Assessment and Intervention Credits: 3
- PSY 675 - School Psychology Practicum Credits: 3

### Semester 5: Winter

- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- PSY 527 - Ethics and Diversity in Professional Practice Credits: 3
- PSY 675 - School Psychology Practicum Credits: 3
- PSY 693 - Master's Project Credits: 3

### Semester 6: Spring

- PSY 525 - Behavior Analysis Applied to Autism Spectrum Disorders and Developmental Disorders Credits: 3

### Semester 7: Fall

- PSY 685 - School Psychology Internship Credits: 3

### Semester 8: Winter

- PSY 685 - School Psychology Internship Credits: 3

## Group Social Studies - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

The major in group social studies is designed for students seeking teacher certification in secondary and middle school social studies or in elementary education. The major includes a minimum of 42 credit hours in economics, geography, history, and political science. Students seeking teacher certification also complete a teachable minor (for secondary level) or the elementary education minor (for the elementary level) and the professional major offered by the College of Education. The group social studies major meets State of Michigan content standards for teacher preparation in social studies, which require at least six credit hours and two courses in each of the four disciplines and at least 18 credits and six courses in one of the four areas. In order to meet State Certification requirements for non-duplication of credits in the major and the minor, it is necessary to have 36 unduplicated credits in a group major and 18 unduplicated credits in the minor.

All group social studies majors complete the core courses and select an area of concentration from the component disciplines. Students must complete a substantial portion of the major, including SST 310, before admission to the College of Education. The College of Education requires that candidates for admission present an overall GPA of 2.7 as well as a GPA of 2.7 in the major and minor. Students may earn the B.A. or the B.S. degree. Students seeking the B.A. must demonstrate third-semester

proficiency in a foreign language; students seeking the B.S. complete the following:

- STA 215 - Introductory Applied Statistics Credits: 3
- EDT 370 - Technology in Education Credits: 3
- HST 290 - Research Methods in History Credits: 3

Students who decide not to seek teacher certification may complete the group social studies major and receive a bachelor's degree without completing the professional program in education; such students may graduate with a GPA lower than 3.0 provided they meet the university's minimum requirements.

Transfer and post-graduate students seeking a teachable major in group social studies should consult the CLAS Advising Center for an evaluation of their previous work. Post-baccalaureate students must present a record substantially equivalent to that required of Grand Valley State University undergraduates; such students whose previous academic work is not equivalent to the Grand Valley program or whose previous work does not include at least six credits and two courses in each of the four disciplines and at least 18 credits and six courses in one of the disciplines must take additional courses to meet those requirements. Post-baccalaureate students seeking admission to the College of Education's undergraduate professional program must also take SST 310, Strategies for social studies teachers, before admission to the College of Education.

## Bachelor of Arts or Bachelor of Science in Group Social Studies

### B.A. and B.S. Degree Requirements

Students may earn the B.A. or B.S. degree. Students seeking the B.A. must demonstrate third-semester proficiency in a foreign language, students seeking the B.S. complete the following courses:

- EDT 370 - Technology in Education Credits: 3
- HST 290 - Research Methods in History Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Requirements for a Major in Social Studies

#### Core

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- GPY 100 - Physical and Environmental Geography Credits: 3
- GPY 235 - Geography for a Changing World Credits: 3
- HST 203 - World History to 1500 A.D. Credits: 3
- HST 204 - World History since 1500 Credits: 3
- HST 205 - American History to 1877 Credits: 3
- HST 206 - American History since 1877 Credits: 3
- PLS 206 - American Constitutional Foundations Credits: 3
- PLS 211 - International Relations Credits: 3

The following course must be taken before admission to the College of Education.

- SST 310 - Teaching Social Studies: Secondary Credits: 3

The following course must be taken with or after Student Assisting or Student Teaching:

- SST 495 - Education in Plural Societies (Capstone) Credits: 3

### Requirements for a Major in Social Studies with Elementary Emphasis

Students seeking certification must have a 3.0 GPA in the social studies major with elementary emphasis and elementary teaching minor to be eligible to enter the College of Education.

Students seeking the B.A. must demonstrate third-semester proficiency in a foreign language.

Students seeking the B.S. complete the following:

- STA 215 - Introductory Applied Statistics Credits: 3
- HST 290 - Research Methods in History Credits: 3
- SST 311 - Data Literacy for Social Studies Teachers Credits: 3

## Social Studies

The following courses must be taken before admission to the College of Education:

- SST 309 - Teaching Social Studies: Elementary Credits: 3
- SST 311 - Data Literacy for Social Studies Teachers Credits: 3

The following course must be taken with or after Student Assisting or Student Teaching:

- SST 495 - Education in Plural Societies (Capstone) Credits: 3

## History

- HST 203 - World History to 1500 A.D. Credits: 3
- HST 204 - World History since 1500 Credits: 3
- HST 205 - American History to 1877 Credits: 3
- HST 206 - American History since 1877 Credits: 3

Students must complete one of the following courses in the United States Category:

- HST 301 - Colonial America Credits: 3
- HST 302 - Revolutionary America Credits: 3
- HST 312 - History of American Women Credits: 3
- HST 314 - African American History Credits: 3
- HST 315 - Latinos: The Forging of Ethnic Identities Credits: 3
- HST 318 - History of Democracy in America Credits: 3
- HST 320 - American Indians Credits: 3
- HST 323 - Michigan History Credits: 3
- HST 328 - U.S. Constitutional and Legal History Credits: 3

Students must complete one of the following courses in the Non-United States Category:

- HST 330 - Colonial Latin America Credits: 3
- HST 333 - Modern China Credits: 3
- HST 335 - Africa Before 1870 Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 342 - History of Buddhism and East Asian Religions Credits: 3
- HST 350 - Ancient Greece Credits: 3
- HST 351 - Ancient Rome Credits: 3
- HST 355 - Medieval Europe Credits: 3
- HST 375 - History of Mexico Credits: 3

## Political Science

- PLS 103 - Issues in World Politics Credits: 3
- PLS 206 - American Constitutional Foundations Credits: 3

## Economics

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3

## Geography

- GPY 220 - Cultural Geography Credits: 3
- GPY 235 - Geography for a Changing World Credits: 3

## Requirements for a Major in Social Studies with Secondary Emphasis

Students seeking certification must have a 3.0 GPA in the social studies major with secondary emphasis to be eligible to enter the College of Education.

Students seeking the B.A. must demonstrate third-semester proficiency in a foreign language.

Students seeking the B.S. complete the following:

- STA 215 - Introductory Applied Statistics Credits: 3
- HST 290 - Research Methods in History Credits: 3
- SST 311 - Data Literacy for Social Studies Teachers Credits: 3

## Social Studies

The following courses must be taken before admission to the College of Education:

- SST 310 - Teaching Social Studies: Secondary Credits: 3
- SST 311 - Data Literacy for Social Studies Teachers Credits: 3

The following course must be taken with or after Student Assisting or Student Teaching:

- SST 495 - Education in Plural Societies (Capstone) Credits: 3

## History

- HST 203 - World History to 1500 A.D. Credits: 3
  - HST 204 - World History since 1500 Credits: 3
  - HST 205 - American History to 1877 Credits: 3
  - HST 206 - American History since 1877 Credits: 3
- Students must complete one of the following courses in the United States category:

- HST 303 - Era of Sectional Conflict, Civil War, and Reconstruction Credits: 3
- HST 305 - America Confronts Modernity Credits: 3
- HST 306 - The 'American Century': From the Great Depression to Vietnam Credits: 3
- HST 307 - United States since 1970 Credits: 3
- HST 311 - History of Religion in the United States Credits: 3
- HST 312 - History of American Women Credits: 3
- HST 314 - African American History Credits: 3
- HST 315 - Latinos: The Forging of Ethnic Identities Credits: 3
- HST 316 - U.S. Civil Rights Movement History Credits: 3
- HST 317 - History of American Foreign Relations Credits: 3
- HST 318 - History of Democracy in America Credits: 3
- HST 320 - American Indians Credits: 3
- HST 322 - American Identity and Sports Credits: 3
- HST 327 - History of United States Urban Society Credits: 3
- HST 328 - U.S. Constitutional and Legal History Credits: 3
- HST 329 - U.S. Intellectual History Credits: 3

Students must complete **FOUR** additional history courses chosen from four of the six regional categories. Only one course (out of the four) may be at the 200 level.

### Europe Category

- HST 207 - European Civilization to the Later Middle Ages Credits: 3
- HST 208 - European Civilization since the Later Middle Ages Credits: 3
- HST 350 - Ancient Greece Credits: 3
- HST 351 - Ancient Rome Credits: 3
- HST 355 - Medieval Europe Credits: 3
- HST 360 - Tudor and Stuart England Credits: 3
- HST 361 - Modern Britain Credits: 3
- HST 364 - Renaissance and Reformation Europe Credits: 3
- HST 366 - Spain in the Age of Empire Credits: 3
- HST 377 - History of Warfare Credits: 3
- HST 386 - 20th Century Europe Credits: 3
- HST 387 - Modern Germany Credits: 3
- HST 389 - Russian History Credits: 3
- HST 390 - Soviet History Credits: 3

### East Asia Category

- HST 240 - A History of East Asia to 1800 Credits: 3
- HST 241 - A History of East Asia since 1800 Credits: 3
- HST 333 - Modern China Credits: 3
- HST 342 - History of Buddhism and East Asian Religions Credits: 3

### South and SW Asia Category

- HST 211 - History of Islamic Civilization Credits: 3
- HST 212 - India: History and Civilization Credits: 3
- HST 332 - Emergence of Modern India and South Asia Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 338 - Modern Middle East Credits: 3
- HST 339 - Modern Iran Credits: 3

### Africa Category

- HST 235 - Africa in World History Credits: 3
- HST 335 - Africa Before 1870 Credits: 3
- HST 336 - Africa After 1870 Credits: 3
- HST 343 - History of South Africa Credits: 3
- HST 331 - Modern Latin America Credits: 3
- HST 334 - The Making of the Caribbean Credits: 3

### Latin America Category

- HST 230 - Latin America in World History Credits: 3

## Social Work

- HST 330 - Colonial Latin America Credits: 3
- HST 372 - From Slavery to Freedom Credits: 3
- HST 374 - Revolution in the Americas Credits: 3
- HST 375 - History of Mexico Credits: 3

### U.S. Category

- HST 303 - Era of Sectional Conflict, Civil War, and Reconstruction Credits: 3
- HST 305 - America Confronts Modernity Credits: 3
- HST 306 - The 'American Century' From the Great Depression to Vietnam Credits: 3
- HST 307 - United States in the Age of Globalization Credits: 3
- HST 311 - History of Religion in the United States Credits: 3
- HST 312 - History of American Women Credits: 3
- HST 314 - African American History Credits: 3
- HST 315 - Latinos: The Forging of Ethnic Identities Credits: 3
- HST 316 - U.S. Civil Rights Movement History Credits: 3
- HST 317 - History of American Foreign Relations Credits: 3
- HST 318 - History of Democracy in America Credits: 3
- HST 320 - American Indians Credits: 3
- HST 322 - American Identity and Sports Credits: 3
- HST 327 - History of U.S. Urban Society Credits: 3
- HST 328 - U.S. Constitutional and Legal History Credits: 3
- HST 329 - Intellectual History of the U.S. Credits: 3

### Political Science

- PLS 103 - Issues in World Politics Credits: 3
- PLS 206 - American Constitutional Foundations Credits: 3
- PLS 211 - International Relations Credits: 3

### Economics

- ECO 210 - Introductory Macroeconomics Credits: 3
  - ECO 211 - Introductory Microeconomics Credits: 3
- Students must complete **one** of the following courses
- ECO 349 - Emerging Markets Issues Credits: 3
  - ECO 365 - Comparative Economic Systems Credits: 3
  - ECO 369 - International Economic Issues Credits: 3

### Geography

- GPY 100 - Physical and Environmental Geography Credits: 3
- GPY 220 - Cultural Geography Credits: 3
- GPY 235 - Geography for a Changing World Credits: 3

## Social Work - Program Description

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section of this catalog.

### Mission

The School of Social Work derives its mission from Grand Valley State University's mission of liberally educating students to shape their lives, their professions, and their societies. Toward that end, the school prepares its students to attain social work practice and professional leadership; advance the field's knowledge of effective professional practice and education through research and evaluation; enhance and sustain the welfare and well-being of citizens, organizations and communities of West Michigan, the state, the nation, and the world; and further the goals of the university and of the social work profession in this region and beyond.

All of the school's programs are grounded in the profession's body of knowledge, values and skills that support and enhance the opportunities, resources, and capacities of people to achieve their full potential; prevent and alleviate personal, interpersonal, organizational and societal problems; and improve the conditions that limit human development and adversely impact the quality of human life. The school celebrates and affirms the importance of diversity in all of its forms, and it supports the expansion of human rights, cultural competence, empowerment, social and political justice, civic participation and equality in West Michigan and around the world.

The school's legacy on social justice and on meeting the significant professional workforce needs of an expansive West Michigan social services sector remain strong. Another distinctive feature of the school is its integration and promotion of domestic and international service learning opportunities that prepare students for 21st century practice in increasingly global economic and social contexts.

### Goals

The school's overarching goals:

- The School of Social Work provides a generalist social work curriculum in a high quality learning environment that prepares B.S.W. graduates for entry level social work practice that promotes social and economic justice and endeavors to address poverty and other social problems within organizational, individual, and community contexts not limited to West Michigan and the State of Michigan.
- The School of Social Work provides a M.S.W. foundation curriculum in a high-quality learning environment that prepares students for success in our advanced generalist social work specialization.
- The School of Social Work provides an advanced generalist social work curriculum that prepares M.S.W. graduates for autonomous social work practice that promotes social and economic justice and endeavors to address poverty and other social problems within organizational, individual, and community contexts not limited to West Michigan and the State of Michigan.
- Graduates of all programs of the School of Social Work exhibit a professional commitment to enhancing social justice, promoting human rights, ensuring the dignity and worth of all individuals, practicing with integrity, upholding the profession's code of ethics, incorporating diversity into their practice, and advancing the profession's reputation and knowledge base.
- Graduates of the B.S.W. and M.S.W. programs have the knowledge, skills and values they need to create and/or acquire new information about professional social work practice as they advance throughout their careers.
- Graduates of all programs of the school are competent users of technologies and proficient consumers of training opportunities that support their lifelong professional development.

The School of Social Work B.S.W. and M.S.W. programs do not award academic credit for students' life experiences or previous work experiences.

Students enrolled in the School of Social Work curriculum must be cognizant of the fact that past or future criminal conduct may limit or prevent placement in a field practice agency. Because field practice is a B.S.W. and M.S.W. curriculum imperative, the social work degree is awarded only after successful completion of all requirements. Furthermore, past or present criminal conduct may render an individual ineligible to secure a state license and the privilege to practice social work.

### The Bachelor of Social Work Program

The Bachelor of Social Work program is accredited by the Council on Social Work Education. [www.gvsu.edu/ssw](http://www.gvsu.edu/ssw)

The overarching goals of the B.S.W. program:

1. To prepare students for entry into the social work profession as generalist practitioners
2. To prepare students for continued professional development opportunities

### Admission

All social work majors must formally apply to the School of Social Work during the spring/summer semester prior to their junior year.

To be eligible for consideration of candidacy, students must have:

1. A minimum cumulative GPA of 2.5 (4.0 scale)
2. Completion of the following components of the general education curriculum:
  - a. All Foundation categories; except mathematical sciences

- b. Cultures category: U.S. Diversity
- c. Basic skills categories: WRT 150 and one general education MTH/SCI course
- 3. School of Social Work prerequisite course requirements
- 4. Earned a minimum grade of B- (2.7) and not have repeated the following courses more than once: PLS 102; PSY 303; PSY 360 or SOC 360; SOC 105; SOC 313 or SW 300; SOC 252; SOC 315; and SW 150.
- 5. Though it is recommended that PSY 303, PSY/SOC 360, and SOC 313/SW 300 be completed prior to candidacy, you may complete these courses concurrent with SW courses outlined in the third year. These courses must be satisfied to continue in the fourth year.

Completed candidacy applications are reviewed by the School of Social Work faculty. Accepted applicants are awarded candidacy for the B.S.W. degree and are eligible for enrollment in specified third- and fourth-year professional social work courses. Applicants who are not accepted are advised and referred to the B.S.W. director.

### Advising

Upon declaration of social work as a major, students will be assigned a faculty mentor to assist the student with questions regarding the profession. In addition, students are encouraged to make contact with the College of Community and Public Service Undergraduate Advising Center. [www.gvsu.edu/ccpsadvising](http://www.gvsu.edu/ccpsadvising)

### Field Practice

B.S.W. Field Education Coordinator: Scheuerle

Field education practice is a significant and integral part of the student's total professional training. In the fall semester of the junior year, students are required to complete:

- SW 348 - Professional Development in Social Work Credits: 3

Students are required to complete and submit the Application for Field Practice in Social Work. The minimum requirements for entering field practice:

1. An overall 2.5 GPA.
2. A minimum B- (2.7 GPA) grade in the cognate courses required for BSW Candidacy.
3. An overall 3.0 GPA in social work courses.
4. Maintenance of official "candidacy status."
5. Successful completion of all first-, second-, and third-year required courses.
6. A schedule that allows two full days of fieldwork during the fall and winter semesters.

Students commence field practice in the fall of their senior year and must follow the course sequence. Students must simultaneously enroll in field education practice and field education seminar. The field education practice requirement consists of a minimum of 225 clock hours per semester for two consecutive semesters in a human service agency selected to meet the student's educational and professional needs and interests. These hours are accumulated at the rate of 15 hours per week for 15 weeks. All field education practice students will receive and are expected to become familiar with the "Manual for Field Education Practice: Policies and Procedures". Elective social work practice courses and field education seminars are taken in conjunction with a field education practice. Students entering a field practice must arrange or provide their own transportation.

### The Master of Social Work Program

The Master of Social Work program is accredited by the Council on Social Work Education.

The goals of the M.S.W. advanced generalist program are:

1. To award the graduate degree to individuals who are not only skilled practitioners but also capable of assuming leadership and scholarly professional roles in the community, region, state, national and global communities

2. To contribute to the ongoing development of professional social work knowledge and practice through research and scholarly inquiry that employ state-of-the-art technology
3. To maximize the strengths and assets within local, regional, statewide, national and international social welfare and human services communities through direct participation in organizing, leading, and participating in effective capacity building and social and political action activities

### The Advanced Generalist Model

The advanced generalist model is built on a liberal arts education that promotes the use of critical thinking skills and conscientious application of advanced practice social work knowledge, skills, values and ethics. The model integrates the advanced practice skills concentration curriculum to equip graduates to meet the diverse demands presented by unique social service delivery systems.

Features of the advanced generalist model are designed to

- enhance the depth and breadth of practice in a multi-method, multi-level, multi-systemic and theoretically grounded perspective;
- refine and shape advanced practitioners through acquisition of professional competencies to assess, intervene, and evaluate within all systems and within all practice environments;
- affirm that human problems derive from a complex interplay of psychological, social, cultural, economic, political, biological and physical forces;
- prepare students to effectively intervene with individuals, families, groups, organizations and communities, and advocating for environmental justice through community engagement;
- expand and enhance the foundation of generalist social work core competencies with advanced knowledge and practice behaviors; and
- through high-impact learning acquire advanced skills in leadership, collaboration, administration, advocacy, assessment, problem solving, intervention, cultural competency, communication, community building, program evaluation, organizational management, policy analysis, and scientific inquiry.

The integration of professional practice skills within the advanced generalist curriculum model results in mastery of social work's core competencies and advanced generalist practitioners are proficient in a wide range of interventions, skills, roles, theories, systems, and settings (Jones and Pierce, 2006).

### Admission and Academic Requirements

For general requirements, see the Admissions section of the Grand Valley State University Undergraduate and Graduate Catalog.

### Admission to the Regular M.S.W. and M.S.W. Advanced Standing Programs

GVSU School of Social Work welcomes applications to the master's program. There are three distinct admission dates that guarantee review:

- **February 1** for students applying for full-time advanced standing
- **March 15** for students applying for part-time advanced standing or regular admission in the full- or part-time program
- **October 1** for students applying for winter semester, part-time regular program only
- Applications received later than these dates are not guaranteed review.

### I. Admission Requirements for M.S.W. Advanced Standing Students: Policies and Procedures for Advanced Standing

The School of Social Work recognizes superior academic performance by students who have graduated from a Council on Social Work Education accredited undergraduate social work or social welfare department or program within five years prior to enrollment in the M.S.W. program.

A minimum GPA of 3.0 in each social work course from a CSWE accredited baccalaureate program may qualify prospective students for "advanced standing." Students are exempted from 19 hours of first-year

## Social Work

core or foundation courses and may therefore accelerate their graduate study by completing the remaining 41 hours of degree requirements in one calendar year. The courses exempted are SW 600, SW 601, SW 603, SW 610, SW 620, SW 650, and SW 651. Advanced standing students are required to maintain a 3.00 GPA throughout their program.

All advanced standing students may take a 100-item diagnostic proficiency examination in research methods. A score of 75 or higher will qualify the student for exemption from SW 690 Research Methods I. This reduces to 38 hours the degree requirements remaining for completion.

Students admitted to the full-time advanced standing program must begin their studies during the spring/summer semester and continue full time during the subsequent fall and winter semesters. Students admitted as part-time advanced standing students begin fall semester and continue part time during the subsequent two years. The school may, in certain instances, prescribe additional coursework in areas of particular weakness or need. Advanced standing applicants may be interviewed prior to admission.

- Applicants must have an overall GPA no lower than 3.0 in their undergraduate coursework.
- Official transcripts must note that the B.S.W. degree has been awarded from a CSWE accredited program.
- All B.S.W. coursework must have a GPA of 3.0 or higher to qualify for application for advanced standing.
- Exception to the previous statement: if applicant possesses a GPA below 3.0 in a B.S.W. course, they must have a cumulative overall 3.5 GPA social work coursework.
- Three professional (academic or employment) recommendations are required from individuals able to attest to the candidate's qualifications for graduate work and professional practice.
- Must demonstrate successful (3.0 GPA) performance across ALL areas of field with no major concerns.
- A current resume, detailing work and volunteer experiences.
- Graduate admission statement: A personal statement answering the five questions detailed in the Admissions packet.
- Coursework Requirement Form, found in the Admissions packet.

### Advanced Standing Graduate Eligibility Degrees

Advanced standing is awarded only to graduates holding degrees from baccalaureate social work programs:

- accredited by CSWE, or
- recognized by its International Social Work Degree Recognition and Evaluation Service, or
- covered under a memorandum of understanding with international social work accreditors.

## II. Admission Requirements for Regular Degree-Seeking M.S.W. Applicants

- Three professional (academic or employment) recommendations are required from individuals able to attest to the candidate's qualifications for graduate work and professional practice
- Applicants must have an overall GPA no lower than 3.0 in their undergraduate coursework
- Graduate admissions statement, responding to the five questions detailed in the Admissions packet
- Current resume detailing work and volunteer experience
- Coursework Requirement Form, found in the Admission's packet.

### Field Education

The field education practice component of the M.S.W. program is the signature pedagogy of the social work student's overall educational experience. It provides opportunities for the development, integration, and application of professional knowledge, skills, values, and cognitive and affective processes. Placements are made in a wide variety of human service settings in the public and private sectors.

#### Field Education for Advanced Standing Students

Eight of the 41 credit hours required for the M.S.W. degree are devoted to field education. Admitted students will participate in two consecutive

academic semesters of supervised, agency-based field instruction, for a minimum of 21 hours per week. Placements are made in affiliated agencies selected on the basis of their commitment to social work education and their willingness to provide a professional learning environment, meaningful experiences, and supportive resources consistent with the nine core competencies provided by the Council on Social Work Education (2015). Prior to entering field education practice each student must attend a scheduled mandatory Field Education Orientation seminar.

In order to be assigned a field placement and remain in the field education practice setting, a student must

1. have completed a B.S.W. degree;
2. possess and maintain the minimum 3.0 GPA; and
3. have no more than one incomplete grade.

#### Field Education for Regular M.S.W. Students

Twelve of the 60 credit hours required for the M.S.W. degree are devoted to field education. Admitted students will participate in three consecutive academic semesters of supervised, agency-based field instruction, for a minimum of 21-26 hours per week. Placements are made in affiliated agencies selected on the basis of their commitment to social work education and their willingness to provide a professional learning environment, meaningful experiences, and supportive resources consistent with the nine core competencies provided by the Council on Social Work Education (2015). Prior to entering field education practice each student MUST attend a scheduled mandatory Field Education Orientation seminar.

In order to be assigned a field placement and remain in the field education practice setting, a student must

1. have completed all prerequisites and other requirements for field placement;
2. possess and maintain the minimum 3.0 GPA; and
3. have no more than one incomplete grade.

Students who would like a field education practice placement in a school setting must take SW 650 - Field Education I and SW 651 - Field Education Seminar I during the winter semester. All other regular program students will begin Field Education practice spring/summer semester.

### Nondegree-seeking

Students who are not seeking a graduate degree or who have not completed all of the admission requirements of their chosen program may apply for nondegree-seeking status. A maximum of six Social Work semester credits earned at Grand Valley State University as a nondegree-seeking student may be considered for transfer to degree seeking status. Enrollment as a nondegree-seeking student does *not* guarantee formal admission to the M.S.W. program. Nondegree status students are limited to two of the following: SW 600, SW 601, SW 610, and/or SW 620.

### Changing Status from Nondegree- to Degree-seeking

Students who seek a change in status must

1. submit all required admission materials; and
2. submit a degree-seeking graduate application form to the GVSU Admissions Office.

### Transfer Credit

The School of Social Work has established procedures for determining the award of credit for previous academic coursework and to address the issue of redundancy. It is noted that:

1. The maximum of 18 semester hours of transfer credit for graduate courses completed with a grade of B or better at another CSWE accredited M.S.W. program.
2. A foundation course may be waived when the student demonstrates proficiency through examination in the specific foundation course. In this instance, the course is waived but the number of credits must be satisfied with other coursework.
3. Transfer credits are not granted for courses completed more than five years before enrollment in the Grand Valley M.S.W. program or for courses taken toward the completion of another degree.

## Bachelor of Social Work

### Undergraduate Social Work Admission

#### Social Work Majors

The B.S.W. degree requires successful completion of 120 semester hours of college credits. The program is built on a liberal arts foundation plus 34 hours of cognate and international courses. These required courses augment, complement, and supplement the 45 credit hours of professional social work courses, which include emphases on social work values and ethics, social and economic justice, diversity, and populations at risk in the human behavior and social environment, social welfare policy and services, generalist social work practice, social work research, and field education practice sequences.

- The Bachelor of Social Work degree program is a secondary admission program, which only admits students one time per year. An eligible applicant must:
- Have a minimum cumulative grade point average of 2.500 or above;
- Have all admission prerequisite coursework successfully completed or in progress at the time of application;
- Earn a C or better in all admission prerequisite coursework (excluding general education requirements and MTH 110);
- Adhere to the SSW course repeat policy which states that a student may not repeat a required course more than once.

The B.S.W. program starts in the fall semester and the SSW admits students one time per year.

At the time of graduation, all students must have earned a minimum cumulative GPA of 2.500 and a 3.000 GPA in their social work major courses.

#### Admission Prerequisite Courses

All admission prerequisite courses must be completed with a C or better and the cumulative grade point average for these course must a 2.500 or above. These courses may be repeated no more than once.

\*BIO 104 is the recommended Life Science choice for social work majors.

- Social Problems/Social Inequality Elective Credits: 3
  - \* BIO 104 - Biology for the 21st Century Credits: 4
  - PLS 102 - American Government and Politics Credits: 3
  - PSY 101 - Introductory Psychology Credits: 3
  - PSY 303 - Psychopathology Credits: 3
  - **OR** PSY 324 - Developmental Psychopathology
  - SOC 101 - Introduction to Sociology Credits: 3
  - SW 150 - Human Needs in Complex Societies Credits: 3
- Students must also demonstrate a MTH 110 proficiency and have completed their general education Foundations (excluding Mathematical Sciences); these requirements do not require C or better.

#### Required Courses in the Major

The student must earn an overall G.P.A. of 3.0 in social work courses and not have repeated a course more than once. Also included are six credits from the list of social work electives, as well as three credits from the list of international program courses.

- SW 150 - Human Needs in Complex Societies Credits: 3
- SW 300 - Pluralism in American Society Credits: 3
- SW 316 - Interviewing in Social Work Credits: 3
- SW 317 - Generalist Practice I Credits: 3
- SW 318 - Generalist Practice II Credits: 3
- SW 319 - Social Welfare Policy and Services Credits: 3
- SW 340 - Human Behavior and the Social Environment I Credits: 3
- SW 341 - Human Behavior and the Social Environment II Credits: 3
- SW 348 - Professional Development in Social Work Credits: 3
- SW 430 - Social Work Research Credits: 4
- SW 490 - Social Work Field Education I Credits: 3
- SW 491 - Social Work Field Education II Credits: 3
- SW 492 - Social Work Field Seminar I Credits: 1
- SW 493 - Social Work Field Seminar II Credits: 1
- SW 495 - Social Work Capstone Credits: 3

#### Courses Required Prior to Second Year of Social Work Program

The following required courses must be completed by the student before starting field education:

- Culture and environment elective Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### Courses Required Prior to Graduation

The following courses must be completed prior to graduating with their B.S.W.:

- Interprofessional practice elective Credits: 3
- Social Work electives Credits: 6
- International relations elective Credits: 3

#### Course Lists

##### Social Problems/Social Inequality Course (3 credits)

- BMS 222 - Introduction to Public Health Credits: 3
- CJ 101 - Justice and Society Credits: 3
- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- SOC 105 - Social Problems Credits: 3
- SOC 252 - Sociology of Drug Use and Abuse Credits: 3
- SOC 286 - Sociology of Health Care Credits: 3
- SOC 315 - Social Class Inequality Credits: 3
- SOC 381 - Class, Race, Gender, and Sexuality Credits: 3
- CJ 320 /WGS 320 - Crimes Against Women Credits: 3

##### Culture and Environment Course (3 credits required)

Culture and environment course must be completed prior to entering field education.

\*Courses cannot be used to satisfy both the culture and environment and social work elective requirements.

- ANT 204 - Peoples and Cultures of the World Credits: 3
- ANT 340 - Culture and Environment Credits: 3
- LIB 350 - The Immigrant Experience in the U.S. Credits: 3
- PHI 370 - Sex Matters: Feminist Philosophy in the Contemporary World Credits: 3
- PLS 301 - Poverty, Inequality, and U.S. Public Policy Credits: 3
- PSY 355 - Psychology and Culture Credits: 3
- PSY 360 - Social Psychology: Psychology's View Credits: 3
- PSY 362 - Environmental Psychology Credits: 3
- PSY 385 - Psychology of Religion Credits: 3
- SOC 287 - Sociology of Religion Credits: 3
- SOC 345 - Cultural Sociology Credits: 3
- SOC 351 - Urban Sociology Credits: 3
- SOC 360 - Social Psychology: Sociology's View Credits: 3
- \*SW 351 - Cross-cultural Service Learning Credits: 3
- \*SW 354 - Social Work: International Service Credits: 3 to 4

##### Interprofessional Practice (3 credits required)

Interprofessional practice course must be completed prior to entering field education.

- CJ 420 - Juvenile Correctional Counseling Credits: 3
- COM 302 - Small Group Communication Credits: 3
- IDS 350 - Civil Discourse Credits: 3
- LIB 341 - Leadership for Social Change Credits: 3
- PA 270 - Public and Nonprofit Administration Credits: 3
- PA 335 - Grant Writing Credits: 3
- PA 360 - Voluntarism and the Nonprofit Sector Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3
- PSY 310 - Behavior Modification Credits: 3
- PSY 452 - Counseling: Theories and Applications Credits: 3
- SOC 290 - Sociology of Education Credits: 3

##### Social Work Electives (6 credits required)

- SW 320 - Children and Child Welfare Services Credits: 3
- SW 322 - Responding to Illness Credits: 3
- SW 333 - Community Work with the Lesbian, Gay, Bisexual and Transgender Community Credits: 3

## Social Work

- SW 351 - Cross-cultural Service Learning Credits: 3
- SW 354 - Social Work: International Service Credits: 3 to 4
- SW 380 - Special Topics in Social Work Credits: 1 to 4
- SW 439 - The Family and Social Work Practice Credits: 3
- SW 453 - Case Management Credits: 3
- SW 461 - Multicultural Issues in Social Work Practice Credits: 3
- SW 470 - Contemporary Social Policy Issues Credits: 3
- SW 499 - Independent Study in Social Work Credits: 1 to 4

### International Relations Program (3 credits required)

Note: Students are not restricted to this list; students may ask the B.S.W. director to consider additional courses.

- AAA 200 - Understanding Africa Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- GPY 235 - Geography for a Changing World Credits: 3
- HST 211 - History of Islamic Civilization Credits: 3
- HST 212 - India: History and Civilization Credits: 3
- HST 310 - Cultural and Social Topics in Nonwestern History Credits: 3
- HST 319 /LIB 319 - Human Traffic and Trafficking Credits: 3
- HST 331 - Modern Latin America Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 338 - Modern Middle East Credits: 3
- HST 386 - 20th Century Europe Credits: 3
- LAS 374 - Revolution in the Americas Credits: 3
- MES 201 - Introduction to the Middle East Credits: 3
- PLS 211 - International Relations Credits: 3
- PLS 313 - International Organization Credits: 3
- PLS 327 - Politics of Developing Countries Credits: 3
- WGS 350 /SOC 350 - Family and Gender in the Developing World Credits: 3
- SW 354 - Social Work: International Service Credits: 3 to 4

### Recommended Free Electives

Note: Students are not restricted to this list.

- ANT 204 - Peoples and Cultures of the World Credits: 3
- PA 270 - Public and Nonprofit Administration Credits: 3
- PA 449 - Policy Research and Evaluation Credits: 3
- PHI 102 - Ethics Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3
- PSY 310 - Behavior Modification Credits: 3
- PSY 316 - The Psychology of Human Intimacy and Sexuality Credits: 3
- SOC 379 - Sociology of Love Credits: 3
- SOC 390 - Advanced Seminar on Social Issues Credits: 3
- WGS 200 - Introduction to Gender Studies Credits: 3
- WGS 360 - Foundations of Feminism Credits: 3
- WGS 380 - Special Topics in Women Gender, and Sexuality Studies Credits: 1 to 4

### Transfer Students

A student planning to transfer to GVSU from another college or university should work closely with their local academic advisor. As a transfer student, be sure to carefully review your GVSU transcript evaluation upon admission to the university. To be considered for the Social Work program, a student must be admitted to GVSU and have declared social work as a major prior to application. Transfer students are able to declare Social Work as their major at transfer orientation.

#### An eligible applicant must

- have a minimum cumulative grade point average of 2.500 (including transfer credits);
- have all admission prerequisite coursework successfully completed or in-progress at the time of application;
- earn a C or better in all admission prerequisite coursework (excluding general education requirements and MTH 110);
- adhere to the SSW course repeat policy which states that a student may not repeat a required course more than once;

- successfully complete SW 300 within their first year of the B.S.W. program, as most transfer institutions do not offer an equivalent; and
- demonstrate MTH 110 proficiency via MTH Placement test, ACT or SAT scores, or through successful completion of a MTH 110 equivalent.

The B.S.W. program starts in the fall semester and the SSW admits students one time per year.

Given extenuating circumstances, the director of the Bachelor of Social Work program reserves the right to work with students on a case by case basis when making admission decisions.

Once admitted into the School of Social Work, all transfer students must satisfy all university and major requirements prior to graduation.

### Suggested Order of Coursework for a Social Work Major

#### Fall Semester - Year One (15 credits)

- WRT 150 - Strategies in Writing Credits: 4
- SW 150 - Human Needs in Complex Societies Credits: 3 (general education S and BS and SW core course)
- MTH 110 - Algebra Credits: 4 (prerequisite for general education MTH SCI)
- BIO 104 - Biology for the 21st Century Credits: 4 (general education LS/Lab and SW prerequisite)

#### Winter Semester - Year One (15 credits)

- SOC 101 - Introduction to Sociology (general education S and BS and SW prerequisite) Credits: 3
- PSY 101 - Introductory Psychology (general education S and BS and SW prerequisite) Credits: 3
- General education course (choose from ART, P and L, or HST) Credits: 3
- General education course (choose from ART, P and L, or HST) Credits: 3
- General education course (Physical Science Nonlab) Credits: 3

#### Fall Semester - Year Two (15 credits)

- Social Problems/Social Inequality Elective Credits: 3
- International relations program course Credits: 3
- General education course (choose from ART, P and L, or HST) Credits: 3
- General education course (choose a U.S. Diversity) Credits: 3
- PLS 102 - American Government and Politics Credits: 3

#### Winter Semester - Year Two (15 credits)

- General education course (choose a World Perspectives) Credits: 3
- General elective Credits: 3
- PSY 303 - Psychopathology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- SW 300 - Pluralism in American Society Credits: 3

#### Fall Semester - Year Three (15 credits)

- Culture and environment elective Credits: 3
- SW 317 - Generalist Practice I Credits: 3 (SW Core Course)
- SW 319 - Social Welfare Policy and Services Credits: 3 (SW Core Course)
- SW 340 - Human Behavior and the Social Environment I Credits: 3 (SW Core Course)
- SW 348 - Professional Development in Social Work Credits: 3 (SW Core Course)

#### Winter Semester - Year Three (15 credits)

- General education Issues Credits: 3
- General elective Credits: 3
- SW 316 - Interviewing in Social Work Credits: 3 (SW Core Course)
- SW 318 - Generalist Practice II Credits: 3 (SW Core Course)
- SW 341 - Human Behavior and the Social Environment II Credits: 3 (SW Core Course)

#### Fall Semester - Year Four (15 credits)

- Social work elective Credits: 3
- Inter-Professional practice elective Credits: 3

- General elective Credit: 1
- SW 430 - Social Work Research Credits: 4 (SW Core Course)
- SW 490 - Social Work Field Education I Credits: 3 (SW Core Course)
- SW 492 - Social Work Field Seminar I Credits: 1 (SW Core Course)

#### Winter Semester - Year Four (15 credits)

- Social work elective Credits: 3
- General education Issues: Credits: 3
- General elective Credits: 2
- SW 491 - Social Work Field Education II Credits: 3 (SW Core Course)
- SW 493 - Social Work Field Seminar II Credits: 1 (SW Core Course)
- SW 495 - Social Work Capstone Credits: 3 (SW Core Course)

Note: This is a sample curriculum guide. It may not be applicable for every student and is not a replacement for meetings with an academic advisor.

## Master of Social Work

**Website:** [www.gvsu.edu/grad/msw](http://www.gvsu.edu/grad/msw)

### Programs of Study

The School of Social Work offers a 60 credit hour Master of Social Work (M.S.W.) degree program on both a full time and part time basis. Students pursuing part-time study may choose either a three or four academic year model. All requirements for graduation must be completed within four years after coursework has begun. The distribution of course requirements for both programs of study are set forth as follows.

### Requirements for the M.S.W.

The M.S.W. degree consists of a minimum of 60 credit hours.

#### Primary Foundation (all required)

- SW 600 - Cultural Competency for Social Work Credits: 3
- \*SW 601 - Foundations of Social Work Practice Credits: 3

\*See your advisor : Not required for students with CSWE accredited B.S.W. undergraduate degrees or Child Welfare Grantees. If waived, students take a SW elective in place of SW 601.

- SW 603 - Integrated Methods Credits: 3
- SW 610 - Social Welfare Policy and Services I Credits: 3
- SW 620 - Human Behavior and the Social Environment Credits: 3
- \*\*SW 690 - Social Research I Credits: 3

\*\* Test-out exam available.

#### Advanced Generalist Concentration (all required):

- SW 622 - Psychopathology and Social Deviance Credits: 3
- SW 662 - Substance Abuse and Social Work Practice Credits: 3
- SW 670 - Social Work Practice: Individuals Credits: 3
- SW 693 - Social Research II Credits: 3
- SW 640 - Seminar in Advanced Generalist Practice (Capstone) Credits: 3

#### Advanced Policy

Choose one of four:

- SW 612 - Social Policy: Families and Children Credits: 3
- SW 614 - Social Policy and Mental Health Credits: 3
- SW 630 - Social Work: Global Service-Learning Credits: 3
- SW 631 - Cross-cultural Service Learning Credits: 3

#### Field Education Practice (all required)

- SW 650 - Field Education I Credits: 3
- SW 651 - Field Education Seminar I Credits: 1
- SW 652 - Field Education II Credits: 3
- SW 653 - Field Education Seminar II Credits: 1
- SW 654 - Field Education III Credits: 3
- SW 655 - Field Education Seminar III Credits: 1

#### Advanced Micro-core

Choose one of two:

- SW 672 - Social Work Practice: Groups Credits: 3
- SW 674 - Social Work Practice: Families and Children Credits: 3

#### Advanced Macro-core

Choose two of four:

- IPE 507 - Integrated Team Health Care Credits: 2  
**AND** SW 607 - Building Relationships Across Interprofessional Domains [BRAID] Social Work Seminar Credits: 1
- SW 660 - Grant Writing and Resource Development Credits: 3
- SW 677 - Principles of Supervision Credits: 3
- SW 676 - Community and Social Planning Credits: 3
- SW 678 - Human Services Administration Credits: 3
- SW 679 - Program Planning, Monitoring and Evaluation Credits: 3

#### Electives (choose one course of at least three credits)

Any course from previous list not taken to satisfy requirements or:

- SW 613 - Human Rights and Social Work Credits: 3
- SW 665 - Aging in Contemporary Society Credits: 3
- SW 667 - Holistic Practices in Social Work Credits: 3
- SW 668 - Child and Adolescent Trauma Credits: 3
- SW 669 - Responses to Loss and Death Credits: 3
- SW 671 - Social Work Practice in Health Care Credits: 3
- SW 673 - Social Work Practice with Children and Adolescents Credits: 3
- SW 675 - Child Welfare and Family Services Credits: 3
- SW 680 - Special Topics in Social Work Credits: 1 to 4
- SW 694 - Master's Thesis Credits: 3
- SW 695 - Master's Thesis Credits: 3

## School Social Work Certification

The School of Social Work at Grand Valley is authorized by the State Board of Education in Michigan to provide training and make recommendations concerning practitioner certification for school social work as provided in the Administrative Rules for School Social Work (Rule 340.1013) of the Michigan Department of Education.

### Requirements for the Certification

All students seeking certification for school social work are required to take the following course, **in addition** to the 60 credit hours required for the M.S.W. degree.

- SW 664 - Social Work Practice in Schools Credits: 4

### Additional Requirements

Students must consult with the school social work advisor. In addition to taking required foundation courses, the student seeking certification must complete the following curriculum:

- SW 612 - Social Policy: Families and Children Credits: 3
- SW 662 - Substance Abuse and Social Work Practice Credits: 3
- SW 670 - Social Work Practice: Individuals Credits: 3
- SW 672 - Social Work Practice: Groups Credits: 3
- SW 674 - Social Work Practice: Families and Children Credits: 3
- SW 677 - Principles of Supervision Credits: 3
- SW 678 - Human Services Administration Credits: 3

## Sociology - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/soc-dept](http://www.gvsu.edu/soc-dept)

The sociology department is a community of critical scholars who analyze the context of social interaction and the construction of difference in society. Faculty utilize qualitative and quantitative methods to develop insight on a wide range of substantive areas.

The department seeks to 1) engage students in critical examination of their own social world and those beyond their personal experience, and 2) examine how society reproduces itself in the individual and how individuals think and behave within institutional contexts.

Departmental teaching and scholarship strive toward three main outcomes: 1) affirmation of pluralistic and democratic visions of society;

## Sociology

2) development of critical thinking and analytical skills in students, which are essential in governmental, corporate, and academic settings;  
3) empowerment of community development and participation in civic society.

### Minor in Aging and Adult Life

The sociology department participates in a multidisciplinary minor in aging and adult life. See section on Aging and Adult Life for further information.

### Honors Organization

The Grand Valley State University Theta chapter of Alpha Kappa Delta, the International Sociology Honor Society, promotes excellence in scholarship in the study of sociology, research of social problems, and such other social and intellectual activities as will lead to an improvement in the human condition.

Membership in Alpha Kappa Delta is awarded each year to sociology majors who are juniors or seniors, have an overall GPA of 3.0 or above, and have maintained a 3.0 GPA in a minimum of 12 hours of sociology courses at Grand Valley.

## Bachelor of Arts or Bachelor of Science in Sociology

### Requirements for a Major in Sociology

Students majoring in sociology are required to complete at least 45 credit hours for either a B.S. or B.A. degree. For the B.S. degree, the 45 credit hours will include 33 hours of core credit and 12 credit hours of electives chosen from courses in the sociology department. The B.A. requires 27 hours in the core, and 6 hours of electives chosen from courses in the sociology department and third semester proficiency in a language (12 hours).

#### Bachelor of Science (B.S.)

##### Core Courses (33 credit hours)

- SOC 101 - Introduction to Sociology Credits: 3  
OR SOC 105 - Social Problems Credits: 3
- SOC 204 - Introduction to Social Theory Credits: 3
- SOC 304 - Quantitative Methods in Sociology Credits: 3
- SOC 305 - Qualitative Methods in Sociology Credits: 3
- SOC 313 - Race and Ethnicity Credits: 3
- SOC 315 - Social Class Inequality Credits: 3
- SOC 317 - Sociology of Gender Credits: 3
- SOC 319 - Classic Social Theory Credits: 3  
OR SOC 321 - Contemporary Sociological Theory Credits: 3
- SOC 495 - Senior Seminar in Sociology (Capstone) Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3

##### Electives (12 credit hours)

Any four additional courses in sociology. Whichever of SOC 101 or 105, and SOC 319 or 321 that was not taken for the core can also count as electives.

#### Bachelor of Arts (B.A.)

##### Core Courses (39 credit hours)

- SOC 101 - Introduction to Sociology Credits: 3  
OR SOC 105 - Social Problems Credits: 3
- SOC 204 - Introduction to Social Theory Credits: 3
- SOC 305 - Qualitative Methods in Sociology Credits: 3
- SOC 313 - Race and Ethnicity Credits: 3
- SOC 315 - Social Class Inequality Credits: 3
- SOC 317 - Sociology of Gender Credits: 3
- SOC 319 - Classic Social Theory Credits: 3  
OR SOC 321 - Contemporary Sociological Theory Credits: 3
- SOC 495 - Senior Seminar in Sociology (Capstone) Credits: 3

- STA 215 - Introductory Applied Statistics Credits: 3
- Third-semester proficiency foreign language

##### Electives (6 credit hours)

Any two additional courses in sociology. Whichever of SOC 101 or 105, and SOC 319 or 321 that was not taken for the core can also count as an elective.

### Suggested Order of Coursework for a Major in Sociology

#### First Year B.S.

- MTH 110 - Algebra Credits: 4
- SOC 101 - Introduction to Sociology Credits: 3  
OR SOC 105 - Social Problems Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

#### Second Year B.S.

- SOC 304 - Quantitative Methods in Sociology Credits: 3
- SOC 305 - Qualitative Methods in Sociology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3

#### Third Year B.S.

- SOC 313 - Race and Ethnicity Credits: 3
- SOC 315 - Social Class Inequality Credits: 3
- SOC 317 - Sociology of Gender Credits: 3
- SOC 319 - Classic Social Theory Credits: 3  
OR SOC 321 - Contemporary Sociological Theory Credits: 3

#### Fourth Year B.S.

- SOC elective
- SOC elective
- SOC elective
- SOC elective
- SOC 495 - Senior Seminar in Sociology (Capstone) Credits: 3

#### First Year B.A.

- MTH 110 - Algebra Credits: 4
- SOC 101 - Introduction to Sociology Credits: 3  
OR SOC 105 - Social Problems Credits: 3
- SOC 204 - Introduction to Social Theory Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- Language 101
- Language 102

#### Second Year B.A.

- SOC 304 - Quantitative Methods in Sociology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- Language 103

#### Third Year B.A.

- SOC 313 - Race and Ethnicity Credits: 3
- SOC 315 - Social Class Inequality Credits: 3
- SOC 317 - Sociology of Gender Credits: 3
- SOC 319 - Classic Social Theory Credits: 3  
OR SOC 321 - Contemporary Sociological Theory Credits: 3

#### Fourth Year B.A.

- SOC elective
- SOC elective
- SOC elective
- SOC 495 - Senior Seminar in Sociology (Capstone) Credits: 3

## Sociology Minor

Students minoring in sociology are required to complete 21 credit hours in the department.

### Requirements for the Minor

The 21 credit hours will include:

- SOC 101 - Introduction to Sociology Credits: 3
- SOC 204 - Introduction to Social Theory Credits: 3
- 15 elective credits (five courses) in sociology

## Bachelor of Arts in Spanish

For additional information about opportunities your college offers, please refer to the College of Arts and Sciences section in this catalog.

### Requirements for a Major in Spanish

Students majoring in Spanish are required to take a minimum of 33 credits in this subject beyond the 200-level, including SPA 321, 322, one civilization and culture course (from SPA 310, 311, 312 or 313), one Survey of Literature course (either SPA 331 OR SPA 332), SPA 330, one 400-level literature course, and SPA 495 (Capstone). All students are urged to declare the major at the beginning of their sophomore year and to take courses beyond the minimum number, particularly those in civilization and culture and literature. Students should also seriously contemplate taking advantage of the various semester and year-long study abroad opportunities, and they are encouraged to consider a minor that will complement the major such as Latin American Studies, business, or another language.

Credits for 101, 102, 150, 201, 202, 203, or 204 will not be counted toward the major or minor.

### Suggested Order of Coursework for a Major in Spanish

Note: Majors may also take any of the Spanish for the professions courses as electives at any time.

In order to complete the program in four years, work toward the major should begin in a student's sophomore year. The suggested distribution of courses is as follows:

#### Sophomore Year

##### First Semester:

- SPA 321 - Composition and Conversation I Credits: 3
- AND** one from the following:
- SPA 300 - Reading and Telling Stories Credits: 3
- SPA 304 - Spanish for Health Professionals Credits: 3
- SPA 305 - Spanish for Law Enforcement Credits: 3
- SPA 306 - Spanish for Business Credits: 3
- SPA 308 - Spanish Phonetics Credits: 3
- SPA 315 - One-Act Hispanic Drama Credits: 3
- SPA 350 - Spanish Laboratory Theatre Credits: 3

##### Second Semester:

- SPA 322 - Composition and Conversation II Credits: 3
- AND** one from the following:
- SPA 300 - Reading and Telling Stories Credits: 3
- SPA 304 - Spanish for Health Professionals Credits: 3
- SPA 305 - Spanish for Law Enforcement Credits: 3
- SPA 306 - Spanish for Business Credits: 3
- SPA 308 - Spanish Phonetics Credits: 3
- SPA 315 - One-Act Hispanic Drama Credits: 3
- SPA 350 - Spanish Laboratory Theatre Credits: 3

#### Junior Year

##### First Semester:

- SPA 331 - Survey of Spanish Literature Credits: 3
- OR** SPA 330 - Introduction to Literary Analysis Credits: 3
- AND** one of the following:
- SPA 310 - Spanish Civilization and Culture Credits: 3
- SPA 311 - Latin American Civilization and Culture I Credits: 3
- SPA 312 - Latin American Civilization and Culture II Credits: 3
- SPA 313 - U.S. Latino/a Civilization and Culture Credits: 3

##### Second Semester:

- SPA 330 - Introduction to Literary Analysis Credits: 3
- OR** SPA 332 - Survey of Spanish American Literature Credits: 3
- AND** one of the following:
- SPA 300 - Reading and Telling Stories Credits: 3
- SPA 308 - Spanish Phonetics Credits: 3
- SPA 309 - Advanced Spanish Grammar Credits: 3
- SPA 329 - Sociolinguistics of Spanish Credits: 3

#### Senior Year

##### First Semester:

- One 400-level literature courses
- AND** one of the following:
- SPA 303 - Professional Writing Credits: 3
- A second culture and civilization course
- A second survey of literature course
- A second 400-level literature course

##### Second Semester:

- SPA 495 - Cross-National Literary Movements (Capstone) Credits: 3

Note: Majors may also take any of the Spanish for the professions courses as electives at any time. Classes are conducted primarily in Spanish.

### Requirements for a Spanish Secondary Education Major

Students choosing Spanish as a teachable major must complete a total of 36 credits in Spanish beyond the 200-level, including SPA 321, SPA 322, SPA 309, two civilization and culture courses (from SPA 310, SPA 311, SPA 312, SPA 313), SPA 314, one Survey of Literature course (either SPA 331 or SPA 332), SPA 330, SPA 335, one 400-level literature course, and SPA 495 (Capstone). In addition, students with a Spanish Secondary Education major must study abroad in a Spanish-speaking country for a minimum of one semester (12-15 credits in Spanish at the 300-level) in a departmentally-approved program. Courses taken during the study abroad semester may fulfill some of the courses required for the major. The semester abroad should take place after students have completed SPA 322. Students who cannot meet this requirement will need to complete an alternative plan approved by the Spanish section's Study Abroad Committee. Students interested in pursuing a teaching degree in Spanish are urged to meet with a Spanish advisor as early as possible in their program.

It is a requirement of the Michigan Department of Education and Grand Valley's College of Education that teacher candidates achieve the Advanced Low level on the Oral Proficiency Interview (OPI) in Spanish before student teaching. Information sessions on the OPI and other requirements for certification are provided regularly, but students should work closely with their advisor in Spanish. Students planning to teach Spanish are strongly encouraged to fulfill the study abroad requirement before attempting the OPI.

Credits for SPA 101, 102, 150, 201, 202, 203, or 204 will not be counted toward the major or minor.

### Suggested Order of Coursework for a Spanish Secondary Education Major

In order to complete the program in four years, work toward the major should begin in a student's sophomore year. The suggested distribution of courses is listed as follows:

#### Sophomore Year

##### First Semester

- SPA 321 - Composition and Conversation I Credits: 3

##### Second Semester

- SPA 322 - Composition and Conversation II Credits: 3

#### Junior Year

##### First Semester

- SPA 330 - Introduction to Literary Analysis Credits: 3
- AND** one of the following:
- SPA 310 - Spanish Civilization and Culture Credits: 3
- SPA 311 - Latin American Civilization and Culture I Credits: 3
- SPA 312 - Latin American Civilization and Culture II Credits: 3
- SPA 313 - U.S. Latino/a Civilization and Culture Credits: 3

##### Second Semester (recommended study abroad semester)

- SPA 331 - Survey of Spanish Literature Credits: 3
- OR** SPA 332 - Survey of Spanish American Literature Credits: 3
- SPA 309 - Advanced Spanish Grammar Credits: 3

## Speech-Language Pathology

**AND** one of the following:

- SPA 310 - Spanish Civilization and Culture Credits: 3
- SPA 311 - Latin American Civilization and Culture I Credits: 3
- SPA 312 - Latin American Civilization and Culture II Credits: 3
- SPA 300-level elective

Senior Year

First Semester

- One 400-level literature course

**AND** one of the following:

- SPA 314 - Teaching Methods Credits: 3
- SPA 335 - Introduction to Spanish Linguistics Credits: 3

Second Semester

- SPA 495 - Cross-National Literary Movements (Capstone) Credits: 3

**AND** one of the following:

- SPA 314 - Teaching Methods Credits: 3
- SPA 335 - Introduction to Spanish Linguistics Credits: 3

Note: Classes are conducted primarily in Spanish.

## Spanish Minor

### Requirements for a Minor in Spanish

The minor in Spanish is designed for students majoring in the professions or other disciplines who wish to enhance their knowledge of the primary field by perfecting their Spanish language skills and comprehension of culture. Students choosing Spanish as a minor program must complete a total of 21 hours of Spanish beyond the 200-level. The minor is especially geared toward students in the professions; it is strongly recommended that minors take the appropriate courses for their field (from SPA 304, 305, and 306), as well as SPA 303 Professional Writing. In addition, students choosing Spanish as a teachable minor must take two civilization and culture courses, SPA 314, and SPA 335. The total number of credits required for the minor is the same regardless of the emphasis.

Credits for SPA 101, 102, 150, 201, 202, 203, or 204 will **not** be counted toward the major or minor.

### Requirements for a Spanish Secondary Education Minor

Students choosing Spanish as a teachable minor must complete 21 credits including: two civilization and culture courses, SPA 314, and SPA 335. In addition, students with a Spanish Secondary Education minor must study abroad in a Spanish speaking country for a minimum of one semester (12-15 credits in Spanish at the 300-level) in a departmentally approved program. Courses taken during the study abroad semester may fulfill some of the courses required for the minor. The semester abroad should take place after students have completed SPA 322. Students who cannot meet this requirement will need to complete an alternative plan approved by the Spanish section's Study Abroad Committee. Students interested in pursuing a teaching degree in Spanish are urged to meet with a Spanish advisor as early as possible in their program.

It is a requirement of the Michigan Department of Education and Grand Valley's College of Education that teacher candidates achieve the Advanced Low level on the Oral Proficiency Interview (OPI) in Spanish before student teaching. Information sessions on the OPI and other requirements for certification are provided regularly, but students should work closely with their advisor in Spanish. Students planning to teach Spanish are strongly encouraged to fulfill the study abroad requirement before attempting the OPI.

Credits for SPA 101, 102, 150, 201, 202, 203, or 204 will **not** be counted toward the major or minor.

### Requirements for a Spanish Elementary Education Minor

Students choosing Spanish as a teachable minor for elementary education certification (in conjunction with the comprehensive science and arts for teaching major) must complete 27 credits including:

- SPA 309 - Advanced Spanish Grammar Credits: 3

- Select two of the following three courses: SPA 310 - Spanish Civilization and Culture Credits: 3  
**OR** SPA 311 - Latin American Civilization and Culture I Credits: 3  
**OR** SPA 312 - Latin American Civilization and Culture II Credits: 3
- SPA 313 - U.S. Latino/a Civilization and Culture Credits: 3  
**OR** SPA 329 - Sociolinguistics of Spanish Credits: 3  
**OR** SPA 331 - Survey of Spanish Literature Credits: 3  
**OR** SPA 332 - Survey of Spanish American Literature Credits: 3
- SPA 314 - Teaching Methods Credits: 3
- SPA 321 - Composition and Conversation I Credits: 3
- SPA 322 - Composition and Conversation II Credits: 3
- SPA 335 - Introduction to Spanish Linguistics Credits: 3
- SPA 395 - Advanced Speaking Strategies and Skills Credits: 3

A student who wishes to complete the Spanish elementary education minor must also complete the comprehensive science and arts for teaching (CSAT) major in the College of Liberal Arts and Sciences and the elementary education major in the College of Education. Due to the complex and extensive nature of the combined programs, minors in Spanish elementary education should consult regularly with both CSAT and Spanish advisors.

It is a requirement of the Michigan Department of Education and Grand Valley's College of Education that teacher candidates achieve the advanced low level on the oral proficiency interview (OPI) in Spanish before student teaching. Students interested in teaching in immersion or dual language programs should plan to develop advanced high oral proficiency. Information sessions on the OPI and other requirements for certification are provided regularly, but students should work closely with an advisor in Spanish. Students are urged to meet with a Spanish advisor as early as possible in their program and strongly encouraged to study abroad for at least one semester. Credits for SPA 101, 102, 150, 201, 202, 203, or 204 will not be counted toward the major or minor.

## Speech-Language Pathology - Program Description

**Website:** [www.gvsu.edu](http://www.gvsu.edu)

Speech-language pathologists (also referred to as speech therapists) are educated to assess speech and language development and to treat speech, language, and swallowing disorders. Speech-language pathologists often work as part of an interprofessional team, which may include teachers, physicians, audiologists, psychologists, social workers, rehabilitation counselors and others.

### Speech-Language Pathology at Grand Valley

Speech-language pathology is an intensive program leading to a Master of Science degree. Students interested in studying speech-language pathology at the graduate level must complete a series of prerequisite courses at the undergraduate level. The profession of speech-language pathology is a licensed field of practice that typically requires completion of a graduate degree from an accredited institution. It is not possible to become licensed as a speech-language pathologist without the graduate degree. Professional certification is also available to practitioners that demonstrate to the public that the speech-language pathologist has completed rigorous academic and clinical preparation and is considered competent to practice the profession. The master degree program at GVSU prepares students to qualify for licensure and validates that students have completed all academic preparation to qualify for national certification.

### Admission to the MS in Speech-Language Pathology Program

All admissions materials, with the exception of the personal interview, must be received prior to the **application deadline of January 15**. Applications will be reviewed in accordance with slots that may be available. Using the submitted material, the program's admissions committee will rank eligible candidates for a limited number of admissions. To be eligible for consideration, applicants must have:

1. Completion of a bachelor's degree with a minimum 3.0 cumulative undergraduate GPA
2. Successful completion of any undergraduate prerequisite courses with a 3.2 GPA
3. General GRE scores (verbal, quantitative, and writing)
4. Personal written statement
5. Professional vita or resume
6. Personal interview, if invited
7. Applicants must meet the eligibility requirements and be able to perform all essential functions specified by the program. A copy of the eligibility requirements and essential functions document will be provided to all prospective applicants.
8. All non-native English speakers must demonstrate sufficient mastery of English proficiency to be able to succeed as a graduate student and to practice the profession of speech-language pathology. Minimum score on the TOEFL of 610 (253 on computer-based). Scores must be received by the institution prior to the admission deadline.

Students applying for admission to the M.S. program in speech-language pathology should be aware that some of the clinical placement sites in which students are required to complete clinical practica in order to graduate will require the student to produce a current criminal records check. It is the student's responsibility to arrange for the check, to keep it current in order to comply with the requirements of the various clinical sites, and to advise the university and program if the status of the student's criminal record changes at any time during the student's program of study.

## Master of Science in Speech-Language Pathology

### Requirements for the Master of Science in Speech-Language Pathology

Students admitted into the M.S. in speech-language pathology degree program must complete 60 semester credit hours of didactic and practical coursework. A sample curriculum is shown:

#### Semester 1

- STA 610 - Applied Statistics for Health Professions Credits: 3
- SLP 560 - School Age and Adolescent Language Disorders Credits: 3
- SLP 561 - Advanced Study of Phonological Disorders Credits: 3
- SLP 562 - Aphasia and Related Disorders Credits: 3
- SLP 670 - Professional Seminar in Speech-Language Pathology Credits: 1
- SLP 681 - Clinical Practicum in Speech-Language Pathology I Credits: 3

#### Semester 2

- IPE 507 - Integrated Team Health Care Credits: 2
- SLP 510 - Applied Research in Speech-Language Pathology Credits: 1
- SLP 570 - Infant, Toddler, Preschool Language Disorders Credits: 3
- SLP 571 - Voice Disorders and Laryngectomy Credits: 3
- SLP 572 - Dysphagia Credits: 3
- SLP 670 - Professional Seminar in Speech-Language Pathology Credits: 1
- SLP 682 - Clinical Practicum in Speech-Language Pathology II Credits: 3

#### Semester 3

- SLP 573 - Fluency Disorders Credits: 3
- SLP 581 - Cognitive Communication Disorders Credits: 3
- SLP 582 - Motor Speech and Craniofacial Disorders Credits: 3
- SLP 583 - Autism and Augmentative/Alternative Communication Credits: 3
- SLP 670 - Professional Seminar in Speech-Language Pathology Credits: 1
- SLP 683 - Clinical Practicum in Speech-Language Pathology III Credits: 3

#### Semester 4

- SLP 684 - Clinical Internship in Speech-Language Pathology Credits: 12

## Statistics - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/stat](http://www.gvsu.edu/stat)

**Degrees Offered:** Master of Science in biostatistics; Bachelor of Science or Bachelor of Arts in statistics; minors in applied statistics, mathematical statistics, and data science. The programs in statistics are offered by the Department of Statistics within the College of Liberal Arts and Sciences. All interested students are strongly encouraged to contact the Department of Statistics.

Statistics is the science of collecting, organizing, and interpreting data. Statistics is a scientific discipline through which researchers learn to make informed decisions in the face of uncertainty. Statistics students learn to define problems, to think critically, to analyze and to synthesize. Statistics students gain an appreciation for the integrity of data, the uncertainty of measurements, and the strengths and limitations of science. This background prepares them to explore widely throughout their professional lives, and to be creative and productive citizens regardless of the nature of their careers.

#### Mission Statement

The Department of Statistics informs and actively engages students and colleagues in the ethical practice of modern statistical science and further contributes to our society through active scholarship and effective service.

#### Vision Statement

The Department of Statistics is committed to advancing the science of statistics by maintaining an inclusive learning community that is characterized by

- faculty members who are dedicated to expanding the discipline of statistics, improving the pedagogy of statistics, and broadening the application of statistics; and
- students who are actively engaged in enhancing their understanding of statistics and its application.

All members of our community are encouraged to utilize their statistical skills to be ethical and productive professionals, lifelong learners and responsible citizens.

#### Honors Organizations

Mu Sigma Rho

## Bachelor of Arts or Bachelor of Science in Statistics

Requirements for a Major in Statistics (without actuarial sciences emphasis)

Students must complete the following requirements:

#### 1. University Degree Requirements

As identified in the General Academic Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog.

#### 2. Statistics Requirements (credits: 29)

A) All majors must complete the following statistics core courses (credits: 17)

- STA 215 - Introductory Applied Statistics Credits: 3
- **OR** STA 312 - Probability and Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (Capstone) Credits: 4
- STA 419 - Statistics Project Credits: 3

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B) All majors must complete two of the following statistics core courses (credits: 6)

- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 315 - Design of Experiments Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3

C) All majors must complete two of the following courses (credits: 6)

- STA 301 - Questionnaire Design and Execution Credits: 3
- STA 310 - Introduction to Biostatistics Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- STA 317 - Nonparametric Statistical Analysis Credits: 3
- STA 318 - Statistical Computing Credits: 3
- STA 418 - Statistical Computing and Graphics with R Credits: 3
- STA 421 - Bayesian Data Analysis Credits: 3
- STA 426 - Multivariate Data Analysis Credits: 3

The third course of STA 311, STA 315, and STA 321 that was not used to fulfill part (B) listed previously. Credits: 3.

3. B.S. and B.A. Degree Requirements (credits: 14)

Completion of MTH 201, MTH 202, MTH 227, and one of CIS 160, CIS 161, CIS 162 or CIS 261 satisfies the B.S. degree requirements for statistics majors. Completion of these courses plus the foreign language requirement for a B.A. satisfies the B.A. degree requirements for statistics majors. The following courses are required of all students majoring in statistics:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 227 - Linear Algebra I Credits: 3

**AND** one of the following:

- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 161 - Computational Science Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 261 - Structured Programming in C Credits: 3

4. Application Cognates (minimum of 6 credits)

Each major in statistics must select an area of application consisting of at least six credits from a list of GVSU courses (called application cognate courses) that are accepted by the statistics department as applying statistical methodology. Statistics courses on this list will not be one of the required or elective statistics courses listed previously.

Students are strongly encouraged to meet with their advisor as soon as their major in statistics is declared, both to plan their course schedule over the rest of their time at GVSU and to develop specific plans for their application cognate courses.

**Suggested Order of Coursework for a Major in Statistics (without actuarial sciences emphasis)**

The following two sample statistics schedules assume the student is in contact with an advisor for the appropriate general education requirements and has a strong mathematical background. Students who do not begin their mathematical sequence with MTH 201 will need to make appropriate changes. Suggested order of coursework one assumes students take MTH 201 in the fall of their first year; suggested order of coursework two assumes students take MTH 201 in the fall of their second year.

Students majoring in statistics who plan to do graduate work are strongly encouraged to take MTH 203, Calculus and Analytic Geometry III, in the fall of their second year and MTH 227, Linear Algebra I, in the winter of their second year.

**Suggested Order of Coursework: One**

First Year

- MTH 201 - Calculus I Credits: 4
- CIS 162 - Computer Science I Credits: 4
- MTH 202 - Calculus II Credits: 4

Second Year

- MTH 227 - Linear Algebra I Credits: 3
- STA 312 - Probability and Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3

Third Year

Two of the following:

- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 315 - Design of Experiments Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3
- Two courses (either STA electives of application cognates)

Fourth Year

- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (Capstone) Credits: 4
- STA 419 - Statistics Project Credits: 3
- Two courses (either STA electives or application cognates)

**Suggested Order of Coursework: Two**

First Year

- STA 215 - Introductory Applied Statistics Credits: 3

Second Year

- CIS 161 - Computational Science Credits: 3
- MTH 201 - Calculus I Credits: 4
- STA 216 - Intermediate Applied Statistics Credits: 3
- MTH 202 - Calculus II Credits: 4

Third Year

- MTH 227 - Linear Algebra I Credits: 3

Choose two of the following:

- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 315 - Design of Experiments Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3
- Two courses (either STA electives or application cognates)

Fourth Year

- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (Capstone) Credits: 4
- STA 419 - Statistics Project Credits: 3
- Two courses (either STA electives or application cognates)

**Requirements for a Major in Statistics with Actuarial Sciences Emphasis**

Requirements for the major with the actuarial sciences emphasis are more specific than the Major without the emphasis. Students must complete the following requirements:

1. University Degree Requirements

As identified in the General Academic Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. Statistics Requirements (credits: 29)

A) All majors must complete the following statistics core courses (credits: 17)

- STA 215 - Introductory Applied Statistics Credits: 3
- **OR** STA 312 - Probability and Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (Capstone) Credits: 4
- STA 419 - Statistics Project Credits: 3

B) All majors with actuarial sciences emphasis must complete the following courses (credits: 6)

- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3

C) All majors with actuarial sciences emphasis must complete the following courses (credits: 6)

- STA 318 - Statistical Computing Credits: 3
- STA 418 - Statistical Computing and Graphics with R Credits: 3
- STA 425 - Actuarial Probability and Statistics Credits: 3

3. B.S. and B.A. Degree Requirements (credits: 14)

Completion of MTH 201, MTH 202, MTH 227, and one of CIS 160, CIS 162 or CIS 261 satisfies the B.S. degree requirements for statistics majors. Completion of these courses plus the foreign language requirement for a B.A. satisfies the B.A. degree requirements for statistics majors. The following courses are required of all students majoring in statistics:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- MTH 227 - Linear Algebra I Credits: 3

**AND** one of the following:

- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 161 - Computational Science Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 261 - Structured Programming in C Credits: 3

#### 4. Application Cognates (credits: 15 to 18)

Depending on whether a student takes the ECO 210 and ECO 211 sequence or ECO 200, 15 to 18 hours of cognate credits are required.

- ACC 212 - Principles of Financial Accounting Credits: 3

**BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**  
ECO 211 - Introductory Microeconomics Credits: 3

**OR** ECO 200 - Business Economics Credits: 3

- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3
- FIN 331 - Risk and Insurance Credits: 3

#### Suggested Order of Coursework for a Major in Statistics (with actuarial sciences emphasis)

The following two sample statistics schedules assume the student is in contact with an advisor for the appropriate general education requirements and has a strong mathematical background. Students who do not begin their mathematical sequence with MTH 201 will need to make appropriate changes. Suggested order of coursework one assumes students take MTH 201 in the fall of their first year; suggested order of coursework two assumes students take MTH 201 in the fall of their second year.

Students majoring in statistics who plan to do graduate work are strongly encouraged to complete the three-semester calculus sequence by taking MTH 203 - Calculus and Analytic Geometry III, in the fall of their second year before taking MTH 227 - Linear Algebra I, in the winter of their second year.

Business courses in the application cognates have prerequisites that mandate some sequence in completing the courses. ACC 212 is required for FIN 320 and FIN 320 is required for FIN 321. The ECO courses require MTH 110, MTH 121 or MTH 201.

#### Suggested Order of Coursework: One

First Year

- MTH 201 - Calculus I Credits: 4
- CIS 161 - Computational Science Credits: 3
- MTH 202 - Calculus II Credits: 4
- ACC 212 - Principles of Financial Accounting Credits: 3

Second Year

- MTH 227 - Linear Algebra I Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3

**BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**  
ECO 211 - Introductory Microeconomics Credits: 3

**OR** ECO 200 - Business Economics Credits: 3

Third Year

- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 318 - Statistical Computing Credits: 3  
**OR** STA 418 - Statistical Computing and Graphics with R Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3

Fourth Year

- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (Capstone) Credits: 4
- STA 419 - Statistics Project Credits: 3
- STA 425 - Actuarial Probability and Statistics Credits: 3
- FIN 331 - Risk and Insurance Credits: 3

#### Suggested Order of Coursework: Two

First Year

- STA 215 - Introductory Applied Statistics Credits: 3
- ACC 212 - Principles of Financial Accounting Credits: 3

**BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND**  
ECO 211 - Introductory Microeconomics Credits: 3

**OR** ECO 200 - Business Economics Credits: 3

Second Year

- CIS 161 - Computational Science Credits: 3
- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- STA 216 - Intermediate Applied Statistics Credits: 3

Third Year

- MTH 227 - Linear Algebra I Credits: 3
- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 318 - Statistical Computing Credits: 3  
**OR** STA 418 - Statistical Computing and Graphics with R Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3

Fourth Year

- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (Capstone) Credits: 4
- STA 419 - Statistics Project Credits: 3
- STA 425 - Actuarial Probability and Statistics Credits: 3
- FIN 331 - Risk and Insurance Credits: 3 (fall semester)

## Applied Statistics Minor

### Requirements for a Minor in Applied Statistics

The applied statistics minor is offered within the Department of Statistics and consists of seven courses (at least 21 credits).

One or two of the seven courses may be from a list of GVSU courses (called application cognate courses) that are accepted by the statistics department as applying statistical methodology.

All minors must complete the following statistics core courses (6 credits):

**EITHER**

- STA 215 - Introductory Applied Statistics Credits: 3
- STA 312 - Probability and Statistics Credits: 3

**PLUS**

- STA 216 - Intermediate Applied Statistics Credits: 3

All minors must also complete five additional courses (15 credits).

At least three of the courses must come from the following list:

- STA 301 - Questionnaire Design and Execution Credits: 3
- STA 310 - Introduction to Biostatistics Credits: 3
- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- STA 315 - Design of Experiments Credits: 3
- STA 317 - Nonparametric Statistical Analysis Credits: 3
- STA 318 - Statistical Computing Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3
- STA 418 - Statistical Computing and Graphics with R Credits: 3
- STA 419 - Statistics Project Credits: 3
- STA 426 - Multivariate Data Analysis Credits: 3

The remaining two courses either may be from the previous list or may be from the applications cognates list of courses. The applications cognates list of courses is available from the statistics department.

Students are strongly advised to meet with a member of the statistics faculty as soon as they decide to minor in applied statistics to develop specific plans for the courses outside of statistics.

## Data Science Minor

### Minor Requirements

Statistics:

- STA 216 - Intermediate Applied Statistics Credits: 3
- **OR** STA 318 - Statistical Computing Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3
- STA 426 - Multivariate Data Analysis Credits: 3

Computing and information systems:

- CIS 162 - Computer Science I Credits: 4
- **OR** CIS 161 - Computational Science Credits: 3
- CIS 335 - Data Mining Credits: 3
- CIS 360 - Information Management and Science Credits: 3

\*Note: STA 216 and STA 318 have prerequisites of STA 215 or 312.

One additional three credit course is required. This course must provide an appropriate application of data science or deepen knowledge in either statistics or computer science.

Students should meet with a data science faculty member from the statistics or computing and information systems departments to determine an appropriate course meeting this requirement. Students are strongly encouraged to meet with a data science faculty member as soon as they decide to minor in data science.

### Suggested Order of Coursework

First Year

- MTH 110 - Algebra Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3

Second Year

- CIS 161 - Computational Science Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3

Third Year

- CIS 335 - Data Mining Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3

Fourth Year

- Program elective
- CIS 360 - Information Management and Science Credits: 3
- STA 426 - Multivariate Data Analysis Credits: 3

## Mathematical Statistics Minor

### Requirements for a Minor in Mathematical Statistics

The mathematical statistics minor is offered within the Department of Statistics and consists of six courses (at least 22 credits). The minor in mathematical statistics is a calculus-based program that focuses heavily on mathematical theory of statistics.

All minors in mathematical statistics must complete the following core courses:

- MTH 201 - Calculus I Credits: 4
- MTH 202 - Calculus II Credits: 4
- STA 216 - Intermediate Applied Statistics Credits: 3
- STA 312 - Probability and Statistics Credits: 3
- STA 412 - Mathematical Statistics I Credits: 4

### Additional Course Requirements

In addition, all mathematical statistics minors must complete one additional course, selected in consultation with a member of the statistics faculty, from the following list:

- STA 310 - Introduction to Biostatistics Credits: 3
- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- STA 315 - Design of Experiments Credits: 3
- STA 317 - Nonparametric Statistical Analysis Credits: 3
- STA 318 - Statistical Computing Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3

- STA 415 - Mathematical Statistics II (Capstone) Credits: 4
- STA 419 - Statistics Project Credits: 3
- STA 426 - Multivariate Data Analysis Credits: 3

## Supply Chain Management - Program Description

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

The field of supply chain management involves the acquisition of components and finished goods from original sources, production scheduling and manufacturing, and logistics functions necessary to flow components inbound to manufacturing and finished goods outbound to wholesalers, retailers, and/or directly to end users. Specific functions relate to purchasing, forecasting, production scheduling, manufacturing operations, inventory control, customer service, warehousing, and transportation. Students with this major are employed by manufacturers, wholesalers, retailers, third-party service providers, and transportation carriers.

## Bachelor of Business Administration in Supply Chain Management

### Requirements for the B.B.A.

#### Core Courses

All business core courses acquaint you with various fields in business and help you learn to communicate, to interact, and to assume responsible positions in your chosen field.

For a major in business administration, you must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3

#### **BOTH**

- ECO 210 - Introductory Macroeconomics Credits: 3 **AND** ECO 211 - Introductory Microeconomics Credits: 3
- **OR** ECO 200 - Business Economics Credits: 3
- Upper-division economics course (not ECO 490) Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Business Processes and Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MGT 366 - Operations Management Credits: 3
- MGT 495 - Administrative Policy Credits: 3
- MKT 350 - Marketing Management Credits: 3

Students are required to select one class from the following list. This course may count toward the major or minor if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Ethics and Business, Social Justice and Sustainability Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

#### Required Business Electives

Three upper-division Seidman courses are not applied to the major or minor (nine credits total). However, these courses can be applied toward a second business major.

#### Electives

Students may elect nonbusiness or business courses to fulfill their elective course requirements. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree

requirements. Business majors may not take any of the major courses, except the internship, on a credit/no credit basis.

## Requirements for a Major in Supply Chain Management

### Required Courses

- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- MKT 354 - Distribution Institutions and Logistics Credits: 3
- MKT 457 - Logistics and Transportation Credits: 3
- MGT 337 - Supply Chain Management Credits: 3
- MGT 367 - Manufacturing Planning and Control Credits: 3
- MGT 467 - Advanced Topics in Operations and Supply Chain Management Credits: 3

Quantitative group - choose one:

- MTH 122 - College Algebra Credits: 3
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 4
- MGT 361 - Management Science Credits: 3
- PHI 103 - Logic Credits: 3

One course from the following:

- MKT 355 - International Logistics Credits: 3
- MGT 363 - Managing Quality Credits: 3

One course from the following:

- MGT 351 - Enterprise Information Systems Credits: 3
- MGT 360 - Business Process Redesign Credits: 3
- MGT 362 - Computers in Operations Management Credits: 3
- MGT 365 - Strategic Management of Operations Credits: 3
- MGT 466 - International Management and Multinational Corporations Credits: 3
- MKT 353 - Marketing Negotiations Credits: 3
- MKT 356 - Professional Selling Credits: 3
- MKT 357 - Retailing Credits: 3
- MKT 359 - Multinational Marketing Credits: 3

## Master of Science in Taxation - Program Description

See the Seidman College of Business section of this catalog for a listing of faculty.

### Master of Science in Taxation (M.S.T.)

The M.S.T. is specialized, practical, and intensely client focused. Students will examine substantive tax law and enhance their analytical and research skills, thus enabling them to analyze a tax problem, identify the relevant issues, and arrive at the appropriate conclusion or course of action.

### Admission to the Master of Science in Taxation Program

Candidates are admitted to the traditional M.S.T. program based on criteria that have been shown to predict success. Applicants must submit official documentation of all previous college coursework, including a baccalaureate degree (or equivalent international credential). An undergraduate degree in accounting is not required, although those with limited undergraduate exposure to taxation are required to complete appropriate courses to provide a foundation for advanced study in taxation. Additionally, applicants must submit:

- GMAT score
- Personal Statement
- TOEFL score (if English is not the applicant's first language)

Admission requirements are provided in detail in the Seidman College of Business section of this catalog, including conditions that qualify applicants for a GMAT waiver.

### Transfer Credit

A maximum of nine semester hours of transfer credit will be given for appropriate graduate courses completed with a grade of B or better from another AACSB-accredited college. These credits may be substituted

for required courses or elective courses as determined by the program director. University policy on transfer of credit also governs such courses.

### Academic Review

A cumulative GPA of 3.0 or higher is required in all graduate-level courses. Additionally, a cumulative GPA of 3.0 is required in all 600-level courses that fulfill graduation requirements for the M.S.T. A grade of C or better must be earned in all graduate courses that fulfill graduation requirements for the M.S.T.

**Website:** [www.gvsu.edu/grad/mst](http://www.gvsu.edu/grad/mst)

### Minimum Number of Hours for Graduation

The M.S.T. program consists of 33 semester hours of 600-level coursework.

There are no prerequisites required for admission to the M.S.T. program, although a college-level tax course must have been completed within five years of beginning graduate tax courses.

A maximum of nine semester hours of transfer credit will be given for appropriate graduate courses completed with a grade of B or better in another accredited college of university. These credits may be substituted for required or elective courses as determined by the graduate programs director. To be considered for transfer, coursework must have been taken within five years of admission to the M.S.T. program.

A cumulative GPA of 3.0 or higher is required in all graduate-level courses. Additionally, a cumulative GPA of 3.0 is required in all 600-level courses that fulfill graduation requirements for the M.S.T. A grade of C or better must be earned in all graduate courses that fulfill graduation requirements for the M.S.T.

See the Graduate Information - Academic Policies and Regulations section of this catalog for information regarding retention and dismissal.

### Program Location

The M.S.T. program is offered on the Pew Grand Rapids Campus in DeVos Center in downtown Grand Rapids, MI.

### Graduate Outcomes/Time to Program Completion

The Seidman faculty has identified the following learning objectives for M.S.T. students, and objectives are assessed regularly to ensure that they are being achieved.

Seidman M.S.T. graduates will:

- Write skillful tax communications
- Be effective in analyzing and resolving tax problems
- Be strategic tax planners
- Master substantive tax law about the formation of a business entity in the context of real-life or simulated client situations
- Be prepared to recognize and respond to ethical questions encountered in the practice of tax accounting

## Master of Science in Taxation

The M.S.T. program serves individuals who are interested in expanding or continuing their education in taxation. It is specialized, practical, and intensely client focused. Students examine substantive tax law and enhance their analytical and research skills, thus enabling them to analyze tax problems, identify the relevant issues, and arrive at the appropriate conclusions or courses of action.

### Admission to the Master of Science in Taxation Program

Candidates are admitted to the M.S.T. program based on criteria that have been shown to predict success. Applicants must submit official documentation of all previous college coursework, including a baccalaureate degree (or equivalent international credential). An undergraduate degree in accounting is not required, although those with limited undergraduate exposure to taxation are required to complete appropriate courses to provide a foundation for advanced study in taxation. Additionally, applicants must submit:

## Theatre

- GMAT score
- Personal Statement
- TOEFL score (if English is not the applicant's first language)

Admission requirements are provided in detail in the Seidman College of Business section of this catalog, including conditions that qualify applicants for a GMAT waiver.

### Transfer Credit

A maximum of nine semester hours of transfer credit will be given for appropriate graduate courses completed with a grade of B or better from another AACSB-accredited college. These credits may be substituted for required courses or elective courses as determined by the program director. University policy on transfer of credit also governs such courses.

### Academic Review

A cumulative GPA of 3.0 or higher is required in all graduate-level courses. Additionally, a cumulative GPA of 3.0 is required in all 600-level courses that fulfill graduation requirements for the M.S.T. A grade of C or better must be earned in all graduate courses that fulfill graduation requirements for the M.S.T.

### Requirements for the M.S.T.

The M.S.T. program consists of 33 semester hours of 600-level coursework.

### Core Courses

The following five core courses are required of all M.S.T. students. Each course is three credits:

- ACC 622 - Tax Research and Writing Credits: 3
- ACC 624 - Corporate Tax I Credits: 3
- ACC 627 - Estate, Gift, and Trust I Credits: 3
- ACC 629 - Partnership Taxation Credits: 3
- ACC 636 - Taxation Problems, Planning, and Current Issues Credits: 3

### Elective Courses

In addition, all M.S.T. students must complete at least two of the following tax elective courses. Each course is three credits:

- ACC 625 - Corporate Tax II Credits: 3
- ACC 623 - Sales, Exchanges, and Other Property Dispositions Credits: 3
- ACC 628 - Fiduciary Income Tax Credits: 3
- ACC 630 - Multistate Taxation Credits: 3
- ACC 631 - Employee Benefit Plans and Deferred Compensation Credits: 3
- ACC 632 - Tax Accounting Credits: 3
- ACC 633 - International Tax Practice Credits: 3
- ACC 639 - Federal Tax Practice and Procedure Credits: 3
- ACC 640 - S Corp and Limited Liability Co Taxation Credits: 3
- ACC 641 - Advanced Estate and Gift Taxation Credits: 3

The remaining four electives may be selected from among Seidman M.S.T. courses or, with faculty advisor approval, other Seidman graduate offerings or graduate program offerings outside the Seidman College of Business.

### Cognates

Certain cognates must be completed before graduation. They may be completed as part of the student's undergraduate program prior to admission to the M.S.T. program or completed anytime between admission and program completion. These cognates include accounting and economics and at least four of the following areas: business law, computer science and information systems, finance, marketing, and statistics.

Cognate Area	Cognate Course	GVSU Undergraduate Course(s)
Accounting	ACC 511 Financial and Managerial Accounting Concepts (3 credits)	ACC 212 and 213 (6 credits)
Statistics and Finance	FIN 520 Statistics and Mathematics of Finance (3 credits)	STA 215 (3 credits) and FIN 320 (3 credits)
Legal Environment	BUS 531 Legal Environment of Business (2 credits)	BUS 201 (3 credits)
Economics	ECO 542 Economic Reasoning (3 credits)	ECO 210 and 211 (6 credits)

Students who have completed GVSU undergraduate courses listed previously with a grade of B or better or the equivalent at another college or university are not required to complete additional 500-level coursework in the respective areas. A background assessment showing the status of the student's cognate requirements is provided to each student at the time of admission.

### Capstone

- ACC 636 - Taxation Problems, Planning, and Current Issues is a Capstone course and may not be taken until other core courses are complete.

The M.S.T. is a program designed for working professionals. Classes are offered in the evenings, and most students attend part-time. Students who have completed the cognate requirements and enroll for six credits each semester graduate in two years. The M.S.T. can be completed in four semesters of full-time study, including two fall semesters, if the student has completed all cognate requirements and attends full-time.

Students must complete a program plan with their faculty advisor prior to beginning coursework.

## Master of Science in Taxation and Law

The Seidman College of Business and Michigan State University College of Law offer the dual M.S.T./J.D. The partnership enables students to transfer 12 credits of Seidman M.S.T. courses to the MSU Law J.D. program and 12 credits of J.D. credits to the M.S.T. program, thus reducing the total number of graduate credit hours required to complete both programs from 121 to 97. Prerequisites for both programs must be met in addition to the 97 graduate credits. Participating students must meet admission standards of each school and be admitted to both programs prior to registering for coursework that will be transferred to either program.

The transfer work from MSU COL must include at least two tax courses. Courses not eligible for transfer are those that are required for the M.S.T. degree. Thus, students pursuing this degree will complete, in addition to the M.S.T. prerequisites, the five required core courses and two constrained electives. Specific coursework to be transferred to the M.S.T. from MSU COL must be planned with the graduate programs director. Students are referred to the associate dean for Academic Affairs of MSU COL for advising with respect to the J.D. and the specific M.S.T. transfer courses.

## Theatre - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences website.

**Website:** [www.gvsu.edu/theatre](http://www.gvsu.edu/theatre)

The theatre program provides quality student centered education and performance experiences within Grand Valley State University's liberal education environment. The theatre program enables students to fully

explore their potential as productive, literate, articulate, humane, and culturally engaged members of a global public through a close study of theatre theory and practice. Students so educated are able to bring highly developed aesthetic and critical skills, flexibility, and creativity to a wide range of graduate school and career opportunities.

Students may use the major as a preparation for graduate or professional work; the required courses provide basic training in essential theatre areas, and students planning to pursue more advanced work should take well chosen electives in areas designed to increase specific skills. All theatre majors are required to participate in university theatre productions as actors, designers, production technicians and managers; academic credit is given for all such involvement. The program also supports students pursuing regional, national, and international internships as managers, publicists, technicians, and production assistants with major professional theaters and arts organizations. Theatre courses from overseas schools can substitute for GVSU theatre requirements for those students pursuing international studies.

Note: Theatre majors are encouraged to take ENG 212 in general education.

## Bachelor of Arts or Bachelor of Science in Theatre

### Requirements for a Major in Theatre

A bachelor's degree in theatre requires completion of (1) School of Communication's core, (2) B.A. or B.S. degree requirements, (3) theatre core, (4) theatre electives, and (5) a theatre Capstone. The Bachelor of Arts requires between 51 and 63 credit hours, while the Bachelor of Science requires 60 credit hours.

### School of Communications Core (credits: 6)

All students majoring in the School of Communications must complete the following core courses, for a total of six credits:

- COM 101 - Concepts of Communication Credits: 3
- COM 201 - Speech Credits: 3
- OR COM 215 - Story Making Credits: 3

### B.A. and B.S. Degree Requirements

#### B.A. Degree Requirements

The B.A. degree requires a third-semester proficiency in a classical or modern foreign language of the student's choice.

#### B.S. Degree Requirements for the Theatre Program

- COM 275 - Foundations of Communication Research Credits: 3
- COM 375 - Communication Research Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Theatre Core (Credits: 35)

#### Design/Tech/Management Area (credits: 8)

Two of the following:

- CTH 250 - Theatre Management Credits: 3
- CTH 261 - Stagecraft I Credits: 3
- CTH 262 - Costume Construction Credits: 3

Tech labs. Take two, one credit sections of applied theatre practice corresponding to the courses selected from the previously listed design/tech/management areas.

- CTH 298 - Applied Theatre Practice Credits: 1 to 3

#### Theatre Studies Area (credits: 12)

- CTH 161 - Theatre Production Credits: 3
- CTH 162 - Play Analysis Credits: 3
- CTH 371 - Theatre History I Credits: 3
- CTH 372 - Theatre History II Credits: 3

#### Performance Area (credits: 9)

- CTH 151 - Acting Process Credits: 3
- CTH 252 - Acting Characterization Credits: 3
- CTH 365 - Directing I Credits: 3

### Advanced Theatre Study (credits: 6)

Two of the following, one of which must be a design course selected from CTH 367, CTH 368, or CTH 369.

- CTH 362 - Production Dramaturgy Credits: 3
- CTH 367 - Scenography Credits: 3
- CTH 368 - Lighting Design Credits: 3
- CTH 369 - Costume Design Credits: 3
- CTH 465 - Directing II Credits: 3

### Theatre Electives (credits: 7)

Elective credit courses must be taken in addition to courses taken in the theatre core. Courses not selected to fulfill the theatre core may be taken as electives once the core requirements have been satisfied. Elective credit for CTH 298 is available only after satisfying the tech lab requirement.

\*A maximum of three credits from CTH 490 Internship may be counted toward the required theatre elective credit.

- CTH 152 - Voice for the Actor Credits: 3
- CTH 198 - Rehearsal and Performance Credits: 1 to 3
- CTH 250 - Theatre Management Credits: 3
- CTH 261 - Stagecraft I Credits: 3
- CTH 262 - Costume Construction Credits: 3
- CTH 263 - Makeup Credits: 2
- CTH 298 - Applied Theatre Practice Credits: 1 to 3
- CTH 300 - Storytelling Credits: 3
- CTH 356 - Acting for the Camera Credits: 3
- CTH 362 - Production Dramaturgy Credits: 3
- CTH 366 - Drama in Education Credits: 3
- CTH 367 - Scenography Credits: 3
- CTH 368 - Lighting Design Credits: 3
- CTH 369 - Costume Design Credits: 3
- CTH 380 - Special Topics in Theatre Credits: 1 to 3
- CTH 399 - Independent Reading Credits: 1 to 3
- CTH 400 - Touring Theatre Production Credits: 3
- CTH 454 - Acting Advanced Scene Study Credits: 3
- CTH 455 - Shakespeare Performance Credits: 3
- CTH 465 - Directing II Credits: 3
- CTH 490 - Internship Credits: 1 to 6
- CTH 499 - Independent Research Credits: 1 to 3
- MUS 357 - Opera Theatre Credits: 1

### Capstone (Credits: 3)

Capstone Requirement:

- COM 495 - Issues in Communication (Capstone) Credits: 3

All students majoring in the School of Communications must take COM 495 (three credits) during their senior year. This Capstone course offers a synthesis of ideas and theories about one or more current critical issues in communication.

### Suggested Pattern of Coursework for a Major in Theatre

Guidelines for completing the theatre major (check specific major requirements with your advisor). This option assumes students will complete the required skills, general education, and required courses working toward a B.S. or B.A. degree. Theatre students are encouraged to avoid taking evening courses where possible, due to rehearsal conflicts in the co-curricular theatre program.

#### Freshman Year

\*CTH 161 fulfills the general education Foundations Arts category and is required for the theatre major.

- COM 101 - Concepts of Communication Credits: 3
- CTH 151 - Acting Process Credits: 3
- \* CTH 161 - Theatre Production Credits: 3
- CTH 162 - Play Analysis Credits: 3

#### Sophomore Year

\*Two credits, one credit each, of CTH 298 in concert with the two technical theatre classes selected.

- COM 201 - Speech Credits: 3 OR COM 215 - Story Making

## Therapeutic Recreation

- CTH 252 - Acting Characterization Credits: 3
  - CTH 298 - Applied Theatre Practice Credits: 1 to 3
- Two of the following three:
- CTH 250 - Theatre Management Credits: 3
  - CTH 261 - Stagecraft I Credits: 3
  - CTH 262 - Costume Construction Credits: 3

### Junior and Senior Year

Students' select one design course and either an additional design course or CTH 362 or CTH 465.

- CTH 365 - Directing I Credits: 3
  - CTH 371 - Theatre History I Credits: 3
  - CTH 372 - Theatre History II Credits: 3
- Design Courses
- CTH 367 - Costume Design Credits: 3
- Other courses that can fulfill the additional course requirement.
- CTH 362 - Production Dramaturgy Credits: 3
  - CTH 465 - Directing II Credits: 3
  - COM 495 - Issues in Communication (Capstone) Credits: 3
  - Theatre electives Credits: 7

## Theatre Minor

### Requirements for the Minor in Theatre

Minors must complete 20 hours of theatre coursework. Minors must complete one course in the design/tech/management area, one in the theatre studies area, and one in the performance area. Most of these select courses also serve as prerequisite courses for more advanced theatre study. Minors must complete additional courses in any theatre area to fulfill the 20 hours minimum credit requirement.

### Design/Tech/Management Area (4 credits)

One of the following:

- CTH 250 - Theatre Management Credits: 3
- CTH 261 - Stagecraft I Credits: 3
- CTH 262 - Costume Construction Credits: 3

Each of these D/T/M classes also requires a corresponding one credit section of CTH 298 as a theatre production lab.

- CTH 298 - Applied Theatre Practice Credits: 1 to 3

### Theatre Studies Area (3 credits)

One of the following. CTH 161 and CTH 101 fulfill the general education Foundations Arts category.

- CTH 101 - Introduction to Theatre Credits: 3
- CTH 161 - Theatre Production Credits: 3
- CTH 162 - Play Analysis Credits: 3

### Performance Area (3 credits)

One of the following:

- CTH 151 - Acting Process Credits: 3
- CTH 152 - Voice for the Actor Credits: 3

### Theatre Electives (10 credits)

Courses taken to fulfill the required courses cannot also count toward electives, but courses not selected from among the required courses may be taken to complete theatre electives. For example, a student who completes CTH 151 Acting Process for the required performance area may elect to take CTH 152 Voice for the Actor as one of their electives.

\*No more than three total credit hours from CTH 198 and CTH 298 may be applied toward elective credit for the theatre minor.

- CTH 101 - Introduction to Theatre Credits: 3
- CTH 151 - Acting Process Credits: 3
- CTH 152 - Voice for the Actor Credits: 3
- CTH 161 - Theatre Production Credits: 3
- CTH 162 - Play Analysis Credits: 3
- \*CTH 198 - Rehearsal and Performance Credits: 1 to 3
- CTH 250 - Theatre Management Credits: 3
- CTH 261 - Stagecraft I Credits: 3

- CTH 262 - Costume Construction Credits: 3
- CTH 263 - Makeup Credits: 2
- \*CTH 298 - Applied Theatre Practice Credits: 1 to 3
- CTH 300 - Storytelling Credits: 3
- CTH 356 - Acting for the Camera Credits: 3
- CTH 362 - Production Dramaturgy Credits: 3
- CTH 366 - Drama in Education Credits: 3
- CTH 367 - Scenography Credits: 3
- CTH 368 - Lighting Design Credits: 3
- CTH 369 - Costume Design Credits: 3
- CTH 380 - Special Topics in Theatre Credits: 1 to 3
- CTH 399 - Independent Reading Credits: 1 to 3
- CTH 400 - Touring Theatre Production Credits: 3
- CTH 454 - Acting Advanced Scene Study Credits: 3
- CTH 455 - Shakespeare Performance Credits: 3
- CTH 465 - Directing II Credits: 3
- CTH 490 - Internship Credits: 1 to 6
- CTH 499 - Independent Research Credits: 1 to 3

## Therapeutic Recreation - Program Description

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

**Degree Offered:** Bachelor of Science in therapeutic recreation

**Website:** [www.gvsu.edu/tr](http://www.gvsu.edu/tr)

Therapeutic recreation is an allied health profession involved in the care of patients/clients with a variety of diagnoses and functional limitations across the lifespan. Therapeutic Recreation uses a continuum of services which include recreation therapy (treatment), education, and adapted recreation. These services are provided by using a variety of recreation and leisure activities in order to improve functional abilities and maximize opportunities for persons with special needs to access and become engaged in their communities, thus impacting their overall quality of life.

### Therapeutic Recreation/Recreation Therapy at Grand Valley

The therapeutic recreation major leads to a Bachelor of Science degree. The program offers a highly articulated and sequenced curriculum. All students must seek advising from a program faculty member before embarking on the program. The baccalaureate curriculum provides educational opportunities that prepare students for entry level positions in therapeutic recreation. Graduates are prepared to meet patient/client health needs in a dynamic and culturally diverse world by completing a comprehensive curriculum that includes theoretical and practical experience and application. Students need to be able to use clinical reasoning skills such as problem solving, formulating concepts, making judgments, analyzing behaviors and tasks, and determining appropriate intervention. The following abilities are important for students to possess for the therapeutic recreation profession: commitment to learning, interpersonal skills, communication skills, effective use of time and resources, use of constructive feedback, professionalism, responsibility, critical thinking, and stress management skills.

### Admission

Students who have been accepted by the university through the Admissions Office will follow the outlined procedures: All undergraduate students interested in therapeutic recreation (TR) can declare therapeutic recreation as their designated major at Grand Valley. During their freshmen and sophomore years students will make progress toward completing the general education and therapeutic recreation cognate courses that are required of TR majors and that are pertinent to therapeutic recreation. Students apply to the TR program during the winter semester sophomore year, at which time, if offered a seat into the program they will have their status updated from 'TR declared' to 'TR admitted' status.

The admission process for therapeutic recreation consists of three phases. These phases are outlined as follows:

### Phase I

Phase I consists of having the following prerequisites met or being currently enrolled at the time of application for admission: overall GPA of 2.7 or above, PSY 101, BIO 120, and CHM 109.

### Phase II

Phase II consists of the actual application process. Students must submit all application materials to the Director of the Therapeutic Recreation program. The application consists of the following components, all of which must be completed and submitted by March 1, prior to the intended fall entry (applications available in the College of Health Professions office).

- Application form.
- Autobiographical sketch.
- Statement of professional goals.
- Fifty hours of volunteer or paid work in a therapeutic setting.
- Two letters of recommendation from therapeutic recreation specialists, related health care professionals, or other recreation professionals with whom the applicant has completed volunteer or paid work hours.

### Phase III

Upon completion of Phases I and II, students who meet the qualifications will be notified of provisional admission into the program and will be asked to schedule an advising appointment with a faculty member in the therapeutic recreation program. Students will be given a permit to register for REC 300, REC 302, REC 304, and REC 389 for the fall semester. Upon successful completion of these courses (80 percent competency/B- in each course), the student will be granted full admission into the therapeutic recreation program.

Transfer students will follow the preceding process and meet the same criteria. Students should note that they are able to complete two years at another institution (i.e., community college). This preparation will facilitate completing the therapeutic recreation program at Grand Valley within the two-year and one-semester rotation of therapeutic recreation coursework.

## Bachelor of Science in Therapeutic Recreation

### Requirements for a Major in Therapeutic Recreation

The curriculum for the bachelor's degree in therapeutic recreation is designed to provide the essential competencies and skills related to professional practice in therapeutic settings. Students desiring a major in therapeutic recreation must complete the following:

#### 1. University Degree Requirement

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

#### 2. Therapeutic Recreation Core

- REC 300 - Foundations of Therapeutic Recreation Credits: 3
- REC 302 - Leisure, Health, and Wellness Credits: 3
- REC 304 - Diagnostic Groups in Therapeutic Recreation Credits: 3
- REC 306 - Comprehensive Therapeutic Recreation Programming Credits: 3
- REC 308 - Leadership for Therapeutic Recreation Credits: 3
- REC 310 - Interventions in Therapeutic Recreation Credits: 3
- REC 389 - Therapeutic Recreation Placement Preparation Credits: 1
- REC 390 - Fieldwork in Therapeutic Recreation Credits: 3
- REC 404 - Trends and Challenges in Therapeutic Recreation Credits: 3
- REC 405 - Administration of Therapeutic Recreation Credits: 3
- REC 407 - Assessment and Documentation in Therapeutic Recreation Credits: 3

- REC 410 - Research and Evaluation in Therapeutic Recreation Credits: 3
- REC 490 - Internship in Therapeutic Recreation Credits: 6 or 12

#### 3. Electives

Two courses:

- REC 313 - Therapeutic Recreation for Physical Disability Credits: 3
- REC 315 - Therapeutic Recreation for Mental Health Credits: 3
- REC 316 - Therapeutic Recreation with the Elderly Credits: 3
- REC 317 - Therapeutic Recreation for Pediatrics Credits: 3

#### 4. Cognates

- AHS 100 - Medical Terminology Credits: 3
- AHS 110 - Introduction to Health Care Credits: 3
- BIO 120 - General Biology I Credits: 4
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4
- MOV 300 - Kinesiology Credits: 3
- MOV 304 - Introduction to Exercise Physiology Credits: 3
- PSY 101 - Introductory Psychology Credits: 3
- PSY 303 - Psychopathology Credits: 3
- PSY 325 - Educational Psychology Credits: 3 **OR** PSY 365 - Cognition Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### 5. Academic Standards

To embark on the fieldwork and internship placements, students must show academic competence. The criterion for competence is 80 percent (B-) in each REC designated course. Additionally, students should be aware that prior to the beginning of the fieldwork and internship placements, they must complete comprehensive health compliance obligations including but not limited to a criminal background check, fingerprinting, and drug screening. It is the responsibility of the student to comply. If there is illegal activity in the background check/fingerprinting or if there is evidence of one or more prohibited substance in the drug test, the clinical sites have the right to refuse a student's placement which may negatively impact a student's ability to progress in the therapeutic recreation program. In addition, individuals who have been charged with, or convicted of a crime, may not be eligible for national certification by the National Council on Therapeutic Recreation Certification (NCTRC). Students to whom this may apply are strongly advised to work with NCTRC for preapplication review of eligibility for certification. Contact information for NCTRC: [www.nctrc.org](http://www.nctrc.org); email: [nctrc@nctrc.org](mailto:nctrc@nctrc.org); telephone: (845) 639-1439; fax: (845) 639-1471.

#### 6. Certifications

- First aid/CPR certification and other health compliance certifications must be current before registering for REC 390, Fieldwork, or REC 490 Internship.
- Water safety instructor (W.S.I.) certification is often an internship requirement in a clinical rehabilitation setting. Students interested in physical rehabilitation or aquatics should consider pursuing this certification.

#### 7. Credential

National Council for Therapeutic Recreation Certification (N.C.T.R.C.) Credential: It is the students' responsibility to be sure that they comply with N.C.T.R.C. standards during their course of study. The certification process can only be pursued by the graduate. Universities and colleges are not permitted to enter into this process. Grand Valley's therapeutic recreation faculty can only advise the student on which courses to take to meet the qualifications for sitting for the credentialing exam. Upon application, the N.C.T.R.C. board has the sole responsibility of reviewing the academic program and ascertaining whether a graduate is permitted to sit for the National Certification Examination. All decisions regarding certification are determined by the N.C.T.R.C. Board.

## Women, Gender, and Sexuality Studies

### Suggested Order of Coursework for a Major in Therapeutic Recreation

#### First Year

##### Fall (credits: 14)

- General education course Credits: 3
- AHS 110 - Introduction to Health Care Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- MTH 110 - Algebra Credits: 4

##### Winter (credits: 14)

- General education course Credits: 3
- BIO 120 - General Biology I Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

#### Second Year

##### Fall (credits: 16)

- General education course Credits: 3
- General education course Credits: 3
- AHS 100 - Medical Terminology Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- PSY 364 - Life Span Developmental Psychology Credits: 3

##### Winter (credits: 16)

- General education course Credits: 3
- General education course Credits: 3
- BMS 251 - Anatomy and Physiology II Credits: 4
- PSY 303 - Psychopathology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

#### Third Year

##### Fall (credits: 16)

- General education course Credits: 3
- REC 300 - Foundations of Therapeutic Recreation Credits: 3
- REC 302 - Leisure, Health, and Wellness Credits: 3
- REC 304 - Diagnostic Groups in Therapeutic Recreation Credits: 3
- REC 389 - Therapeutic Recreation Placement Preparation Credits: 1
- PSY 325 - Educational Psychology Credits: 3

##### Winter (credits: 12/15)

- General education course Credits: 3
- Issues course Credits: 3
- REC 306 - Comprehensive Therapeutic Recreation Programming Credits: 3
- REC 308 - Leadership for Therapeutic Recreation Credits: 3
- REC 310 - Interventions in Therapeutic Recreation Credits: 3
- \*REC 313 - Therapeutic Recreation for Physical Disability Credits: 3
- \*REC 316 - Therapeutic Recreation with the Elderly Credits: 3
- **\*TR Elective - Must have a minimum of two**

#### Summer

- REC 390 - Fieldwork in Therapeutic Recreation Credits: 3

#### Fourth Year

##### Fall (credits 12/15)

- General education - Issues Credits: 3
- MOV 300 - Kinesiology Credits: 3
- \*REC 315 - Therapeutic Recreation for Mental Health Credits: 3
- REC 404 - Trends and Challenges in Therapeutic Recreation Credits: 3
- REC 407 - Assessment and Documentation in Therapeutic Recreation Credits: 3
- **\*TR Elective - Must take a minimum of two**

##### Winter (credits: 12/15)

- MOV 304 - Introduction to Exercise Physiology Credits: 3
- \* REC 317 - Therapeutic Recreation for Pediatrics Credits: 3
- REC 405 - Administration of Therapeutic Recreation Credits: 3
- REC 410 - Research and Evaluation in Therapeutic Recreation Credits: 3

- Elective Credits: 3

**\*TR Elective - Must take a minimum of two**

#### Summer

- REC 490 - Internship in Therapeutic Recreation Credits: 6 or 12

## Women, Gender, and Sexuality Studies - Program Description

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

**Website:** [www.gvsu.edu/wgs](http://www.gvsu.edu/wgs)

### Mission

Creating and sustaining a community of scholar-activists who: understand systems of gender and sexuality; generate and apply intersectional feminist and queer perspectives; challenge structural inequalities; and work for social justice.

### Program Information

Students may earn a Bachelor of Arts or Bachelor of Science degree in Women, Gender, and Sexuality Studies (WGS). The program also offers WGS as a minor as well as Lesbian, Gay, Bisexual, Transgender, Queer Studies (LGBTQ) as a minor.

WGS curriculum focuses on diversity and the integration of theory and practice within the field. Liberal education is central to WGS, and the department requires that students critically reflect on and recognize their own social and cultural environments and to challenge prevailing ideas of privilege, and inequality. These attributes encourage students to develop the skills of inquiry, reflection, critical analysis, dialog, and expression so central to the university's vision for undergraduate success.

The Women, Gender, and Sexuality Studies Department at GVSU offers an interdisciplinary curriculum that acquaints students with the scholarship on women, gender and sexuality; raises awareness of how categories of gender and sexuality affect and are affected by our everyday lives, historical currents, social institutions, science, art, and literature; and prepares students for graduate school and/or careers in which knowledge of gender issues is relevant.

Each semester, more than 500 students enroll in WGS courses ranging from Introduction to Gender Studies to courses cross-listed in more than a dozen departments to our senior level courses on praxis that empower students to challenge gender stereotypes, understand feminist perspectives, and to work actively for diverse gender justice through service learning at the community level and through international perspectives and experiences.

### Campus Engagement

The WGS Department contributes to the experience of all students on campus by working in collaboration with the Gayle R. Davis Center for Women and Gender Equity, the Milton E. Ford LGBT Resource Center, the Office of Multicultural Affairs, student organizations and academic programs and departments across the university to sponsor speakers and events that contribute to understanding women, gender, and sexuality in the contemporary world. Most significantly, each March in conjunction with the Center for Women and Gender Equity, WGS celebrates Women's and Feminist History Month with a keynote speaker, a tea party celebrating the legacy of women's activism, and an awards ceremony honoring students, staff, and faculty members of the Grand Valley community.

### Study Abroad

Students interested in the field of women, gender, and sexuality studies are encouraged to seek study abroad experiences that examine issues of gender and its relationship to economics, political movements, society, and empowerment.

WGS faculty currently facilitate a study abroad program in Cape Town, South Africa which combines academic curriculum with service to the community. Participants examine how issues such as reproductive health, education, violence, political representation, and Apartheid have intersected to impact the role of women within various societal and class structures. Students participate in several excursions in and around Cape Town as well.

For more information about opportunities to study women, gender, and/or sexuality abroad, students should contact the Women, Gender, and Sexuality Studies Department or the Padnos International Center.

### Honors Organizations

Iota Iota Iota is the academic honor society for the field of women gender, and sexuality studies. The organization recognizes the academic achievements of students and encourages and supports scholarship and excellence in the field. WGS students meeting criteria are inducted into GVSU's chapter of Iota Iota Iota each year.

## Bachelor of Arts or Bachelor of Science in Women, Gender, and Sexuality Studies

### Requirements for a Major in Women, Gender, and Sexuality Studies

Students majoring in women, gender and sexuality studies are required to complete at least 30 credit hours, including Introduction to Gender Studies, Foundations of Feminism, Women/Gender Studies Research Methods, Global Feminisms, and the Senior Capstone. Students must also take five electives at the 200 level or higher, one of which must come from the high impact/civic engagement emphasis. The required courses are:

- WGS 200 - Introduction to Gender Studies Credits: 3
- WGS 360 - Foundations of Feminism Credits: 3
- WGS 395 - Women and Gender Studies Research Methods Credits: 3
- WGS 450 - Global Feminisms Credits: 3
- WGS 495 - Capstone Credits: 3

High impact/civic engagement emphasis: Students must complete one of the following courses:

- WGS 490 - WGS Internship Credits: Variable.
- WGS 491 - Contemporary Theory and Practicum Credits: 3
- WGS 492 - Community Collaborative Credits: 3
- WGS 493 - Community Collaborative in South Africa Credits: 3

### Electives

For the remaining five electives, students have a wide range of WGS courses, courses cross-listed with other departments, and other courses approved for meeting program requirements. These courses include:

- WGS 224 - Introduction to LGBTQ Studies Credits: 3
- WGS 280 - Special Topics in Women Gender, and Sexuality Studies Credits: 3
- WGS 302 - Women, Politics, and Public Policy Credits: 3
- WGS 310 - Sexual Orientation and the Law Credits: 3
- WGS 315 - Psychology of Sex Differences Credits: 3
- WGS 316 - Human Intimacy and Sexuality Credits: 3
- WGS 317 - Sociology of Gender Credits: 3
- WGS 318 - Sociology of Sexuality Credits: 3
- WGS 320 - Crimes Against Women Credits: 3
- WGS 335 - Women, Health and Environment Credits: 3
- WGS 336 - Lesbian, Gay and Queer Literature Credits: 3
- WGS 343 - Black Feminist Thought Credits: 3
- WGS 350 - Family and Gender in the Developing World Credits: 3
- WGS 352 - Black Women's Culture and Communities Credits: 3
- WGS 358 - Women and Gender in South Africa Credits: 3
- WGS 370 - Women and the Law Credits: 3
- WGS 371 - Historical Perspectives on Gender and Sexualities Credits: 3

- WGS 380 - Special Topics in Women Gender, and Sexuality Studies Credits: 1 to 4
- WGS 399 - Independent Readings Credits: 1 to 3
- WGS 402 - Feminist Visionary Thinkers Credits: 3
- WGS 460 - Spanish Women Authors Credits: 3
- WGS 461 - Language and Gender Credits: 3
- WGS 490 - WGS Internship Credits: Variable.
- WGS 491 - Contemporary Theory and Practicum Credits: 3
- WGS 492 - Community Collaborative Credits: 3
- WGS 493 - Community Collaborative in South Africa Credits: 3
- AAA 351 - Perspectives on African American Males Credits: 3
- ANT 370 - Cross-cultural Perspectives on Gender Credits: 3
- BIO 325 - Human Sexuality Credits: 3
- ECO 350 - Economics of Gender Credits: 3
- ENG 436 - Women and Literature Credits: 3
- HST 371 - Historical Perspectives on Gender and Sexualities Credits: 3
- PHI 370 - Sex Matters: Feminist Philosophy in the Contemporary World Credits: 3
- SOC 285 - Families in Society Credits: 3
- SOC 379 - Sociology of Love Credits: 3
- SOC 381 - Class, Race, Gender, and Sexuality Credits: 3
- SOC 389 - Child Maltreatment Credits: 3
- SW 333 - Community Work with the Lesbian, Gay, Bisexual and Transgender Community Credits: 3

Other courses that have a significant amount of the course devoted to the study of women, gender, and/or sexuality during a particular semester may also be counted toward the minor on an **individual case basis with director approval**.

### B.A. or B.S. Degree Requirements

Candidates for the B.A. degree must demonstrate third semester proficiency in a foreign language, either by completing successfully a 201 level language course or by passing a proficiency examination in the language chosen. Candidates for the B.S. degree must complete one of the following tracks:

Track one:

- Women and Gender Studies Research Methods (WGS 395)
- College Algebra (MTH 122) or Calculus 1 (MTH 201)
- Problem Solving Using Spreadsheets (CIS 231)

Track two:

- Women and Gender Studies Research Methods (WGS 395)
- Introductory Applied Statistics (STA 215)

Choose one of the following:

- AHS 301 - Introduction to Health Care Research Credits: 3
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3
- COM 375 - Communication Research Credits: 3
- HST 290 - Research Methods in History Credits: 3
- PLS 300 - Political Analysis Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- STA 318 - Statistical Computing Credits: 3
- STA 340 - Statistics in the Media Credits: 3
- STA 345 - Statistics in Sports Credits: 3

### Double Major

A double major in women, gender, and sexuality studies and another disciplinary area of study carries many advantages for students with multiple interests.

### Study Abroad

Students interested in women, gender, and sexuality studies are encouraged to seek study abroad experience in programs that examine issues of gender and its relationship to economics, political movements, society, and empowerment.

## Writing

WGS faculty currently facilitate a study abroad program in Cape Town, South Africa which combines academic curriculum with service to the community. Participants examine how issues such as reproductive health, education, violence, political representation, and Apartheid have intersected to impact the role of women within various societal and class structures. Students participate in several excursions in and around Cape Town as well.

For more information about opportunities to study women, gender, and/or sexuality abroad, students should contact the women, gender, and sexuality studies program and the Padnos International Center.

### Suggested Order of Coursework for a Major in Women, Gender, and Sexuality Studies

#### First Year

- Three general education Foundations courses
- Two foreign language courses (B.A. Candidates)
- STA 215 - Introductory Applied Statistics Credits: 3 or CIS 160 - Programming with Visual Basic Credits: 3 (B.S. Candidates)
- WGS 200 - Introduction to Gender Studies Credits: 3
- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4

#### Second Year

- Four general education Foundations courses
- One foreign language course (B.A. candidates)
- One approved course that focuses on mathematics, statistics, quantitative reasoning or scientific analysis (B.S. candidates)
- WGS 360 - Foundations of Feminism Credits: 3
- WGS 450 - Global Feminisms Credits: 3
- WGS elective

#### Third Year

- Four general education Foundations courses
- General education Issues courses
- WGS 395 - Women and Gender Studies Research Methods Credits: 3

#### Fourth Year

- Four general education Foundations courses
- General education Issues course
- WGS 495 - Capstone Credits: 3

## Lesbian, Gay, Bisexual, Transgender, Queer Studies Minor

### Requirements for a Minor in Lesbian, Gay, Bisexual, Transgender, Queer Studies

Students who minor in lesbian, gay, bisexual, transgender, queer studies must complete at least 21 credit hours including:

- WGS 224 - Introduction to LGBTQ Studies Credits: 3
- WGS 365 - Queer Theory Credits: 3
- WGS 491 - Contemporary Theory and Practicum Credits: 3

#### Elective Courses

The remaining four courses must be selected from the electives listed as follows. Other courses that have a significant amount of the course devoted to the study of LGBTQ topics during a particular semester may also be counted toward the minor on an individual case basis with director approval.

- ANT 370 - Cross-cultural Perspectives on Gender Credits: 3
- BIO 325 - Human Sexuality Credits: 3
- HST 371 - Historical Perspectives on Gender and Sexualities Credits: 3
- LIB 325 - LGBTQ Identities Credits: 3
- SOC 379 - Sociology of Love Credits: 3
- SOC 381 - Class, Race, Gender, and Sexuality Credits: 3
- SW 333 - Community Work with the Lesbian, Gay, Bisexual and Transgender Community Credits: 3
- WGS 310 - Sexual Orientation and the Law Credits: 3

- WGS 315 - Psychology of Sex Differences Credits: 3
- WGS 316 - Human Intimacy and Sexuality Credits: 3
- WGS 318 - Sociology of Sexuality Credits: 3
- WGS 336 - Lesbian, Gay and Queer Literature Credits: 3
- WGS 399 - Independent Readings Credits: 1 to 3
- WGS 490 - WGS Internship Credits: Variable.

## Women, Gender, and Sexuality Studies Minor

### Requirements for a Minor in Women, Gender, and Sexuality Studies

Students who minor in women, gender, and sexuality studies must complete at least 21 credit hours including:

- WGS 200 - Introduction to Gender Studies Credits: 3
- WGS 360 - Foundations of Feminism Credits: 3

Choose one of the following:

- WGS 491 - Contemporary Theory and Practicum Credits: 3
- WGS 492 - Community Collaborative Credits: 3
- WGS 493 - Community Collaborative in South Africa Credits: 3

#### Electives

The remaining four courses must be selected from the electives listed under the Bachelor of Arts or Bachelor of Science in Women, Gender, and Sexuality Studies; students may also select courses required for the major as part of their program. Other courses that have a significant amount of the course devoted to the study of women, gender and/or sexuality during a particular semester may also be counted toward the minor on an **individual case basis with department chair approval.**

## Writing - Program Description

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

**Website:** [www.gvsu.edu/writing](http://www.gvsu.edu/writing)

The Department of Writing offers instruction in academic, creative, and professional writing genres. Knowing how to construct texts that appeal to different audiences is a critical skill for the 21st century. With the proliferation of on-line and accelerated communication, the ability to tell a story that engages and persuades an audience is more important than ever. A major or minor in writing can help students to develop this ability.

Students in writing will have opportunities to develop storytelling skills in a wide variety of genres and media. Whether they are interested in connecting storytelling to traditional genres (academic, poetry, magazine, fiction, non-fiction) or to the latest writing technologies (document design software, content management systems), students can select courses that best prepare them for their future professional careers.

For students who choose to major in writing, the department offers coursework that will help students develop as strong writers in professional, literary, and civic contexts. The department also offers a minor in writing for students wishing to develop their writing abilities for personal or professional reasons.

#### The Writing Major

Through a unique modular curriculum that combines courses in professional, academic, and creative writing genres, students majoring in writing will learn how to create, shape, design, and share texts. These abilities will allow them to enter the world in a variety of careers. Students who pursue a major in writing can become a Web writer, freelancer, document designer, magazine writer, editor, publisher, or technical writer, to name a few. The flexibility and the variety of courses offered lets our students shape their educational experience and future professional identity.

Through the 42-credit B.A. or B.S. degree, our writing majors develop the skillset to:

- Write fiction and non-fiction texts.
- Develop and tailor content to both print and online media.
- Work with the industry standard writing and design software.
- Collaborate with other writers, editors, subject matter experts, and designers to prepare content for publication.
- Develop promotional materials to pitch and sell content.

### The Writing Minor

The minor in writing is designed to serve students in a wide variety of disciplines, such as computer science, business, math, nursing, classics, and engineering, by giving them the opportunity to develop personal and workplace writing skills and greater rhetorical sensitivity. The minor requires 18 credits; the range of courses offered encourages students to tailor a program that augments their professional needs and personal talents as writers.

### First-Year Writing Requirement

All Grand Valley students, regardless of major, must satisfy the first-year writing requirement. First-year composition courses focus on developing student fluency and skill, with special attention given to general forms of writing common in many academic settings. In WRT 150, students draw on personal experience and opinions, use library resources, conduct research, integrate sources into their writing, and become familiar with the Fred Meijer Center for Writing as an important campus resource. Students who want additional work on the basics of college writing, or who simply wish to build their confidence in writing before tackling WRT 150, may take WRT 098, a course focusing on writing clearly, confidently, and correctly.

Students who need or want additional work on their writing may elect to take WRT 305, a course designed to build general writing abilities and to help students develop expertise in the writing forms and styles specific to their academic and career interests.

### Extracurricular Activities

The department of writing offers a rich community of writers and readers, including students, faculty, local professionals, and regional and national authors. Beyond their courses, students have a number of opportunities to participate in the writing communities and organizations across campus.

- **AWP Intro Journal Awards.** A literary competition for the discovery and publication of the best new works by students currently enrolled in the programs of AWP.
- **Distinction in Writing.** A program that encourages majors to explore opportunities in addition to the regular curriculum. Interested students work with their advisors to plan and complete a series of extracurricular activities over a one- or two-year period. Successful students submit a final portfolio of work and are awarded the Distinction in Writing designation upon graduation.
- **Fishladder: A Student Journal of Art and Writing.** The literary arts magazine publishes creative work of students once yearly and is edited by students under the guidance of a faculty adviser.
- **Grand Valley Writers Series.** This annual series brings both regionally and nationally known writers to campus for public readings, class visits, and other appearances.
- **InWriting.** An annual newsletter about the faculty and students in the Department of Writing.
- **Oldenburg Writing Contest.** An annual writing contest, cosponsored with the English Department, carrying cash prizes for essays and creative writing in various categories.
- **Organization for Professional Writers.** The Organization for Professional Writers is a place for students to further their understanding of professional writing as a field, utilize their skills outside of the classroom, and network with other writing majors, minors, and professionals.

- **Student Reading Series.** A public series of evening readings of promising student work from intermediate and advanced writing courses. Works typically include fiction, nonfiction, and poetry.

## Bachelor of Arts or Bachelor of Science in Writing

### Program Requirements for a B.A. in Writing

The Bachelor of Arts degree requires third-semester proficiency in a foreign language of the student's choice.

### Program Requirements for a B.S. in Writing

The Bachelor of Science degree requires that students take the following three courses:

- CIS 238 - Internet Media and Programming Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

### Requirements for a Major in Writing (42 Credits)

All writing majors will earn the B.A. degree, which requires third-semester proficiency in a foreign language. The writing major totals 42 credits.

### Core Requirements

Four courses = 12 credits

You should do your best to complete all four core requirements during your first two semesters as a major because

- The advanced WRT courses you will take after this generally require some of the core as prerequisites.
- The core courses will introduce you to a wide range of areas that could help you to better choose your path as a major.
- You cannot complete your internship or take the Capstone without first completing these four courses.
- WRT 200 - Introduction to Professional Writing Credits: 3
- WRT 210 - Writing with Style Credits: 3
- WRT 219 - Introduction to Creative Writing Credits: 3
- WRT 253 - Document Production and Design Credits: 3

### Module Requirement

Choose three modules and complete two courses in each = 18 credits

In selecting which modules to take, think about which modules might help best to shape you as the writer you need to be for your future career. If you are uncertain as to which modules might best support your career goals, consult with your advisor. If you are uncertain what your career goals are, it would also be a good idea to talk with your advisor.

While you must complete three separate modules by taking both courses for the module requirement, if you take a course in a module and decide the module is not for you, or perhaps change your career goals, you can always use the single course to count toward the elective requirement.

### Working with Writers

- WRT 307 - Consulting With Writers Credits: 3
- WRT 308 - Working with Manuscripts Credits: 3

### Style and Technique

- WRT 310 - Intermediate Style and Technique Credits: 3
- WRT 410 - Advanced Style and Technique Credits: 3

### Poetry

- WRT 320 - Intermediate Poetry Workshop Credits: 3
- WRT 420 - Advanced Poetry Workshop Credits: 3

### Fiction

- WRT 330 - Intermediate Fiction Workshop Credits: 3
- WRT 430 - Advanced Fiction Workshop Credits: 3

### Writing for the Web

- WRT 351 - Writing for the World Wide Web Credits: 3
- WRT 451 - Advanced Writing for the Web Credits: 3

## Writing

### Writing with Technologies

- WRT 353 - Visual Rhetoric and Document Design Credits: 3
- WRT 455 - Multimodal Composing Credits: 3

### Nonfiction

- WRT 360 - Intermediate Creative Nonfiction Credits: 3
- WRT 460 - Advanced Creative Nonfiction Credits: 3

### Magazine Writing

- WRT 365 - Intermediate Magazine Writing Credits: 3
- WRT 465 - Advanced Magazine Writing Credits: 3

### Writing Electives

Two courses = 6 credits

The writing electives offer you further flexibility to design your curriculum to suit your future career. For example, you can choose WRT courses that are not part of the modules previously listed. In some instances, you may be able to choose elective courses that also count towards completion of another major or minor (be sure to verify this by talking to advisors in both disciplines).

Choose any two from the following:

- Any WRT Module course other than those you are using to satisfy the module requirement
- WRT 350 - Business Communication Credits: 3
- WRT 354 - Writing in the Global Context: Culture, Technology, and Language Practices Credits: 3
- WRT 380 - Special Topics in Writing Credits: 3
- WRT 381 - Writing and Sports Credits: 3
- **OR** Any two pre-approved writing electives (see the approved list)
- Any two advisor-approved interdisciplinary electives (talk to your advisor before taking)

### Internship and Capstone Courses

Two courses = 6 credits

You must have senior standing and complete all the core classes before you can take the Capstone course.

An internship is something that you need to plan well in advance. Be sure to review the WRT Internship Guide to learn more.

- WRT 490 - Internship Credits: 1 to 3
- WRT 495 - Genre and Writing (Capstone) Credits: 3

## Writing Minor

The minor in writing is designed to serve students in a wide variety of disciplines, such as computer science, business, math, nursing, classics, and engineering, by giving them the opportunity to develop personal and workplace writing skills and greater rhetorical sensitivity. The minor requires 18 credits; the range of courses offered encourages students to tailor a program that augments their professional needs and personal talents as writers.

### Requirements for a Minor in Writing

#### Core Requirements

Pick three courses from the four courses in the core:

- WRT 200 - Introduction to Professional Writing Credits: 3
- WRT 210 - Writing with Style Credits: 3
- WRT 219 - Introduction to Creative Writing Credits: 3
- WRT 253 - Document Production and Design Credits: 3

#### Additional Courses

Pick any three upper-division writing courses from the following list:

- WRT 307 - Consulting With Writers Credits: 3
- WRT 308 - Working with Manuscripts Credits: 3
- WRT 310 - Intermediate Style and Technique Credits: 3
- WRT 320 - Intermediate Poetry Workshop Credits: 3
- WRT 330 - Intermediate Fiction Workshop Credits: 3
- WRT 350 - Business Communication Credits: 3

- WRT 351 - Writing for the World Wide Web Credits: 3
- WRT 353 - Visual Rhetoric and Document Design Credits: 3
- WRT 354 - Writing in the Global Context: Culture, Technology, and Language Practices Credits: 3
- WRT 360 - Intermediate Creative Nonfiction Credits: 3
- WRT 365 - Intermediate Magazine Writing Credits: 3
- WRT 381 - Writing and Sports Credits: 3
- WRT 410 - Advanced Style and Technique Credits: 3
- WRT 420 - Advanced Poetry Workshop Credits: 3
- WRT 430 - Advanced Fiction Workshop Credits: 3
- WRT 451 - Advanced Writing for the Web Credits: 3
- WRT 455 - Multimodal Composing Credits: 3
- WRT 460 - Advanced Creative Nonfiction Credits: 3
- WRT 465 - Advanced Magazine Writing Credits: 3

## Course Listings and Descriptions

### AAA 200 - Understanding Africa

An introduction to the theoretical, conceptual and historical framework that has shaped the study of Africa and a multidisciplinary survey of the main topics and issues facing the African continent as a vehicle for understanding African studies and making sense of Africa's evolution. Fulfills Foundation - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Offered fall semester. Credits: 3

### AAA 201 - Introduction to African American Studies

Traces the historical development and examines the scope, theories, discourses, and methodologies defining African American studies and the critical responses to these studies. Surveys perspectives on African American history, religion, social organization, politics, economy, literature, and culture and social ideology. Fulfills Foundation - Social and Behavioral Sciences. Fulfills Cultures - U.S. Diversity. Credits: 3

### AAA 231 - Early African American Literature

Analysis and discussion of discourse primarily written by African Americans during the formative years of this nation. Emphasis on literary discourse as a means of defining African American consciousness and community, understanding representations of African American's community of origin, and investigating how the communities African Americans inhabit shaped their discursive expression. Cross-listed with ENG 231. Students may not receive credit for both. Fulfills Foundation - Philosophy and Literature. Fulfills Cultures - World Perspectives. Offered fall semester. Prerequisite: WRT 150. Credits: 3

### AAA 232 - Modern African American Literature

Analysis and discussion of discourse by and about African Americans written primarily during the 20th century. Emphasis on literary discourse as a means of defining African American consciousness and community and understanding how the communities African Americans inhabit shaped their discursive expression. Cross-listed with ENG 232. Offered winter semester. Prerequisite: WRT 150. Credits: 3

### AAA 300 - US-Africa Relations

Examines the historical development of the relationship between the United States and Africa, and the broad range of issues — cultural, economic, political, security and social — that conditions and shapes the relationship. Fulfills Cultures - World Perspectives. Offered every year. Credits: 3

### AAA 302 - African Diaspora

Overview of the history and culture of African societies throughout the world and the persistence of African culture among black populations outside of Africa. Chronicle of major events in the diasporic experience. Examines ethnocultural debate, African cultural values, artistic and intellectual traditions, and cultural continua of African forms in the New World. Fulfills Cultures - World Perspectives. Offered winter semester. Credits: 3

### AAA 305 - Perspectives on the Black Arts Movement

This course examines the relationship between “aesthetics,” artistic form (i.e., song, dance, literature, etc.), and “politics,” or the social function of art (i.e., entertainment, “protest art,” “social art,” “revolutionary art,” etc.) during this period of African American cultural history through prose, fiction, visual culture, music, and film. Part of the Information, Innovation, and Technology Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### AAA 315 - Field to Factory: African American Migration

Examines the sociocultural, political, economic, psychological, and interpersonal consequences of the migration of over one million African Americans from the rural South to the industrialized North during the decades surrounding World Wars I and II. Offered fall semester. Credits: 3

### AAA 319 - African Politics

A study of social and economic forces that shape the political processes in Africa through a combination of individual cases and general themes. Topics include colonization, regional integration, democratic transitions,

state collapse and violence, politics of ethnicity, religion, gender and class, civil society, development, and Africa's role in world affairs. Fulfills Cultures - World Perspectives. Part of the Globalization Issue. Cross-listed with PLS 319. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### AAA 333 - Study Abroad-African/African American Studies

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits may vary. Offered as needed. Prerequisites: Specific to course and instructor. Credits: 1 to 6

### AAA 337 - Contemporary Black Literature

Studies the importance and variety of literature by Black authors from Africa, the Americas and/or Afro-Europe since 1975. Texts written earlier than 1975 are used to consider influential historical and/or social events, trends and themes, literary styles, innovative uses of popular culture, and/or expression of the experience of marginality. Fulfills Cultures - World Perspectives. Part of the Identity Issue. Cross-listed with ENG 337. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### AAA 340 - African American Culture and Social Thought

A critical examination of African American cultural expression, several African American cultural and social movements, and the defining intellectual conversations and persons in African American culture and social thought. Part of the Identity Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### AAA 341 - Civil Conflicts in Africa

The analysis of the nature and dynamics of both nonviolent and violent conflicts — civil wars — in Africa, and the efforts to resolve them. The focus will be on selected case studies of African states. Offered every year. Credits: 3

### AAA 343 - Black Feminist Thought

Survey of the interdisciplinary field of black feminist studies. Focuses on the history, theoretical approaches, and interventions of black feminist studies through examination of the foundational topics and concerns of the field. Cross-listed with WGS 343. Course offered fall semester. Credits: 3

### AAA 350 - African American Identity and Communication

Examines the ways African Americans define themselves and membership in their group and ways they perceive within-group and out-of-group communication. Investigates African American conceptualizations of self, identity, and ethnicity and ways these conceptualizations reflect and are a reflection of African American communication styles. Contrasts African American and Anglo American cultural patterns and communication styles. Offered winter semester. Credits: 3

### AAA 351 - Perspectives on African American Males

A critical examination of the socialization, life ways, status, and future of African American males. Historical perspectives, present status, cultural expression and social relationships, empowerment, masculinity, psychosocial development and coping, and the future of African American males. Offered winter semester of odd-numbered years. Credits: 3

### AAA 352 - Black Women's Culture and Communities

A historical and theoretical analysis of the distinct identities African American women constructed for themselves (and had constructed for them) in response to the forces of patriarchal domination and political colonization. Fulfills U.S. Diversity requirement. Part of the Human Rights Issue. Cross-listed with WGS 352. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### AAA 355 - History of Underground Railroad

An exploration of the historical, political and cultural contexts out of which the American Underground Railroad and Abolitionists Movements emerged with emphasis on the important role the State of Michigan played in these movements due to its geographical proximity of Canada. Fulfills Cultures - U.S. Diversity. Offered fall semester. Prerequisite: Junior standing. Credits: 3

## Course Listings and Descriptions

### **AAA 357 - The Black Diaspora and the Meaning of Sports, 1800 to the Present**

This course explores the Black Diaspora (1800-present) through the lens of the black athlete in order to help examine global issues such as race, politics, economics, and gender. Part of Globalization Issue. Cross-listed with HST 357. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### **AAA 380 - Special Topics in African/African American Studies**

A seminar for the study of important topics not ordinarily covered in other courses. Course may be taken more than once when the topic is different. Offered on sufficient demand. Credits: 1 to 3

### **AAA 399 - Independent Readings**

Independent supervised readings in selected topics. A student may take only one reading course for one to three credits per term. No more than six credit hours of AAA 399 and AAA 499 combined may count toward the minor. Offered fall and winter semesters. Credits: 1 to 3

### **AAA 490 - Practicum: Career-Service in Community Building**

Agency experience in the community relating practical training and independent study in a specialized area in African American studies. Maximum of six credits. Nine hours of course preparation and permission of instructor and program coordinator. Offered fall and winter semesters. Credits: 1 to 6

### **AAA 499 - Independent Study and Research**

Research conducted individually with faculty supervision. Attention given to written and oral presentation of research findings. A student may take only one independent study course for one to four credits per term. No more than six credit hours of AAA 399 and AAA 499 combined may count toward the minor. Course is graded credit/no credit. Offered fall and winter semesters. Prerequisites: Nine hours in the department and written permission of the instructor before registration. Credits: 1 to 4

### **ACC 212 - Principles of Financial Accounting**

Introduction to financial accounting. Emphasizes the importance of accounting information, how accounting information is produced, and how this information is used in making decisions about organizations. Offered fall, winter, and spring/summer semesters. Credits: 3

### **ACC 213 - Principles of Managerial Accounting**

Examines the development and use of accounting information for planning, control, and decision-making in today's fast-changing business environment. Cost behavior analysis, ethics, activity-based costing (ABC), budgeting, variance analysis, balanced scorecards, relevant costs for decision-making, pricing, and total quality management will be examined using spreadsheets wherever applicable. Offered fall, winter, and spring/summer semesters. Prerequisite: ACC 212. Knowledge of spreadsheets and college algebra recommended. Credits: 3

### **ACC 240 - Financial Accounting Applications**

A review of the financial accounting process and an introduction to financial accounting database and retrieval procedures. Offered every semester. Prerequisite: ACC 212. Credits: 1

### **ACC 308 - Governmental and Not-for-Profit Accounting**

Accounting and auditing principles for governmental and not-for-profit entities. Offered fall semester. Prerequisite: ACC 212. Credits: 3

### **ACC 310 - Intermediate Accounting I**

Theory and application of financial accounting. Topics include the accounting cycle, development of accounting standards, financial statement presentation, basic asset/liability/equity transactions, revenue recognition, and the time value of money. Offered every semester. Prerequisites: ACC 212 and ACC 240. Credits: 3

### **ACC 311 - Intermediate Accounting II**

Continuation of the theory and application of financial accounting. Topics include the recognition, measurement and presentation of liabilities, equity, deferred taxes, leases, and pensions as well as accounting changes and the cash flow statement. Offered every semester. Prerequisite: Grade of C or better in ACC 310. Credits: 3

### **ACC 317 - Individual Income Taxation**

Consideration of the basic theory and practice applicable to the determination of the taxable income of individuals. The course will cover the individual income tax formula including the determination of income, the role of deductions and credits, and simple and complex property transactions. Offered fall and winter semesters. Prerequisite: ACC 212. Credits: 3

### **ACC 318 - Entity Taxation**

Introduction to tax characteristics of various types of business entities including C and S corporations, partnerships, and limited liability companies. Topics covered include the tax consequences of entity formation, distributions, operations, and liquidations. The course will also cover federal estate and gift taxation. Offered fall and winter semesters. Prerequisite: ACC 212. ACC 317 recommended. Credits: 3

### **ACC 321 - Cost Strategy and Decision Making**

This course will examine cost accounting activities such as activity-based costing (ABC) and activity-based management (ABM), special analysis for decision-making, product and service pricing, cost-volume-profit analysis, flexible budgeting, strategic analysis, theory of constraints, transfer pricing, capacity management, performance evaluation and sales, profitability, mix, yield, and productivity variances. Offered fall and winter semesters. Prerequisite: ACC 213. Credits: 3

### **ACC 330 - International Accounting**

Survey of the major differences between accounting systems around the world and the business practices and environments within which these systems developed and function today. Basic study of the accounting issues affecting multinational companies, including consolidations, price changes, and inflation, foreign currency transactions and translation, transfer pricing, and international taxation. May be offered any semester. Prerequisite: ACC 212. Credits: 3

### **ACC 333 - Corporate Governance and Accounting Ethics**

The class examines ethical decision-making in professional accounting settings. The class focuses on ethical reasoning and the legal and professional environment that accountants work in. Students will apply ethical reasoning in the accounting environment, and evaluate others' decisions in that environment. Offered fall and winter semesters. Prerequisite: ACC 310. Credits: 3

### **ACC 340 - Accounting Systems**

A study of automated systems of processing data for accounting information. The accounting system is discussed from the perspective of developing and maintaining systems capable of producing information for internal decision-making and external reporting. Hands-on experience may include general ledger, ERP, flowcharting software, and other relevant computer technology. Offered fall and winter semesters. Prerequisites: ACC 240 and MGT 268. Credits: 3

### **ACC 380 - Special Topics in Accounting**

To be arranged with a full-time faculty member with the approval of the department chairman. A maximum of three hours of credit may be applied to the degree requirements. Offered as demand warrants. Credits: 1 to 3

### **ACC 413 - Internal Auditing**

This course covers the special areas of internal auditing. Topics include auditing of information systems, operational audits, management reports, staffing, and other essential topics. Auditing with current software such as ACL is emphasized. Offered fall semester. Prerequisite: ACC 212. Credits: 3

### **ACC 414 - Auditing Theory and Practice**

Professional development in the basic concepts of auditing. Internal control procedures, the collecting, testing, and analyses of evidential data, and the auditor's report are discussed. Integrating accounting information systems and continuous auditing are introduced. Offered fall semester. Prerequisite: ACC 310. ACC 340 strongly recommended. Credits: 3

### **ACC 416 - Information Systems Auditing**

This course covers the theory and practical application of information systems audit and control. Topics include authoritative information

technology control frameworks, computer security, continuous auditing, and audit approaches to new and emerging technologies such as electronic commerce, the Internet, client/server networking, and enterprise systems. Offered winter semester. Prerequisite: ACC 413 or ACC 414, or permission of instructor. Credits: 3

#### **ACC 490 - Accounting Internship**

This course will be used to grant accounting credit to students who complete internships in the accounting field. Prerequisites: Junior standing; minimum 2.5 GPA. Graded credit/no credit. Credits: 1 to 6

#### **ACC 499 - Independent Research**

Students propose an independent study culminating in a written and oral report. The proposal must include learning outcomes and a reading list. Proposals involving primary research should include a detailed description of objectives and methodology. Students must find an interested faculty member to help them prepare the proposal and to supervise the independent research. Offered every semester. Credits: 1 to 3

#### **ACC 511 - Financial and Managerial Accounting Concepts**

An introduction to financial and managerial accounting. Financial accounting includes an examination of accounting concepts and understanding and interpreting financial statements. Managerial accounting includes examining the use of accounting information for planning, control, and decision-making in today's fast-changing business environment. No prior knowledge of accounting is required or assumed. Equivalent to ACC 212 and ACC 213. Offered fall and winter semesters. Credits: 3

#### **ACC 602 - Corporate Financial Reporting II**

This course examines the conceptual and practical application of both generally accepted accounting principles and international financial reporting standards. Topics include financial statement preparation, accounting for liabilities, stockholders' equity, deferred taxes, and the reporting of accounting changes and diluted earnings per share. Offered fall semester. Prerequisite: ACC 310 or ACC 601 or equivalent. May not be taken for credit if the student has received credit for ACC 311 or equivalent. Credits: 3

#### **ACC 607 - Ethics for Accountants**

This course covers stakeholder's ethical expectations of accountants, directors and officers, principles of corporate governance, philosophic and practical approaches to making ethical decisions, and an introduction to accountants' regulatory requirements and codes of conduct. Offered fall semesters. Prerequisite: Admission to a Seidman College of Business graduate program. Credits: 3

#### **ACC 608 - Forensic Accounting**

This course surveys concepts of forensic accounting and analyzes practical application in the conduct of day-to-day financial investigations. Course topics include detecting and fighting fraud in financial statements, the corporation, and other entities. There is a detailed examination of investigative auditing techniques, computers, criminology, and the relevant legal environment. Offered winter semester. Prerequisite: ACC 310 or equivalent. Credits: 3

#### **ACC 611 - Contemporary Managerial Accounting**

Examines the use of information for cost management, decision-making, and performance evaluation and measurement. Topics include activity-based management, cost of unused resources, relevant costs for decision-making, productivity measurement, transfer pricing, theory of constraints, balanced scorecards, total quality management, and just-in-time. Offered fall and winter semesters. Prerequisite: Completion of M.B.A. or M.S.A. background equivalents. Credits: 3

#### **ACC 612 - The Accountant's Legal Environment**

An intensive course in business law with emphasis on those subjects that relate to the accountant's legal environment, including accountant's legal liability, federal securities regulation, sales law, insurance suretyship, antitrust law, secured transactions, bankruptcy, property law, etc. Offered winter semester. Prerequisite: ACC 310 or equivalent. Credits: 3

#### **ACC 613 - Financial Statement Analysis**

The course focuses on financial performance analysis in the context of equity (share) valuation, with some attention given to credit analysis and the valuation of debt. Emphasis is placed on the persistence of earnings and the accounting choices made in financial statement preparation that affect earnings quality and comparisons. Offered fall and spring/summer semesters. Prerequisites: ACC 311 or equivalent. Completion of M.B.A. background equivalents. Credits: 3

#### **ACC 614 - Auditing**

The nature of audit evidence, basic audit techniques and concepts, audit practices and procedures, professional ethics, statistical sampling, auditing through and around a computer, and audit reports. Course may not be taken for credit if student has received credit for ACC 414 or equivalent. Prerequisites: ACC 310; and ACC 340 or ACC 616 or equivalents. Credits: 3

#### **ACC 615 - Entity Taxation-Theory and Practice**

Examination of the tax characteristics of various business entities, including the C and S Corporation, partnerships, and limited liability companies. Topics covered include the tax consequences of forming, operating, and liquidating such business entities. Tax research and planning issues are also discussed. Course may not be taken for credit if student has received credit for ACC 318 or equivalent. Not available to M.S.T. students without permission of director of graduate programs. Prerequisite: ACC 212 or ACC 511 or equivalent. Credits: 3

#### **ACC 616 - Financial Accounting Systems**

Study of integrated enterprise-wide information systems with emphasis on financial accounting systems as a core foundation. Includes review of current and emerging systems and technologies. Discussion of pattern-based accounting system design and auditing with emphasis on relational database tools; and internal controls. Prerequisite: ACC 212 or ACC 511 or equivalent. Credits: 3

#### **ACC 617 - International Accounting**

This course addresses accounting issues relevant to managers of a multinational company and to global investors. Topics include translation of foreign currency financial statements, accounting for foreign exchange derivatives, international financial reporting standards, comparative financial reporting, and corporate governance systems. Prerequisite: ACC 310 or equivalent. Credits: 3

#### **ACC 618 - Advanced Accounting**

This course covers the theory, concepts, and methodologies underlying business combinations and consolidations, interim reporting, accounting for partnerships, and governmental and not-for-profit accounting. Offered fall and spring/summer semesters. Prerequisite: ACC 310 or equivalent. Credits: 3

#### **ACC 620 - Accounting Theory**

This course examines the conceptual underpinnings of accounting thought and how accounting relates to valuation theory and capital markets. The role of accounting information is addressed from the points of view of management, auditors and investors. Additionally, selected topics are discussed. Offered fall and winter semesters. Prerequisites: ACC 613, ACC 614 (or ACC 414), ACC 616, ACC 617, and ACC 618. May be taken concurrently with any of these during the final semester. Credits: 3

#### **ACC 621 - Advanced Cost Management**

Using case analysis, this course examines the use of information for cost management and performance evaluation by exploring topics such as capacity management, activity-based costing and management, strategic cost management, balanced scorecard, and incentive compensation systems. Offered fall and winter semesters. Prerequisite: ACC 321 or ACC 611. Credits: 3

#### **ACC 622 - Tax Research and Writing**

Focuses on tools and techniques of tax research and the preparation of formal written communications common to tax practice. Emphasis on tax research methodology and skills in context of practical tax compliance and planning situations. Credits: 3

## Course Listings and Descriptions

### **ACC 623 - Sales, Exchanges, and Other Property Dispositions**

Examines the federal income tax issues pertaining to the sale or exchange of property. Topics include like-kind exchanges, involuntary conversions, the disposition of a principal residence, the disposition of business assets, installment sales, unstated interest, and sale-lease back transactions. Credits: 3

### **ACC 624 - Corporate Tax I**

Detailed analysis of the income taxation of corporations and their shareholders, including corporate formation, capital structure, dividends, and other nonliquidating distributions and stock redemptions. Also covered are subchapter S corporations and various penalties tax issues. Credits: 3

### **ACC 625 - Corporate Tax II**

Continues the discussion of the income taxation of corporations and their shareholders in Corporate Tax I. Includes: Corporate liquidations, liquidation of a subsidiary, taxable, and nontaxable acquisitive transactions including mergers and consolidations, and corporate divisions. Also judicial doctrines, affiliated corporations, and carryover of tax attributes. Prerequisite: ACC 624. Credits: 3

### **ACC 627 - Estate, Gift, and Trust I**

Examines the federal transfer tax system, including estate and gift tax statutes, regulations, rulings, and cases. Topics include the definition of a gift, disclaimers, the annual exclusion, calculation of gross estate, revocable transfers, jointly held property, annuities, powers of appointment, life insurance, the marital deduction, and valuation. Credits: 3

### **ACC 628 - Fiduciary Income Tax**

Examines the federal income taxation of trusts and estates and the generation-skipping transfer tax. Topics include entity classification, determination of distributable net income, simple trusts, fiduciary accounting income, the throwback rules, income in respect of a decedent, and the grantor trust rules. Prerequisites: Completion of M.S.T. background equivalents. Credits: 3

### **ACC 629 - Partnership Taxation**

Covers the federal taxation of partners and partnerships. Topics include formation and operation of a partnership including receipt of a partnership interest for services, liquidations and terminations, distributions and sales of a partnership interest, calculation of basis, and special basis adjustments. Decedent partner issues and LLCs are also covered. Credits: 3

### **ACC 630 - Multistate Taxation**

Conceptual issues and constitutional framework of multistate taxation are developed and explored. Current issues, including Michigan taxes, are presented. Credits: 3

### **ACC 631 - Employee Benefit Plans and Deferred Compensation**

Provides a survey of employee benefit plans and executive compensation under the Internal Revenue Code and ERISA, with an in-depth review of the requirements for qualified retirement plans, for welfare plans (medical, dental, vision, disability, etc.) and applicable federal mandates (COBRA, HIPAA, etc.), and for nonqualified and stock-based plans. Credits: 3

### **ACC 632 - Tax Accounting**

Covers fundamental concepts applicable to tax accounting methods and periods, and to consolidated income tax returns. Topics include income and expense recognition, the installment method, inventories, changes in accounting methods and periods, qualification and filing of consolidated tax returns, and intercompany transactions, distributions, and basis calculations. Credits: 3

### **ACC 633 - International Tax Practice**

United States jurisdiction to tax on the basis of citizenship, source of income, and other minimum contacts required by international or constitutional law is treated, along with taxation of domestic corporations doing business abroad, entities that are either controlled foreign corporations or foreign personal holding companies, and the foreign

tax credit. U.S. possession corporations, domestic international sales corporations, and tax treaties are also considered. Credits: 3

### **ACC 636 - Taxation Problems, Planning, and Current Issues**

Integrates the specific knowledge learned in the prior MST courses with sophisticated business/individual taxation problems. Students will be expected to research and defend their solutions to various taxation controversies. Last course prior to graduation. Prerequisites: ACC 622, ACC 624, ACC 627, and ACC 629. Credits: 3

### **ACC 639 - Federal Tax Practice and Procedure**

Course overviews federal tax practice and procedure under the Code and Regulations. Specific topics include tax return filing issues, interest and penalties, and assessment and collection of tax deficiencies. IRS audits, appeals, and enforcement activities are surveyed, as are the professional and practical requirements for practice before the IRS. Offered every other year. Prerequisite: ACC 622 or permission of the graduate business programs director. Credits: 3

### **ACC 640 - S Corp and Limited Liability Co Taxation**

Examines the federal tax issues of S corporations and limited liability companies. S corporation topics include eligibility and the S election, income taxation of the S corporation and its shareholders, determination of basis, and distributions. Limited liability company topics include formation, entity conversions, basis determinations, member taxation, distributions, and estate planning issues. Prerequisite: ACC 629 or permission of director. Credits: 3

### **ACC 641 - Advanced Estate and Gift Taxation**

The course focuses on more advanced transfer tax issues. Topics include estate and gift tax returns, discounts, the special valuation rules of chapter 14, irrevocable life insurance trusts, gifting issues, the generation skipping tax, marital deductions, buy-sell agreements, family limited partnerships and charitable trusts. Prerequisite: ACC 627. Credits: 3

### **ACC 680 - Special Topics in Accounting**

Analysis and discussion of advanced topics, contemporary problems, new or controversial topics. Specific topics will reflect interest of students and instructors. Prerequisite: Permission of instructor. Credits: 1 to 3

### **ACC 690 - Accounting Internship**

Employment in an accounting capacity that is a new and significant experience for the student, including a minimum of 100 hours of work for every 1 credit of internship for a maximum of 3 credits. Students who have completed an internship at the undergraduate level will not be given credit for this course. The internship must be approved by the accounting chair. Prerequisites: Admission to the M.S.A. program and completion of ACC 511 or the undergraduate equivalents, and at least one additional undergraduate or graduate accounting level course. Credits: 1 to 3

### **ACC 699 - Independent Study**

Independent research in the student's area of interest, supervised by a member of the Seidman faculty and culminating in a written and oral report. Written permission of supervising faculty required. Credits: 1 to 3

### **AHS 100 - Medical Terminology**

The construction and translation of common medical terms. Credits: 3

### **AHS 110 - Introduction to Health Care**

Provides students with an introduction to the U.S. health care system and health-related professions they might enter. Content includes how health care is provided in the U.S., organizations involved in providing health care, and an introduction to the various health professions that students may enter as a career. (2-1-0) Offered every semester. Credits: 3

### **AHS 180 - Special Topics in Health Professions**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

### **AHS 301 - Introduction to Health Care Research**

Introduces students majoring in the health professions to the basic steps of conducting research, literature searching, critical reading of literature, experimental design, quantitative and qualitative data analysis, and

scientific writing. Published literature relevant to the health professions will be analyzed. Students will write a variety of papers and reports. Offered fall, winter, and spring/summer semesters. Prerequisite: STA 215. Credits: 3

#### **AHS 321 - Ethical and Legal Responsibilities in Health Care**

This course presents an overview of the ethical and legal issues faced by health care consumers, practitioners, and administrators. Topics include professional and personal health care ethics, professional liability, consent, and medical records confidentiality (HIPAA, fraud, and abuse). Offered each semester. Credits: 3

#### **AHS 330 - Health Care: A Global Perspective**

This course examines public health and its links between global health, social and economic development, and the impact on creating healthy societies. The course will provide students with an understanding of the risks diseases pose to worldwide society and the burden of disease related costs on individual cultures. Part of the Globalization Issue. Offered fall, winter, and spring/summer semesters. Credits: 3

#### **AHS 340 - Health Care Management**

An introduction to the basic concepts of health care management, including problem solving, planning, organization, motivation, leadership, and group process. Part of the Health Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

#### **AHS 352 - Introduction to Holistic Health Care**

This course offers students the opportunity to critically examine holistic health beliefs and practices and their cultural position in American society. The philosophical and theoretical premises behind these beliefs and practices will be analyzed and compared to Western medicine and to one another. Part of the Health Issue. Offered every semester. Credits: 3

#### **AHS 380 - Special Topics in Allied Health Science**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 12

#### **AHS 480 - Special Topics in Allied Health Sciences**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Credits: 3

#### **AHS 482 - Transcultural Health: China and U.S.**

Transcultural health is designed to bring the student into a direct relationship with health care practices and attitudes from the cultural background of China. The course is presented as an immersion experience in, and examination of, clinics and classes in Chinese medicine. Credits: 3

#### **AHS 490 - Health Care Internship**

A structured learning experience for students in a health care setting. May be repeated for a total of six, 12, or 24 credits. Requires consent of AHS internship coordinator. Course will count as the Capstone for students required to complete 24 credits/year in a clinical setting. Prerequisites: Junior standing, completion of 12 credits in the allied health sciences major, 2.5 GPA in major, and approval of internship by allied health sciences internship coordinator. Credits: 1 to 12

#### **AHS 495 - Issues in Health Professions**

An overview of current issues impacting health care and health care delivery locally, nationally, and internationally. Students will be expected to synthesize materials learned in the health professions major core classes and cognates and to write and present professionally styled presentations. (3-0-0) Prerequisites: (AHS 301 or BMS 301 or PSY 300), and senior standing. Credits: 3

#### **AHS 499 - Independent Study**

Students will complete a reading project or other approved activity building upon declared student interest. Tangible final product must be completed according to criteria developed by the student and the advisor. Prerequisites: One semester of professional curriculum and permission of professional curriculum director. Credits: 1 to 3

#### **AHS 580 - Special Topics in Allied Health Sciences**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Credits: 3

#### **AHS 680 - Special Topics in Health Professions**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Credits: 3

#### **AHS 692 - Clinical Research Trials Practicum**

This one semester practicum and seminar course aims to have students apply the knowledge they have gained from previous CRTM program coursework by working in a clinical sciences/trials research setting, e.g. pharmaceutical or medical device companies, academic/private research institutions, or research programs within health systems. Offered winter semester. Prerequisites: Completion of at least two of the required courses i.e., PSM 650 or one of the two MSU courses (PHM 857/858 or HM 868) in the CRTM program. Credits: 3

#### **AHS 699 - Independent Study**

Students will complete a reading project or other approved activity building upon declared student interest. Tangible final product must be completed according to criteria developed by the student and the advisor. Offered fall, winter, and spring/summer semester. Prerequisites: Good standing after three semesters on one of the AHS professional programs and permission of the professional program director. Credits: 1 to 3

#### **ANT 204 - Peoples and Cultures of the World**

Introduces the discipline of anthropology by examining the diversity of human cultures that have been described by anthropologists over the last 100 years. The principles of anthropology are explained with examples drawn from nonwestern culture. Comparisons are drawn with our own. Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Credits: 3

#### **ANT 206 - Human Origins**

Examines the dynamic interplay between human biology and culture through the study of human evolution. Grounded in the mechanisms of evolution, the class examines the emergence of our species and our relationship to nonhuman primates, among other topics. Fulfills Foundations - Life Sciences. Offered fall and winter semesters. Credits: 3

#### **ANT 207 - Language and Culture**

Explores the interaction between language, communication, and culture, employing cross-cultural analysis to reveal cultural models and to understand how linguistic variation is linked to gender, age, region, ethnicity, and class. Several practical activities are used to apply analyses to anthropological problems. Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills Cultures - U.S. Diversity. Offered fall semester. Credits: 3

#### **ANT 210 - History of Anthropological Theory**

Considers the major historical development and theoretical trends in anthropology since 1860. The approach is both topical and historical. Connections with developments in related disciplines are noted. Offered fall and winter semesters. Prerequisite: ANT 204 or ANT 206. Credits: 3

#### **ANT 215 - Origins of Civilization**

This course examines the consequences of decisions made by our ancestors, the successes and failures of past civilizations, so that we may better understand our own behavior. Development of world civilizations is explored using historic, archaeological, and other perspectives that inform us about the past. Fulfills Foundations - Historical Perspectives. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Credits: 3

#### **ANT 220 - Introduction to Archaeology**

Introduction to the methods and techniques of archaeology, including the methods of excavation, analysis, dating techniques, and data presentation. Course has fieldwork opportunities and draws on examples from local and worldwide research. Fulfills one of the Foundations - Social and Behavioral Sciences. Offered fall and winter semesters. Credits: 4

## Course Listings and Descriptions

### **ANT 305 - Methods in Biological Anthropology**

Overview of research methods used in biological anthropology, emphasizing living humans. It includes a discussion of current theoretical arguments within the field of physical anthropology and the techniques used to examine them. The course will introduce students to the process of research design, data analysis, and interpretation. Offered fall semester. Prerequisite: ANT 206. Credits: 3

### **ANT 307 - Field Techniques and Laboratory Methods in Anthropology**

Training in the application of research methods under field conditions to problems in major areas of anthropology; supervised instruction in anthropological laboratory techniques, including data collection and storage, analysis, and interpretation. Offered spring/summer semester. Prerequisite: Permission of instructor. Credits: 1 to 9

### **ANT 308 - Field Experience Abroad**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

### **ANT 311 - Native Peoples of North America**

A multifaceted examination of North American Indians and a comparison of that culture with the American. Focus on origin, early history, and present disposition of American Indian populations. Fulfills Cultures - U.S. Diversity. Part of the Identity Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **ANT 312 - Human Osteology**

The course explores skeletal biology, growth and development, identification, and assessment of pathological and traumatic conditions. The course focuses on standard forms of data acquisition in traditional physical anthropology and for forensic anthropological applications, including bone identification, aging, sexing, stature, siding, biological affinity, pathology, taphonomy, trauma, and collection of metrics. Offered winter semester. Prerequisite: ANT 206. Credits: 4

### **ANT 313 - Primate Behavior and Ecology**

This course is an overview of the behavior of nonhuman primates within an ecological framework. Topics include a survey of living primates, constraints of body size on locomotion and diet, conservation, communication, conflict resolution, and the role of the environment in diet, on reproductive strategies, and in social interaction. Offered fall semester of odd-numbered years. Credits: 3

### **ANT 314 - Bioarchaeology**

Bioarchaeology is the study of human remains from archaeological settings. Its study encompasses the ethical treatment of human remains, reconstruction of patterns of subsistence, disease, activity, status, ethnicity, diet and demography from the human skeleton to better understand the way that people chose to live in the past. Offered fall semester of even-numbered years. Prerequisite: ANT 206. Credits: 3

### **ANT 315 - Comparative Religions**

A cross-cultural study of contemporary religions. Examines the diversity of religious meanings through the lived experiences of cultures, traditions, and sects around the world. Exposes students to anthropological interpretations of religion through a range of methods, including ethnography. Themes include symbolisms, ritual, death, shamanism, healing, magic, pilgrimage, and interfaith movements. Fulfills Cultures - World Perspectives. Part of the Identity Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **ANT 317 - Advanced Cross-cultural Linguistics**

Survey and comparison of global linguistic diversity focusing on ways different cultures and languages represent, organize and express through, knowledge and emotion in life, political relations, rituals, and personal experience. Survey includes case studies from around the world with emphasis on languages and dialects other than standard English. Offered winter semester of even-numbered years. Prerequisite: ANT 207 or permission of instructor. Credits: 3

### **ANT 320 - Culture and Disease**

Introduces students to the anthropological study of disease ecology and medical systems cross-culturally. Explores the impact of disease, ecology, and sociocultural behavior throughout human evolution. Investigates the efficacy and nature of nonwestern curing procedures and the cultural and psychodynamic features of illness. Part of the Health Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **ANT 325 - Archaeology of North America**

A survey of prehistoric developments from Alaska to Central America, including the Mesoamerican civilizations. Offered winter semester of even-numbered years. Prerequisite: ANT 220 or ANT 215 or instructor permission. Credits: 3

### **ANT 330 - Anthropology of Selected World Areas**

Current topics and methodology will be examined within one anthropological sub-discipline from the perspective of a particular geographic area. Focus will be on the fundamental question, what does anthropology contribute in terms of our understanding of people and cultures? Students may repeat provided each repeat is for a different area. Credits: 3

### **ANT 340 - Culture and Environment**

Compares different adaptive strategies of cultures from around the world and seeks understanding of ethical and social values different groups have related to the environment. Attention is focused on how humans relied on cultural mechanisms in the past to adapt and change their physical and natural environment. Fulfills Cultures - World Perspectives. Part of the Sustainability Issue. Offered fall and winter semesters. Prerequisites: Junior standing, WRT 150, and either Historical Perspectives or U.S. Diversity. Credits: 3

### **ANT 345 - Perspectives on Globalization**

The anthropology of globalization examines the emergence of "globalized local cultures." Students employ the ethnographic approach to understand globalization as the intensification of interconnectedness, in which anthropologists learn that fundamental problems of deep and universal concern to humans everywhere will need to be addressed at local, national, and global levels. Offered fall semester of even-numbered years. Fulfills Cultures - World Perspectives. Part of the Globalization Issue. Prerequisite: Junior standing. Credits: 3

### **ANT 350 - Archaeology of Mid-East**

The Middle East is recognized as the birthplace of several major cultural traditions. This course examines the evidence of archaeology that informs us on the origins and settlement of the Middle East from at least one million years ago to the seventh century A.D. from the perspective of cultural ecology. Offered winter semester of odd-numbered years. Prerequisite: ANT 215 or ANT 220 or MES 201 or prior approval of the instructor. Credits: 3

### **ANT 370 - Cross-cultural Perspectives on Gender**

Examines gender as a fundamental organizing theme of culture. Also emphasizes the sociocultural basis for gender differences using a cross-cultural and comparative approach. Discusses how gender relations affect all other aspects of human life. Offered winter semester of even-numbered years. Prerequisite: ANT 204 or ANT 206. Credits: 3

### **ANT 380 - Special Topics in Anthropology**

A series of courses providing an in-depth study of a problem in anthropology and the methods of investigating it. Various topics of cross-cultural interest, such as human evolution, peasant cultures, preliterate societies, kinship pattern, and culture and personality will be examined. Offered on sufficient demand. Credits: 3

### **ANT 399 - Independent Readings**

Independent supervised readings in selected topics. A student may take only one reading course for one to three credits per semester. No more than six hours of 399 and 499 combined may count toward a major or three hours combined toward the minor. Offered every semester. Prerequisites: ANT 204 or ANT 206 and the written consent of the instructor before registration. Credits: 1 to 3

**ANT 400 - Ethnographic Methods**

Students will examine and evaluate the practice of anthropological ethnography through hands-on exercises, collaborative workshops, discussions on conducting ethnographic field research, ethics, and applications of responsible ethnographic research. Through in-class simulations and assignments, students will develop skills in participant observation techniques, taking ethnographic field notes, conducting interviews, and recording and transcribing discourse. Offered winter semester. Prerequisite: ANT 204 or SOC 101 or CJ 101 or permission of the instructor. Credits: 3

**ANT 405 - Contemporary Anthropological Theory**

This course surveys contemporary topics in anthropological theory. Included is an overview of current issues, topics and debates in archaeology, physical/biological, sociocultural, and linguistic anthropology. Students will gain an understanding of recent trends in anthropology and the trajectory of the discipline. Connections with developments in related disciplines are noted. Offered fall and winter semesters. Prerequisites: ANT 210 and senior standing in anthropology. Credits: 3

**ANT 420 - Applied Anthropology**

The course engages students in contemporary anthropological practice. Students explore applied anthropology through anthropological theories, methods and practices for engaging communities and addressing 'real world' problems. Topics may include the history of engaged anthropology, public and advocacy anthropology, action/participatory research, and the ethical issues of engagement and social change. Offered fall semester. Prerequisites: ANT 204 and junior standing. Credits: 3

**ANT 421 - Anthropology of Social Movements**

This course overviews a wide range of processes and practices related to social movements, and anthropology's central role in expanding the definition of collective resistance beyond the scope of formalized protest (and strategic outcomes) to include and examine everyday forms and lived experience of resistance and dissent. Part of the Human Rights Issue. Course offered winter semester. Prerequisite: Junior standing. Credits: 3

**ANT 430 - Issues in Contemporary Anthropology**

This course is an upper-division examination of contemporary issues being explored in the field of anthropology. Topics may include advanced theory, controversies in the discipline, methodological questions and changing approaches to anthropological research. Offered fall semester. Prerequisites: ANT 210 and one of the following ANT 204 or ANT 206 or ANT 215; and junior standing. Credits: 3

**ANT 431 - Historical Perspectives in Anthropology**

Students will explore historical theoretical and methodological developments from an anthropological perspective, focusing on trends in interpretation of material culture, cultural resources management, experimental archaeology, and the contribution of anthropology to understanding major social issues. Students will critically examine the practice and application of anthropological research from a historic perspective. Offered winter semester of even years. Prerequisites: Two upper division anthropology courses. Credits: 3

**ANT 490 - Practicum: Career-Service**

Agency experience in the community relating practical training and independent study in a specialized area. Limited to 10 credits maximum. Offered every semester. Prerequisites: 15 hours of course preparation and permission of instructor. Graded credit/no credit. Credits: 1 to 9

**ANT 495 - Practicing Anthropology (Capstone)**

Provides students with a broad and comprehensive perspective on the fundamental assumptions and issues in anthropology. Emphasis on the application of anthropological knowledge to solve social problems. Given the diverse dimensions of current trends in anthropology, students will work to establish their particular interests with the field. Offered fall and winter semesters. Prerequisites: Senior standing in anthropology and ANT 405. Credits: 3

**ANT 498 - Honors Research in Anthropology**

Original research conducted individually with faculty supervision, based on a formal proposal. Project is the culmination of undergraduate research incorporating anthropological theory, methodology, data collection, and analysis. Research will be presented in a public forum. Syllabus and guidelines for honors research available from faculty. Offered every semester. Prerequisites: Acceptance of formal written proposal and permission of faculty member. Credits: 3

**ANT 499 - Independent Study and Research**

Research conducted individually with faculty supervision. Attention given to written and oral presentation of research findings. A student may take only one independent study per term. No more than six hours of 399/499 may count toward a major or three hours of 399/499 toward the minor. Offered every semester. Prerequisites: Nine hours in the department and written permission of instructor before registration. Credits: 1 to 4

**ARA 101 - Beginning Arabic I: Language and Culture**

An introduction to the Arabic language and to the cultures of the Arabic-speaking world. Practice in speaking, listening, reading, writing at the beginning level. Supplemented by multimedia and the Language Resource Center. Offered fall semester. Credits: 4

**ARA 102 - Beginning Arabic II: Language and Culture**

Continuation of ARA 101. Practice in speaking, listening, reading, and writing at the beginning level. Arabic culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Offered winter semester. Prerequisite: C (not C-) or better in ARA 101, or credit. Credits: 4

**ARA 180 - Special Topics in Arabic**

Expectations of students approximate those in other 100-level courses. May be repeated when content differs. Offered on sufficient demand. Credits: 1 to 4

**ARA 201 - Intermediate Arabic I: Language and Culture**

Continuation of ARA 102. Practice in speaking, listening, reading, writing at the intermediate level. Arabic culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Students who did not complete ARA 102 at GVSU are strongly encouraged to take the free Placement Test in the Language Resource Center prior to registering. Counts toward the Arabic minor. Offered fall semester. Prerequisite: C (not C-) or better in ARA 102, or credit. Credits: 4

**ARA 202 - Intermediate Arabic II: Language and Culture**

Continued practice in speaking, listening, reading, writing at the Intermediate Level. Review of grammar and expansion of vocabulary. Focus on Arabic culture through authentic texts and multimedia materials. Continuation of ARA 201. Students who did not complete 201 at GVSU are strongly encouraged to take the free Placement Test in the Language Resource Center prior to registering. Counts towards the Arabic Minor and the Middle East studies minor. Fulfills Cultures - World Perspectives. Offered winter semester. Prerequisite: C (not C-) or better in ARA 201, or credit, or appropriate placement test score. Credits: 4

**ARA 280 - Special Topics in Arabic**

Course content varies. Expectations of students approximate those in other 200-level courses. May be repeated when content differs. No more than four credits can be applied to the minor or major. Offered on sufficient demand. Credits: 1 to 4

**ARA 285 - Colloquial and Media Arabic**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

**ARA 301 - Arabic Conversation**

This course provides extensive practice in colloquial Arabic, with a focus on every day practical language. The course also provides a brief overview of major dialects and their relationship to Modern Standard Arabic. Students are trained to recognize and use various layers of Arabic in their proper cultural context. Offered winter semester of even-numbered years. Prerequisite: ARA 102 or permission of instructor. Credits: 3

## Course Listings and Descriptions

### **ARA 302 - Arabic Composition**

The course is intended to develop skills in writing correct Arabic sentences, paragraphs, and longer texts relating to various topics. Review of Arabic grammar through an analysis of various Arabic texts. Offered winter semester of odd-numbered years. Prerequisite: ARA 102 or permission of instructor. Credits: 3

### **ARA 310 - Media Arabic**

This course provides extensive practice in comprehending Media Arabic, including print and nonprint materials. The course trains students both in the idiom of the news media, but also in the broader media output, including cultural materials, songs, and how news is portrayed in various cultural contexts. Offered fall semester of odd-numbered years. Prerequisite: ARA 102 or permission of instructor. Credits: 3

### **ARA 312 - Contemporary Arabic Culture**

This course explores aspects of contemporary Arabic culture through a variety of Arabic materials, including autobiographies, literature (poetry, fiction, and drama), film, and music. Offered fall semester of even-numbered years. Prerequisite: ARA 102 or permission of instructor. Credits: 3

### **ARA 320 - Practical Arabic Translations**

This course provides both an enhancement of techniques of translation and practical experience for various areas of translation. Assignments focus on the process and quality of translation with emphasis on cultural differences. Students will work on solving stylistic, syntactic, cultural, terminological, and technical problems encountered in the translation process. Course offered winter semester. Prerequisite: ARA 201. Credits: 3

### **ARA 330 - Arab Identity in Literature and Culture**

This course examines the complexities of forming, constructing, and shaping Arab identity within a vast Arab world. Such complexity will be examined through written and oral accounts, audio and visual sources, and literary authors from the Arab world. All materials read in English translation. Does not count toward Arabic minor. Part of the Identity Issue. This course is cross-listed with MES 330. Course offered fall and winter semesters. Prerequisite: Junior status. Credits: 3

### **ARA 380 - Special Topics in Arabic**

Offered on sufficient demand. Credits: 1 to 4

### **ARA 386 - Arabic through Culture and Customs**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 2

### **ARA 480 - Special Topics in Arabic**

Course content varies. Expectations of students approximate those in other 400-level courses. May be repeated when content differs. Offered on sufficient demand. Credits: 1 to 4

### **ARC 400 - Archaeological Methods and Research Design**

Provides advanced study of the practical and methodological aspects of research in archaeology. Students will learn how to develop independent projects and embed them in multistage regional research. Prerequisites: ANT 220 and one area course in archaeology (ANT 325, ANT 350, CLA 350). Credits: 3

### **ARC 401 - Archaeological Theory**

The history and evolution of archaeology and its theoretical frameworks are examined in a lecture/seminar/discussion format. The role and implications of theory in archaeological practice are explored from its origins to the present, emphasizing processual, postprocessual and contemporary theoretical debate, ethics and professionalism. Prerequisites: ANT 220, junior standing, and one regional archaeology course (ANT 325, ANT 350, CLA 350). Credits: 3

### **ART 101 - Introduction to Art**

Introduction to the visual arts. Examination of creative, social, historical, and aesthetic aspects of selected works of art. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

### **ART 109 - Graphic Design Basics**

The course is designed for any nongraphic design student who requires or seeks an overview of the graphic design process and its application in visual composition, symbol development, typography and layouts. Students produce solutions to visual communication problems and learn to articulate and present effectively their design choices. Course offered fall and winter semesters. Credits: 3

### **ART 149 - Introduction to Visual Composition**

Explores two dimensional composition by applying visual elements and design principles. All work is computer generated. It is designed for any student outside the Art and Design Department who requires or seeks a background in composition. (Art majors and minors must take ART 150.) Offered fall and winter semesters. Credits: 3

### **ART 150 - Foundations: 2-D Design**

Explores the theories and concepts of two-dimensional art forms. Basic visual design principles, their application, comparison of contemporary and historical examples are presented through lectures and slides and applied to studio problems. Offered fall and winter semesters. Credits: 3

### **ART 151 - Foundations: 3-D Design**

Fundamentals of design with an emphasis upon projects that develop the language of art as applied to three-dimensional forms in space. Offered fall and winter semesters. Credits: 3

### **ART 152 - Foundations: Color and Design**

Fundamentals of design using more complex themes and including an in-depth study of color theory. Offered fall and winter semesters. Prerequisite: ART 150. Credits: 3

### **ART 153 - Foundations: Making and Meaning in Art and Design**

This course entails investigating contemporary practices of art and design, studying how images and objects acquire meaning, experimenting with basic studio processes, and learning to use digital media in combination with traditional media in making art. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

### **ART 155 - Foundations: Introduction to Drawing I**

A study of fundamental pictorial concepts of drawing. Experimentation with varied technical means and media directed toward both descriptive and expressive ends. Offered fall and winter semesters. Credits: 3

### **ART 157 - Foundations: Introduction to Drawing II**

A continuation of techniques and media from Introduction to Drawing I. Offered fall and winter semesters. Prerequisite: ART 155. Credits: 3

### **ART 159 - Drawing Fundamentals**

Drawing course designed for nonart and design majors and minors outside of the Department of Visual and Media Arts. (Art and design majors/minors must take ART 155.) Students will learn how to create observational and expressive drawings using the elements and principles of art, and how to develop ideas for drawing. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

### **ART 210 - Graphic Design I**

Extension of basic art and design fundamentals into a graphic design context, including computer-generated imagery. Stress is placed on problem solving through typographic imaging and the union of text and image. Offered fall semester. Prerequisite: Admission to graphic design. Credits: 3

### **ART 211 - Graphic Design II**

Graphic design is explored in its broadest applications, including symbology and logo design. Students learn to create visual messages that are aesthetically appealing as well as informative. Offered winter semester. Prerequisite: ART 210. Credits: 3

### **ART 212 - Graphic Design for Illustrators**

An introduction to printing methods, typography, layout, and paper choices as they relate to creating self-promotional materials and illustrations that print successfully. Offered winter semester. Credits: 3

**ART 215 - Advanced Typography**

An application of typographic principles to applied communication design projects of increased formal and intellectual complexity. Increased awareness of the emotional properties of typography and the relation to message is emphasized. This course may be repeated once for credit. Offered winter semester. Prerequisite: ART 210. Credits: 3

**ART 218 - Design History**

The history of design from the Industrial Revolution to the present. Discussions of the politics and ethics of design. Offered fall and winter semester. Credits: 3

**ART 221 - Survey of Art History I**

A survey of art history from prehistoric times to the Renaissance. Offered fall semester. Credits: 3

**ART 222 - Survey of Art History II**

A survey of art history from the Renaissance to the present day. Offered winter semester. Credits: 3

**ART 245 - Introduction to Jewelry and Metalsmithing**

A study of the fundamentals of metalsmithing: fabrication techniques, surface embellishment, simple stone setting, and finishing placed within a conceptual context. Offered fall and winter semesters. Prerequisites: ART 152, ART 157; waived for nonmajors. Credits: 3

**ART 257 - Life Drawing**

A continuation of techniques and media from Introduction to Drawing, with emphasis on the human figure. Offered fall and winter semesters. Prerequisite: ART 157. Credits: 3

**ART 258 - Intermediate Drawing**

An exploration of pictorial concepts in drawing in a variety of media with the emphasis upon individual expression. Offered winter semester. Prerequisite: ART 257, waived for graphic design emphasis majors. Credits: 3

**ART 260 - Introduction to Painting**

A painting course designed for art majors and nonart majors. Fundamentals of painting in opaque media with a variety of subjects and styles. Fulfills Foundations - Arts. Credits: 3

**ART 265 - Introduction to Printmaking**

Experimentation with varied techniques and with different composition ideas related to some fundamental forms of printmaking. Work with wood/linoleum cut, intaglio, and collagraph. Offered fall and winter semesters. Credits: 3

**ART 270 - Introduction to Sculpture**

A hands-on studio course designed for art majors and nonart majors. Introduction to basic sculpture techniques (mold making, metal working, wood working, and sewing). Creative project topics include lost wax bronze casting, found object assemblage, soft sculpture, and fibers. Critical thinking skills and studio safety will also be covered. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

**ART 275 - Introduction to Ceramics**

A ceramics course designed for art majors and nonart majors. All basic ceramics (hand-building) techniques, glazing, and concepts relating to ceramics and pottery. Included will be historical background, some clay geology, clay making, and kiln loading and unloading. All other general studio practices and safety will also be covered. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

**ART 280 - Special Topics in Art and Design**

A course built around a special project or media with limited or topical significance and offered on a very limited basis. Credits: 3

**ART 281 - Introduction to Illustration**

An overview of the illustration field covering historical and contemporary perspectives, aesthetic sensitivity, and professional practicality. Offered fall semester. Prerequisite: Admission to illustration. Credits: 3

**ART 307 - Digital Prepress**

This course is an in-depth exploration into the methods of commercial printing and corresponding software packages. This course will aid students in understanding how to manipulate digital technology and conventional printing techniques to their advantage, to increase the quality of their work utilizing this knowledge. Offered fall semester. Prerequisite: ART 211. Credits: 3

**ART 310 - Graphic Design III**

An advanced studio course covering principles that guide the development of creative solutions for educational and communication design. The student learns to manipulate typography, symbolism, illustration, and photography in a given space, which may take the form of advertisements, newspapers, periodicals, books, annual reports, signs, or direct mail. Offered fall semester. Prerequisite: ART 211. Credits: 3

**ART 312 - Graphic Design IV-Experience Design**

An advanced course to acquaint students with professional and technological components of creating and publishing interactive and motion programs. Includes an in-depth exploration of website design including interactivity, navigational systems, motion and typography, integrating both design methodologies and information architecture. Offered winter semester. Prerequisite: ART 310. Credits: 3

**ART 313 - 3-D for Graphic Design**

Introduction to the fundamental development of dimensional construction which refines and integrates many design principles. Imaginative use of materials and surface graphics as well as marketing and production problems are explored. Offered winter semester. Prerequisite: ART 210. Credits: 3

**ART 321 - Digital 3D**

Introduces students to three-dimensional computer technologies and their application in studio art practice. Activities focus on using good computer "craft," employing appropriate compositional principles, and choosing subjects and content that engage viewers and encourage rich conceptual associations. Offered fall semester. Prerequisite: Sophomore, junior, or senior standing. Credits: 3

**ART 322 - Goths to Gothic: Medieval Art**

A thematic examination of the arts and visual culture created between the 6th and 15th centuries in Europe and the broader Mediterranean. Explores diverse media in relation to their political, religious, and social contexts. Also considers 19th century and contemporary reception of medieval art and ideas. Course offered fall semester of even-numbered years. Prerequisite: ART 221 or junior standing. Credits: 3

**ART 323 - Rethinking Renaissance Art**

A thematic examination of the visual arts of Europe created between 1350 and 1600. Topics include the artist in society, civic and domestic settings for the arts, and global contexts, as well as the representation of gender, ethnicity, and social class. Also considers the reception of renaissance art in later eras. Course offered winter semester of odd-numbered years. Prerequisite: ART 222 or junior standing. Credits: 3

**ART 327 - Art Since 1945**

This course highlights important moments of modernist and contemporary aesthetic development from the mid-twentieth century to the present. Offered winter of even-numbered years. Prerequisite: ART 222 or junior status. Credits: 3

**ART 332 - Introduction to Art Education**

An introduction to the field of art education, including the study of its historical, sociological, and theoretical foundations and their effect on its practice in the K-12 classroom. Offered fall semester. Prerequisites: ART 152 and ART 157. Credits: 3

**ART 333 - Curriculum Development and Practice**

This course, designed for art education majors, provides experience in curriculum and teaching portfolio development, as well as classroom observation to provide the future art teacher with a firm foundation for teaching in the K-12 classroom. Offered winter semester. Prerequisite: ART 332. Credits: 3

## Course Listings and Descriptions

### **ART 335 - Digital Creativity**

This course is a hands-on studio course that provides basic skills and an understanding of computer technology in the creative process. Emphasized exploration of digital media concepts and methods for supporting creativity through examination of the themes and issues in contemporary arts and culture. Part of the Information, Innovation, and Technology Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **ART 345 - Relevant Skills for the Jeweler**

An overview of the skills needed to function in the retail and wholesale jewelry industry. The course will cover such topics as stone setting, fabrication, assembly of standardized findings, rebuilding, restoring and repairing of various jewelry types. Sales and situational challenges of working with customers will be addressed. Offered fall semester every other year. Prerequisite: ART 245 or permission of instructor. Credits: 3

### **ART 346 - Intermediate Jewelry and Metalsmithing I**

The study of casting, related production techniques, mold making, gypsy stone setting, and die forming with continued stress on fabrication techniques and increased emphasis on the exploration of conceptual issues. Offered winter semester. Prerequisite: ART 245. Credits: 3

### **ART 347 - Intermediate Jewelry and Metalsmithing II**

The study of raising (angle and anticlastic), forging, patinations, hinges, connections and findings, and introduction to specialized equipment placed with the context of personal exploration and research. Offered fall semester. Prerequisite: ART 245. Credits: 3

### **ART 355 - Advanced Drawing I**

Advanced exploration of drawing techniques with emphasis upon personal expression. Offered fall and winter semesters. Prerequisite: ART 258. Credits: 3

### **ART 356 - Advanced Drawing II**

Advanced exploration of drawing techniques with emphasis upon personal expression. Offered fall and winter semesters. Prerequisite: ART 355. Credits: 3

### **ART 361 - Intermediate Painting I**

Intermediate projects using a variety of styles, subjects, and techniques. Offered fall and winter semesters. Prerequisite: ART 260. Credits: 3

### **ART 362 - Intermediate Painting II**

Intermediate projects using a variety of styles, subjects, and techniques. Offered fall and winter semesters. Prerequisite: ART 361. Credits: 3

### **ART 366 - Intermediate Printmaking I**

A continuation of ART 265. Color and scale and combining printmaking media are emphasized. Offered fall and winter semesters. Prerequisite: ART 265. Credits: 3

### **ART 367 - Intermediate Printmaking II**

A continuation of ART 366. Color and scale and combining printmaking media are emphasized. Offered fall and winter semesters. Prerequisite: ART 366. Credits: 3

### **ART 371 - Intermediate Sculpture 1: Fabrications**

Emphasis placed on techniques and concepts related to fabrication. Additive processes with wood and metal (wood joinery and construction, metal welding and finishing, surface treatments) are learned in conjunction with their application to projects exploring ideas related to fabricating such as function, invention, movement, narrative, and imagination. Offered winter semester. Prerequisite: ART 270. Credits: 3

### **ART 372 - Intermediate Sculpture 2: Replications**

Emphasis is placed on techniques and concepts related to replication. Molding and casting processes with clay, plaster, rubber, plastic, and metal are learned in conjunction with their application to projects exploring ideas related to multiples, hybrids and questions of authenticity and originality. Offered fall semester. Prerequisite: ART 270. Credits: 3

### **ART 376 - Intermediate Ceramics 1: Wheel Throwing**

Beginning work on the potter's wheel. Basic throwing techniques, porcelain and white earthenware added to basic stoneware and terracotta. Colored glazes, low fire glazing, under and over glazing and extended

forming techniques not covered in Art 275 included. Firing theory and practice for gas kilns required. Offered winter semester. Prerequisite: ART 275. Credits: 3

### **ART 377 - Intermediate Ceramics 2: Voice/Concept**

Students will work on large-scale sculptures, while pursuing their own ideas. Students will work in small series of ideas and begin to research and explore concepts that are important to them. Students who wish to continue throwing must apply the same practice and research as students pursuing sculptural form. Offered fall and winter semesters. Prerequisite: ART 275. Credits: 3

### **ART 380 - Special Topics in Art and Design**

A course built around a special project or media with limited or topical significance and offered on a very limited basis. Students must seek special permission of the instructor for entry into any 380 course. Offered on sufficient demand. Credits: 1 to 3

### **ART 381 - Intermediate Illustration I**

Fundamentals of illustration with an emphasis on digital imaging methods. Offered winter semester. Prerequisite: ART 281. Credits: 3

### **ART 382 - Intermediate Illustration II**

Fundamentals of illustration with an emphasis on realistic representation. Offered fall semester. Prerequisite: ART 381. Credits: 3

### **ART 385 - Figure Painting**

Introduction to painting the figure, with an emphasis on perceptual accuracy. Offered winter semester. Prerequisite: ART 260. Credits: 3

### **ART 386 - Art History Study Abroad**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits: 3

### **ART 387 - Studio Art Abroad**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits: 3

### **ART 391 - Civic Studio**

Visual art methods are used to study, form, and present art in a specific public context. Includes the development of a project site, individual and collaborative work, and service learning. Studio operates "in public" presenting lectures, visual displays, and public gatherings. Part of the Identity Issue. (May be repeated once for credit.) Offered every third fall or winter semester. Prerequisite: Junior standing. Credits: 3

### **ART 392 - Curatorial Studio**

Curatorial Studio explores presentational and critical practice and the theoretical discourse specific to such practice within a studio context. This involves the curation (study and creation of visual presentations) in exhibitions or projects. Part of the Information, Innovation, and Technology Issue. Offered every third semester (fall and winter). (May be repeated once for credit.) Prerequisite: Junior standing. Credits: 3

### **ART 393 - Image Studio**

Image studio explores the creation, use, and presentation of images and the theoretical discourse specific to such practices within a studio context. The studio incorporates uses of current image creation and presentation technologies. (May be repeated once for credit.) Offered fall semester. Credits: 3

### **ART 394 - Interactive Studio**

Interactive Studio addresses the study and creation of art works in which the audience is involved in an interactive exchange. Media explored include interactive situations, community collaborations, social/political interactions, and current electronic interactive interfaces. (May be repeated once for credit.) Offered fall semester. Credits: 3

### **ART 395 - Space Studio**

Space Studio addresses the creation of site-specific works based in the primary form and experience of space typically referred to as installations. It includes studio considerations of space, site, installation, public art,

presentational practices and the related theoretical discourse within a studio context. (May be repeated once for credit.) Offered every third semester (fall and winter). Credits: 3

#### **ART 396 - Time Studio**

Time Studio explores temporal and presentational practices and the theoretical discourse specific to such practices within a studio context. Time-based works include time and change as central elements. This includes ephemeral and kinetic objects, performance, sound works, and works incorporating moving images. (May be repeated once for credit.) Offered winter semester. Credits: 3

#### **ART 399 - Independent Readings in Art**

A course giving students with special interests an opportunity to explore texts, periodical, and reference materials under the guidance of an art faculty member. Offered fall and winter semesters. Prerequisite: Permission of the instructor. Credits: 1 to 4

#### **ART 401 - Senior Seminar**

For studio artists and designers about to enter graduate school or professional design studios. Includes a required three-day field trip to Chicago, information concerning resume preparation, exhibitions, interviewing, portfolios, design agencies, galleries, museums, and analysis of the professional literature through written assignments. Students will learn how the professional art world works. Offered fall semester. Prerequisites: Art major and senior standing. Credits: 3

#### **ART 410 - Graphic Design V**

Advanced layout problems involving brochures, annual reports, and corporate identity packages, as well as introduction to mixed media presentations. Stress is on individually conceived and developed projects. Offered fall semester. Prerequisites: ART 312; passage of Junior Review. Credits: 3

#### **ART 413 - Portfolio**

Refinement and development of a body of work constituting a professional portfolio. Offered fall semester. Prerequisite: ART 312 or ART 382. Credits: 3

#### **ART 415 - Senior Project: Graphics/Illustration**

Development of a body of work focusing on a specific aspect of graphic design or illustration in which the student wishes to specialize. The work will be shown along with the student's portfolio as the senior show. Offered fall and winter semesters. Prerequisite: ART 410 or ART 483. Credits: 3

#### **ART 420 - Asian Art**

This course will survey the visual arts of India, China, and Japan, focusing on the relationship between visual form and cultural ideology. Offered fall semester of odd-numbered years. Prerequisites: ART 221 and ART 222, or junior status. Credits: 3

#### **ART 421 - Surrealism**

This course provides an in-depth investigation of the Surrealism movement, addressing its artistic, as well as its historical, political, philosophical, and psychological implications. Offered winter of odd-numbered years. Prerequisite: ART 222 or junior status. Credits: 3

#### **ART 422 - Art and the Worlds of Islam**

Examines the arts and material culture produced in Islamic contexts between the 7th century and the present. Themes include patronage, materials, reception, cultures in contact, plurality of meaning, as well as colonial and postcolonial circumstances. Also explores the work of contemporary artists in relation to transnational contexts. Course offered winter semester of even-numbered years. Prerequisite: ART 221 or junior standing. Credits: 3

#### **ART 425 - Depicting a Nation: 19th Century American Art**

A thematic approach to 19th century American arts and visual culture. Considers individual artists, but stresses the role of objects to reflect and shape cultural change. Discussions include portraiture, westward expansion, the Civil War, as well as the role of visual culture and conceptions of gender, race, and social class. Course offered fall semester

of odd-numbered years. Prerequisite: ART 222 or junior standing. Credits: 3

#### **ART 447 - Advanced Jewelry and Metalsmithing I**

The focus at this level is on ideas that challenge traditionally held concepts and perceptions in the search of a personal interpretation. Technical and material concerns will be addressed as needed for realization of the work. Work should begin to show a cohesive idea. Offered fall and winter semesters. Prerequisite: ART 347. Credits: 3

#### **ART 448 - Advanced Jewelry and Metalsmithing II**

The focus of this course is the demonstration of the use of knowledge of metalsmithing materials, techniques and design concepts to explore new ground and ask new questions in a search for a personal statement. A body of work exploring a particular idea is required. May be repeated for credit. Offered fall and winter semesters. Prerequisite: ART 447. Credits: 3

#### **ART 462 - Advanced Painting I**

A continuation of ART 361 with advanced and more individual problems. Offered fall and winter semesters. Prerequisite: ART 362. Credits: 3

#### **ART 463 - Advanced Painting II**

A continuation of ART 362 with advanced and more individual problems. Course may be repeated for credit. Offered fall and winter semesters. Prerequisite: ART 462. Credits: 3

#### **ART 467 - Advanced Printmaking I**

A continuation of ART 367 with additional emphasis on quality printing, experimental printing and content issues. Offered fall and winter semesters. Prerequisite: ART 367. Credits: 3

#### **ART 468 - Advanced Printmaking II**

A continuation of ART 467 with additional emphasis on quality printing, experimental printing and content issues. Course may be repeated for credit. Offered fall and winter semesters. Prerequisite: ART 467. Credits: 3

#### **ART 472 - Advanced Sculpture 1**

Builds on previous courses by emphasizing development of individual areas of creative investigation that combine material and conceptual concerns. Focus may be placed on a topic of sculptural relevance not previously covered (installation, public art, new media, etc.). Readings, presentations, and class trips relating to contemporary art complement studio work. Offered fall and winter semesters. Prerequisites: ART 371 and ART 372. Credits: 3

#### **ART 473 - Advanced Sculpture 2**

Continued focus on development of individual areas of creative investigation that combine material and conceptual concerns. Students work toward increasingly independent work and decision-making processes. Expectations for material and idea development are very high. Studio work is complemented with readings, presentations, and class trips relating to contemporary art. May be repeated for credit. Offered fall and winter semesters. Prerequisite: ART 472. Credits: 3

#### **ART 477 - Advanced Ceramics 1**

Students continue to develop their own concepts and methods for making them. They will do background research and develop artist mentors important to their work. The work should take on stronger suggestion of personal voice in this course. Students may pursue mixed media and found object additions for their work. Offered fall and winter semesters. Prerequisite: ART 377. Credits: 3

#### **ART 478 - Advanced Ceramics 2**

Students continue to define concepts with further individuality and creative solutions to forming, surface resolution, mixed media, combinations, installation and conceptual work. They may begin work for 498 if they are ready. Includes further reading and research in their areas of interest. ART 478 may be repeated for credit. Offered fall and winter semesters. Prerequisite: ART 477. Credits: 3

#### **ART 479 - Glaze Calculation**

Students will learn ceramic materials that constitute general formulation of glazes at the temperature of stoneware and porcelain. They will mix tests, fire them and come to understand and recognize basic glaze components. Students will make test tiles and sample glaze batches.

## Course Listings and Descriptions

They will analyze and compare formula variations. Offered fall of odd-numbered years. Prerequisite: ART 376 or ART 377 or ART 477. Credits: 3

### **ART 482 - Advanced Illustration I**

Development of a personal style of illustration supported by an examination of historical trends. Offered winter semester. Prerequisite: ART 382. Credits: 3

### **ART 483 - Advanced Illustration II**

Development of personal styles of illustration supported by an examination of contemporary trends. Offered fall semester. Prerequisite: ART 482. Credits: 3

### **ART 490 - Internship in Art History**

This course involves placement in a position off campus in which the student gains professional experience in an institution such as an art museum. Internship arrangements follow campus policy and students must receive faculty permission before enrolling in the course. Offered each semester. Credits: 1 to 6

### **ART 491 - Internship in Studio Art**

A special study opportunity that allows for advanced students to work for academic credit in a professional shop, gallery, or studio. Internships are prearranged by the department, are limited in number, and follow prescribed campus internship policy. Offered on sufficient demand. Prerequisite: Permission of department. Graded credit/no credit. Credits: 1 to 6

### **ART 495 - Issues in Art (Capstone)**

A seminar composed of lectures, discussions, papers, and assigned readings intended to give the student an understanding of his or her own place as a visual artist in the historical, social continuum of our time. Offered fall and winter semesters. Prerequisite: Senior standing in B.A., B.S., or B.F.A. program. Credits: 3

### **ART 498 - Senior Project**

This course is the final work toward the B.F.A. Senior Exhibition and must be taken in the semester in which students hang their degree shows. Students will work closely with their major professor in their emphasis area, and may have an additional course assigned from their Junior Review. Students must seek the advice of their major professor for the selection of works for their exhibition. They may also seek advice of any other faculty members with whom they have worked or from whom they would like additional feedback. Offered fall and winter semesters. Credits: 6

### **ART 499 - Independent Study in Art**

Advanced and independent work for students who have exhausted a regular course sequence and who wish to pursue a specialized project or medium under the guidance of the faculty. B.A. and B.S. students may not use 499 to fulfill their 45-credit major requirement. Offered fall and winter semesters. Prerequisite: Prior arrangement with a specific faculty member. Credits: 1 to 6

### **ASL 201 - American Sign Language 1**

This is the first introductory course for sign vocabulary and grammar, nonverbal grammatical elements, and fingerspelling. Required for students planning to enroll in the American sign language interpreting emphasis. Open to all students interested in learning ASL. Course offered each semester. Credits: 3

### **ASL 202 - American Sign Language 2**

Taught as an immersion course in American sign language (ASL), the medium of classroom instruction is ASL. This is the second of the three ASL immersion courses required for students planning to enroll in the American sign language interpreting emphasis. Open to all students interested in learning ASL. Course offered each semester. Prerequisite: ASL 201. Credits: 3

### **ASL 203 - American Sign Language 3**

A culmination of the three-semester introductory sequence of American sign language (ASL). Students will have mastery of basic ASL at the conclusion of this course. Required for students planning to enroll in the American sign language interpreting emphasis. Open to all students

interested in learning ASL. Course offered each semester. Prerequisite: ASL 202. Corequisite: ASL 210. Credits: 3

### **ASL 210 - Introduction to American Sign Language Interpreting**

An introduction to American sign language interpreting. Students are introduced to professional conduct, variety of interpreter work settings, and interactions with the populations served. Course offered fall and winter semesters. Prerequisite: ASL 202. Corequisite: ASL 203. Credits: 3

### **ASL 321 - Medical and Developmental Interpreting**

Students will learn how all areas of speech, language, and hearing are involved with consumer needs. They will explore current medical trends, policies, and procedures and explore different health professions, medical terminology, and corresponding ASL vocabulary. Course offered fall semester. Prerequisites: ASL 210 and AHS 110. Corequisites: AHS 100 and SLP 303. Credits: 1

### **ASL 323 - Business Interpreting**

Students will learn the corresponding sign vocabulary relating to business practices and understand how all areas of speech and hearing are involved with the needs of the consumers of ASL interpreter services in the business management process. Course offered fall semester. Prerequisite: ASL 210. Corequisite: MGT 331. Credits: 3

### **ASL 324 - Legal Interpreting**

Students explore legal settings and the roles and responsibilities of sign language interpreters in these settings. Students learn sign vocabulary related to the legal and criminal justice systems. Course offered winter semester. Prerequisite: ASL 210. Corequisite: LS 201. Credits: 1

### **ASL 325 - Social Services Interpreting**

Students will learn the corresponding sign vocabulary associated with social services. Students explore the social services and mental health systems and the scope, role, and legal requirements for sign language interpreters in those settings. Course offered winter semester. Prerequisite: ASL 210. Corequisite: SW 150. Credits: 3

### **ASL 326 - Educational Interpreting**

Students will learn the corresponding sign vocabulary associated with schools and education. Students learn special education law as it pertains to the process of qualifying for and receiving special education services for individuals with hearing loss, and explore the importance of having interpreters in the educational setting. Course offered winter semester. Prerequisite: ASL 210. Corequisite: EDS 378. Credits: 1

### **ASL 327 - ASL to English**

Students in this course will learn how to translate from American sign language to spoken English in order to be effective communicators and interpreters. Students will be taught to focus on using proper spoken English grammar, which differs from the grammar used in ASL. Course offered fall semester. Prerequisite: ASL 210. Credits: 3

### **ASL 380 - Special Topics in American Sign Language**

Consideration of selected topics not ordinarily dealt with in other courses. Consult class schedule for specific topics. Offered occasionally. Credits: 1 to 9

### **ASL 420 - American Sign Language Linguistics**

American sign language (ASL) has a unique linguistic format. This course provides the students with the structure of ASL linguistics of phonology, semantics, syntax, morphology, pragmatics and the use of language as related to ASL. Course offered fall semester. Prerequisite: ASL 210. Credits: 3

### **ASL 421 - Deaf History and Culture**

The course gives students opportunities to understand basic concepts of American deaf history, to appreciate the culture of deaf people and to understand social and cultural factors causing diversity in the deaf community and in identity choice. Course offered fall semester. Prerequisite: ASL 210. Corequisite: ASL 422. Credits: 3

### **ASL 422 - Deaf History and Culture Practicum**

The course gives students opportunities to put what they have learned in the Deaf History and Culture course (ASL 421) into practice in the community. Students will have interactions with members of the

deaf communities in a variety of cultural activities. Course offered fall semester. Prerequisite: ASL 210. Corequisite: ASL 421. Credits: 3

#### **ASL 423 - ASL Interpreting Practicum**

This course is the second of two practicum experiences. Practicing sign language interpreters will supervise and teach students refined skills needed to be successful professionals in a variety of work settings. Offered winter semester. Prerequisite: ASL 422. Credits: 6

#### **ATH 210 - Directed Observation in AT**

A required directed observation experience for students wanting to apply to the athletic training education program at Grand Valley State University. Students will observe in a variety of athletic health care settings including clinical, high school and collegiate settings followed by in-class discussions related to the observations and important entry-level athletic training topics. Prerequisite: MOV 217 (may be taken concurrently). Credits: 1

#### **ATH 220 - Athletic Training Clinical I**

The first of four clinical experiences. This course is designed to provide students with clinical experience in athletic training to apply basic knowledge and skills related to injury evaluation, injury treatment, pharmacology, health care administration and nutrition. (0-2-15) Prerequisites: MOV 217 and ATH 210. Credits: 2

#### **ATH 225 - AT Emergency Care**

Lecture and laboratory experiences for students relating to emergency situations commonly encountered in athletic health care settings. Credits: 3

#### **ATH 230 - Athletic Training Clinical II**

The second of four clinical experiences. Students will focus on initial clinical experiences related to general medical assessment and psychosocial intervention/referral. In addition, students will continue to practice skills related to injury treatment, injury evaluation, and health care administration introduced in the Clinical I experience. (0-2-15) Prerequisite: ATH 220. Credits: 2

#### **ATH 314 - Athletic Injury Assessment I**

Provides the necessary background to conduct a thorough clinical evaluation of lower extremity and general medical injuries/conditions. Students will formulate an impression of the injury/condition for the purposes of initial treatment and medical referral. (0-2-2) Prerequisite: ATH 315 or prior approval. Credits: 3

#### **ATH 315 - Athletic Injury Assessment II**

Provides the necessary background to conduct a thorough clinical evaluation of upper extremity and head and neck injuries/conditions. Students will formulate an impression of the injury/condition for the purposes of initial treatment and medical referral. (0-2-2) Prerequisite: ATH 314 or prior approval. Credits: 3

#### **ATH 316 - Therapeutic Exercise**

Provides an introduction to the concepts and principles of carrying out a comprehensive rehabilitation program. Students will identify the physiological effects of tissue trauma, select appropriate exercises/techniques for musculoskeletal injury, develop criteria for rehab progression, and establish return to play/activity guidelines. (0-2-2) Prerequisites: ATH 314 and ATH 315. Corequisite: ATH 405. Credits: 3

#### **ATH 320 - Athletic Training Clinical III**

The third of four clinical experiences. Students will focus on clinical experiences related to building proficiency related to injury treatment, injury evaluation, health care administration, general medical assessment, and psychosocial intervention/referral. (0-2-15) Prerequisites: ATH 230 and ATH 314 or ATH 315. Credits: 2

#### **ATH 330 - Athletic Training Clinical IV**

The fourth of four clinical experiences. The students will focus on initial clinical experiences related to therapeutic modalities and therapeutic exercise. In addition, students will have opportunities to continue to practice skills related to injury treatment, injury assessment, health care administration, general medical conditions, and health care administration. (0-2-15) Prerequisite: ATH 320. Credits: 2

#### **ATH 405 - Therapeutic Modalities**

Concepts and practical applications of therapeutic modalities as they relate to athletic training. A comprehensive look at the interdisciplinary relationship of therapeutic modalities with other areas including; therapeutic exercise, physiology and psychology. (0-2-2) Prerequisites: PHY 200 or PHY 220, and PHY 221; Corequisite: ATH 316. Credits: 3

#### **ATH 406 - Intervention and Referral**

Discussion and literature review of critical issues related to psychosocial intervention and referral. Moral and ethical concerns related to these issues are explored. (0-2-0) Prerequisites: PSY 101 and ATH 230. Credits: 2

#### **ATH 407 - Pharmacology in Athletic Training**

A lecture course designed to introduce athletic training students to the principles of pharmacology and pharmacological aspects of the major classes of drugs used in the treatment of injury and disease. Moral and ethical concerns related to these issues are explored. Offered fall semester. Prerequisite: CHM 109. Corequisite: ATH 406. Credits: 2

#### **ATH 420 - Advanced Techniques in Athletic Training**

An advanced course that integrates theoretical principles of athletic training into current clinical practice. Students will demonstrate their ability to analyze and synthesize information while addressing various issues within the athletic training profession. Information will be reinforced by current evidence based practice standards. Offered fall and winter semesters. Prerequisite: ATH 330 (May be taken concurrently.) Credits: 2

#### **ATH 490 - Internship in Athletic Training**

On-site work experience at an athletic health care facility such as high school, collegiate, professional and clinical facilities to be approved by the internship supervisor and appropriately affiliated with Grand Valley State University. Prerequisites: ATH 330 and approval by the program director. Credits: 6 to 12

#### **ATH 495 - Organization and Administration**

Organizational and administrative skills needed by the entry-level certified athletic trainer to practice effectively in a variety of athletic health care settings including high school, collegiate, clinical and industrial settings. Prerequisite: ATH 230. Credits: 3

#### **BIO 104 - Biology for the 21st Century**

Introductory course for nonscience majors designed to provide a biological literacy for making informed personal, social, and environmental decisions. Topics include cell biology, genetics and biotechnology, form and function of the human body, evolution and ecology. Does not count toward a biology major or minor. Fulfills Foundations - Life Sciences with a lab. Offered every semester. Credits: 4

#### **BIO 105 - Environmental Science**

Study of natural ecosystems, their interrelationships, and human impacts and evolution of humans and environmental determinants of their cultures. Land use, resource and energy utilization, population trends and causative factors, air and water pollution, and economic factors influencing decision-making are emphasized. Does not count toward a biology major or minor. (3-0-0) Fulfills Foundations - Life Sciences. Offered every semester. Credits: 3

#### **BIO 107 - Great Lakes and Other Water Resources**

A study of our region's water resources, including the Great Lakes, streams, and groundwater, and relationships of people with these systems. Does not count toward a biology major or minor. Designated lecture and laboratory sections are tailored for prospective elementary teachers. Fulfills Foundations - Life Sciences with a lab. (3-0-3) Offered fall semester. Credits: 4

#### **BIO 109 - Plants in the World**

A nonmajors course that looks at the ways plants are used by humans as foods, flavorings, fibers, medicines, building materials, etc. Topics include biotechnology, environmental issues, and population issues. Fulfills Foundations - Life Sciences with a lab. (3-0-2) Offered fall and winter semesters. Credits: 4

## Course Listings and Descriptions

### **BIO 120 - General Biology I**

Introduction to cell structure and physiology, growth and development, and genetics (3-0-3). Offered fall, winter, and spring/summer semesters. Fulfills Foundation - Life Sciences with a lab. Prerequisites: High school chemistry, CHM 109, or CHM 115 strongly recommended (CHM 109 or CHM 115 may be taken concurrently). For students with a strong science background or interest in science. Credits: 4

### **BIO 121 - General Biology II**

Students will be introduced to the diversity of living organisms, emphasizing fundamental biological processes operating at the scale of individual organisms. Form and function of organisms will be studied in ecological and evolutionary contexts. Students will explore and apply experimental design and quantitative analysis of data within these contexts (3-0-3). Offered every semester. Prerequisite: MTH 110 or higher (may be taken concurrently). Credits: 4

### **BIO 180 - Special Topics in Biology**

Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: variable. Credits: 1 to 4

### **BIO 205 - Genetics for K-8 Pre-Service Teachers**

Concepts of heredity for preservice teachers emphasizing human traits. Includes Mendelian and nonMendelian transmission genetics, structure and replication of DNA, and protein synthesis. Course is intended for integrated science majors. Does not fulfill requirements for a biology major or minor. Content reflects national and Michigan science standards. (1-0-2) Offered fall and winter semesters. Prerequisites: BIO 120, BIO 121, (MTH 110 or MTH 122 or MTH 201). CHM 109 or CHM 201 recommended. Credits: 2

### **BIO 210 - Evolutionary Biology**

Principles and mechanisms of the evolution of living organisms. Provides an understanding of evolutionary biology as the foundational underpinning of all of biology. Course offered fall and winter semesters. Prerequisites: BIO 120, BIO 121. Credits: 3

### **BIO 215 - Ecology**

Ecologists study how nature functions. Students will explore emergent properties of natural systems at scales ranging from individuals to ecosystems, and study the application of ecological principles to environmental problems caused by global climate change and other anthropogenic disturbances. Intended for biology and natural resources management majors. (3-0-3) Offered fall and spring/summer semesters. Prerequisites: BIO 120 and BIO 121 (BIO 120 may be taken concurrently). Credits: 4

### **BIO 222 - Natural History of Vertebrates**

A study of taxonomy, ecology, life histories, behavior, and distribution of vertebrates, with special emphasis on those of the local region. (2-0-3). Offered fall semester. Prerequisite: BIO 121. Credits: 3

### **BIO 232 - Natural History of Invertebrates**

Anatomy, physiology, embryology, evolution, and natural history of the major groups of invertebrate animals. Those of the Great Lakes region will be emphasized. (2-0-3) Offered winter semester. Prerequisite: BIO 121. Credits: 3

### **BIO 243 - Plant Identification and Natural History**

Examines the plants of West Michigan with emphasis on identification skills and natural history of the plants and communities in which they occur. Offered spring/summer semester. Prerequisite: BIO 121. Credits: 3

### **BIO 272 - Insect Biology and Diversity**

Anatomy and physiology, life histories, ecology and evolution, and classification of insects. Students will also gain expertise in the collection, curation, and identification of local insects. (2-0-3) Offered fall semester. Prerequisite: BIO 121 (BIO 215 recommended). Credits: 3

### **BIO 280 - Special Topics in Biology**

Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: Variable. Credits: 1 to 4

### **BIO 302 - Comparative Vertebrate Anatomy**

Phylogeny and anatomy of vertebrates. (2-0-4) Offered winter semester. Prerequisite: BIO 121. Credits: 4

### **BIO 303 - Plant Morphology**

An in-depth study of the morphological evolution of land plants emphasizing key anatomical and reproductive adaptations to the terrestrial environment. Offered winter semester. Prerequisite: BIO 215. Credits: 4

### **BIO 308 - Wildlife Ecology**

This course provides an introduction to wildlife ecology including population ecology as it relates to wildlife management and conservation. Offered winter semester. Prerequisite: BIO 215. Credits: 4

### **BIO 309 - Plants and Human Health**

Examination of plants and fungi that are sources of medicines, herbal remedies, or are a regular part of people's diets and have been found to have specific health benefits. Only one of BIO 309, 311, 329, or 349 may be counted toward a biology major or minor. Part of the Health Issue. Course offered fall and winter semesters. Prerequisites: Junior standing and completion of the Life Sciences general education category. Credits: 3

### **BIO 311 - Who's Running Your Life: Genes, Evolution and Behavior**

The vast majority of human evolutionary history occurred while we lived in small hunter-gatherer groups. This course will examine if our genetically determined behavior from the past is still affecting us today. Only one of BIO 309, 311, 329, or 349 may be counted toward a biology major or minor. Part of the Identity Issue. Prerequisites: Junior standing and completion of the Life Sciences general education requirement. Credits: 3

### **BIO 313 - Plants and Islands**

Explores the various roles of plants in island systems and their evolutionary histories and adaptations to these unique environments. This course has a required multi-day field study in a coastal or international island setting. Course offered winter semester. Prerequisites: BIO 121 and permission of instructor. BIO 215 is strongly recommended. Credits: 4

### **BIO 317 - Principles of Animal Nutrition**

The course covers basic principles of animal nutrition with a primary emphasis on agricultural animals and practices. Topics include analysis of foodstuffs, ration formulation, feeding, digestion, comparative anatomy of animal GI tracts, absorption and metabolism of the various food nutrients, measurement of body needs, and characteristics of nutrients. Offered winter semester. Prerequisites: BIO 120, CHM 115, and CHM 116. Credits: 3

### **BIO 319 - Global Agricultural Sustainability**

The expansion and collapse of societies throughout history has tracked the rise and fall of their agricultural productivity. We will explore how biological principles dictate long-term agricultural productivity and how knowledge of such principles can impact decisions of consumers, farmers, and policy makers. Part of the Sustainability Issue. Prerequisites: Junior standing and completion of the general education Life Sciences requirement. Credits: 3

### **BIO 323 - Aquatic and Wetland Plants**

Examines the plants and algae of the major aquatic habitats of the Great Lakes region with emphasis on taxonomy and ecology. Offered fall semester. Prerequisite: BIO 121. Credits: 3

### **BIO 325 - Human Sexuality**

Introduction to the biological dimensions of human sexuality from physiological, ecological, and evolutionary perspectives. Part of the Health Issue. (3-0-0) Offered each semester. Prerequisite: Junior standing. Credits: 3

### **BIO 328 - Biomedical Ethics**

Examination of ethical dilemmas encountered in medicine and biomedical research, with an emphasis on obligations of health care workers to their patients. Biology majors may not use both BIO 328 and BIO 338 as elective credit within the major. Part of the Health Issue. (3-0-0) Offered fall, winter, and spring/summer semesters. Prerequisite: Junior standing. Credits: 3

**BIO 329 - Evolution of Social Behavior**

Social behavior links to an animal's quest for evolutionary fitness. Social behavior is rooted in genes, and shaped by development, learning, and environment. Through interdisciplinary lenses, we will explore social behavior in diverse vertebrate and invertebrate species, discover behavioral commonalities among species, and learn how scientists study animal behavior. Part of the Identity Issue. Prerequisite: Junior standing. One course in biology or psychology recommended. Credits: 3

**BIO 333 - Systematic Botany**

Principles and methods of taxonomy of vascular plants. Offered fall semester. Prerequisite: BIO 121. Credits: 4

**BIO 338 - Environmental Ethics**

Examines philosophical underpinnings of environmental ethics. Explores approaches for understanding sustainability issues, solving ongoing environmental problems, and developing a global environmental ethic. Biology majors may not use both BIO 328 and BIO 338 as elective credit within the major. Part of the Sustainability Issue. Prerequisites: Junior standing, Writing 150 (C or better). Credits: 3

**BIO 342 - Ornithology**

Identification, classification, anatomy, physiology, behavior, and life histories of birds. (2-0-3) Offered winter and occasional spring/summer semesters. Prerequisite: BIO 121. Credits: 3

**BIO 349 - The Darwinian Revolution**

Explores the Darwinian revolution in biology, its impact on the Western world view, and the power of Darwin's theory of evolution by natural selection to explain the diversity of life on earth. Only one of BIO 309, 311, 329, or 349 may be counted toward a biology major or minor. Prerequisite: Junior standing. Credits: 3

**BIO 352 - Animal Behavior**

Behavior of invertebrates and vertebrates with emphasis on adaptive significance. (2-0-3) Offered winter semester. Prerequisites: Two courses in biology or psychology or permission of instructor. Credits: 3

**BIO 355 - Human Genetics**

Principles of genetics with emphasis on human traits and disorders. Genetic counseling, ethical considerations, technological advances, and evolution in human populations are discussed. Will not count toward the biology major without permission. (3-0-0) Offered fall, winter, and spring/summer semesters. Prerequisite: BIO 120 or BIO 104, or permission of instructor. Credits: 3

**BIO 357 - Environmental Microbiology**

An introduction to microbiology emphasizing the role of microorganisms in the environment. Surveys microbial lifestyles and the roles of microorganisms in food, water, soil, and industrial microbiology and in nutrient recycling and energy flow. Will not substitute for BMS 212 and BMS 213. (3-0-3) Offered fall semester. Prerequisite: BIO 120 or permission of instructor. Credits: 4

**BIO 362 - Fisheries Biology**

Study of the anatomy, morphology, and classification of fishes and their biology, ecology, and evolution. Emphasis on species native to the Great Lakes region. (3-0-3) Offered fall semester. Prerequisite: BIO 121; BIO 120 is recommended. Credits: 4

**BIO 370 - Marine Biology**

An exploration into the function, biodiversity and ecology of life in the ocean - the largest of Earth's ecosystems. Marine biology will emphasize principles and processes that underlie and unify vastly different marine communities through ecological and evolutionary perspectives. Course offered fall semester. Prerequisites: BIO 121 and BIO 215. Credits: 3

**BIO 375 - Genetics**

Concepts of inheritance in plants, animals, and micro-organisms; both classical and modern investigative techniques are emphasized in lecture and the associated lab, BIO 376. (3-0-0) Offered fall and winter semesters. Prerequisite: BIO 120. Corequisite: BIO 376. Credits: 3

**BIO 376 - Genetics Laboratory**

Laboratory exercises in classical and modern genetics. Required of all students taking BIO 375. (0-0-3) Offered fall and winter semesters. Prerequisite: Concurrent enrollment in BIO 375 or successful completion of BIO 355. Credits: 1

**BIO 380 - Special Topics in Biology**

Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: Variable and with permission of instructor. Credits: 1 to 4

**BIO 383 - Plant-Fungal Interactions**

Overview of diverse plant-fungal symbiotic relationships from mutualistic to parasitic. Topics include the ecology, evolution, morphology, physiology, and development of plant-fungal associations spanning fungal diversity. Students will gain experience identifying fungi and researching plant-fungal interactions. Course offered fall semester of even-numbered years. Prerequisite: BIO 121. Credits: 4

**BIO 386 - Ecological Restoration and Management**

This course will introduce students to ecological restoration and examines the practical methods and techniques used in ecosystem restoration and management. Cross-listed with NRM 386. Course offered fall semester. Prerequisite: BIO 215. Credits: 4

**BIO 399 - Selected Experiences in Biology**

Supervised independent laboratory, field, or other scholarly activity in biology. Topic and amount of credit must be arranged with faculty member and approved by department chair before registration. May be elected for up to five credits toward a biology degree. Offered fall, winter, and spring/summer semesters. Prerequisite: Permission of department chair. Credits: 1 to 4

**BIO 402 - Aquatic Insects**

Advanced study of taxonomic diversity and ecology of aquatic insects, with emphasis on the fauna of local lakes and streams. The role of aquatic insects in stream function and bio-assessment will be emphasized. Students will gain expertise in the scientific collection, curation and identification of aquatic insects. (2-0-3) Offered winter semester. Prerequisites: BIO 121 and BIO 215. Credits: 3

**BIO 403 - Plant Structure and Function**

Anatomy and physiology of plants, including interrelationships of structure and function in growth, flowering, seed germination, photosynthesis, respiration, water relations, and mineral nutrition. (3-0-2) Offered winter semester. Prerequisites: BIO 120 and BIO 121 and CHM 231 or CHM 241. Credits: 4

**BIO 407 - Biology and Society: Study Abroad**

Biological topics related to biodiversity, sustainability, alternative energy, environmental policy and economics, land use, climate change, historical influences, and cultural/societal attitudes conducted within an international context. The society-based experience is combined with readings, lectures, papers, and discussions. Credits: 1 to 4

**BIO 408 - Wildlife Management**

An examination of techniques used in the management, research, and conservation of wildlife species. Introduces the fundamental concepts of wildlife management, including wildlife habitat requirements, evaluation of habitat suitability, interpretation of data analysis techniques, and applied techniques of habitat and population management. Cross-listed with NRM 408. Offered fall semester. Prerequisite: BIO 308 or NRM 308. Credits: 4

**BIO 412 - Mammalogy**

A survey of the class mammalia. Topics will include mammalian evolution, zoogeography, ecology, physiology, natural history, and behavior with emphasis on Michigan mammals. Students will gain practical experience in the techniques of field study, identification, and preservation of mammal specimens. (3-0-3) Offered fall semester. Prerequisites: BIO 121 and BIO 215. Credits: 4

## Course Listings and Descriptions

### **BIO 413 - Freshwater Algae**

Detailed study of the freshwater algae of the Great Lakes region. Topics will include the morphology, ecology, physiology, and evolutionary relationships of the major groups. Methods of collection will also be presented, and considerable emphasis given to identification of the regional flora. (2-0-4) Offered winter semester. Prerequisites: BIO 121 and BIO 215. Credits: 3

### **BIO 416 - Advanced Genetics Laboratory**

Experiments with both prokaryotic and eukaryotic organisms will involve techniques of gene induction, ELISA, DNA extraction, isolation and cloning, transformation, protein translation and analysis of genes ligated into expression vectors. (0-0-4) Offered winter semester. Prerequisite: BIO 376; BIO 411 or BIO 414 recommended (may be taken concurrently). Credits: 2

### **BIO 417 - International Field Biology**

One- to three-week trips to international locations to study the fauna, flora, ecology of representative ecosystems, climate, geology, paleobiology, environmental problems, and/or human impacts upon the previously listed. The field-based experience is combined with readings, lectures, papers, and discussions. A maximum of six credits from BIO 417 and BIO 418 combined may be applied to the elective credit requirements for the biology or NRM major. BIO 417 does not satisfy the plant or animal biology requirements, but may be repeated for credit. Offered fall, winter, and spring/summer semesters. Prerequisites: Variable and with permission of instructor. Credits: 1 to 4

### **BIO 418 - Regional Field Biology**

One- to three-week trips to U.S. regional locations to study the fauna, flora, ecology of representative ecosystems, climate, geology, paleobiology, environmental problems, and/or human impacts upon the previously listed. The field based experience is combined with readings, lectures, papers, and discussions. A maximum of six credits from BIO 417 and BIO 418 combined may be applied to the elective credit requirements for the biology or NRM major. BIO 418 does not satisfy the plant or animal biology requirements, but may be repeated for credit. Offered fall, winter, and spring/summer semesters. Prerequisites: Variable and with permission of instructor. Credits: 1 to 4

### **BIO 422 - Embryology**

Development in animals from formation of gametes and fertilization to larva or birth or hatching. Emphasis is on process and molecular control. (2-0-3) Offered fall semester. Prerequisites: BIO 120 and BIO 121, BIO 355 or BIO 375, or permission of instructor. Credits: 3

### **BIO 423 - Plant Biotechnology**

Study of plant development and its control by hormones, environment and genome, and introduction to current techniques and topics in plant biotechnology, such as another culture, protoplast preparation and fusion, embryogenesis, organogenesis, genetic transformation and developmental mutants. (2-0-2) Offered winter semester. Prerequisite: BIO 376. Credits: 3

### **BIO 432 - Comparative Animal Physiology**

Functions of the organ systems of animals, including their regulatory mechanisms. (3-0-3) Offered fall semester. Prerequisites: BIO 121 (or BMS 208), BIO 120, CHM 232 or CHM 242. Credits: 4

### **BIO 433 - Plant Ecology**

Exploration of plant adaptations and environmental processes governing species distribution and demography, community richness and structure, and ecosystem processes. Offered fall semester. Prerequisites: BIO 120, BIO 121, and BIO 215. Credits: 4

### **BIO 440 - Limnology**

Ecology of lakes and streams with emphasis on the physical, chemical, and biological factors affecting their productivity. (2-0-4) Offered every second fall semester. Prerequisite: BIO 215 or permission of instructor. Credits: 4

### **BIO 444 - Herpetology**

An overview of the biology and global diversity of amphibians and reptiles. Topics include amphibian and reptile evolution, morphology,

physiology, ecology, behavior and conservation. Students will gain field experience and learn to identify amphibians and reptiles, with emphasis on Michigan species. Offered fall semester. Prerequisite: BIO 215. Credits: 4

### **BIO 450 - Stream Ecology**

Examines the structure and function of stream ecosystems, with emphasis on the physical, chemical, and biological factors that influence flowing-water habitats. Laboratory focuses on the methods of stream ecology, including collection and analysis of physical, chemical, and biological data. Field work emphasizes local stream ecosystems. (3-0-4) Offered every second fall semester. Prerequisites: BIO 121 and BIO 215 or permission of instructor. Credits: 4

### **BIO 452 - Human Evolution**

An examination of the fossil, genetic, and behavioral evidence of human evolution within a Darwinian evolutionary perspective. (3-0-0) Offered fall semester of odd-numbered years. Prerequisites: BIO 120 and BIO 121; or ANT 206 or permission of instructor. Credits: 3

### **BIO 460 - Terrestrial Ecosystem Ecology**

Investigation of the structure and function of terrestrial ecosystems using a systems approach. Biotic and abiotic processes controlling interactions among biogeochemical cycles in ecosystems will be discussed and examined. Topics will include controls on primary production, evapotranspiration, decomposition, and herbivory, as well as potential for anthropogenic changes in ecosystem processes. (3-0-3) Offered fall and occasional spring/summer semesters. Prerequisite: BIO 215; NRM 281 recommended. Credits: 4

### **BIO 470 - Conservation Biology**

Theoretical concepts and research applications in the multidisciplinary and applied science of maintaining the planet's biodiversity at the genetic, species, and ecosystem levels. Topics include distribution, functions, and value of biodiversity; causes and consequences of biodiversity loss; conservation solutions; and social, political, legal, ethical, and economic aspects of biodiversity conservation. (3-0-0) Offered fall semester. Prerequisite: BIO 215. Credits: 3

### **BIO 473 - Ecology and Evolution of Plant-Animal Interactions**

An examination of the evolution and ecology of plant-animal interactions, focusing on herbivory, pollination, fruit and seed dispersal in both natural and agroecosystems. Course consists of lectures, presentations and discussion of the primary literature. Suitable for advanced undergraduates and graduate students. Course offered winter semester of even-numbered years. Prerequisite: BIO 215. Credits: 3

### **BIO 480 - Special Topics in Biology**

Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: Variable. Credits: 1 to 4

### **BIO 485 - Molecular Ecology**

This course provides an in-depth exploration of the integrative field of molecular ecology, which uses molecular genetic tools to study ecology and evolution. Concepts/theories are introduced in lecture and through discussion of scientific literature. Hands-on experience with analysis of genetic data is provided in computer laboratories. Cross-listed with BIO 585, CMB 485, and CMB 585. Course offered winter semester. Prerequisite: BIO 375. Credits: 3

### **BIO 486 - Advanced Restoration Ecology**

This course will introduce students to the science of restoration ecology through an examination of underlying theories and contemporary research in ecosystem restoration. Course cross-listed with BIO 586, NRM 486, and NRM 586. Course offered winter semester of even-numbered years. Prerequisite: NRM 386 or BIO 386 or permission of instructor. Credits: 3

### **BIO 490 - Internship**

Practical and applied biology carried out as independent study in specialized areas of biology. Such work will be carried out under the supervision of a faculty advisor and a supervisor at the institution where the work is done. May be elected for up to six credits toward the major. Prerequisites: Major in biology and permission of the department chair. Credits: 1 to 6

**BIO 495 - Perspectives in Biology (Capstone)**

Through literature review and discussion, students examine fundamental principles that drive biological inquiry, such as, the mechanisms determining phenotype, principles of ecological organization, and evolutionary change. Students complete a synthetic project, explore their own knowledge and skills, and develop effective communication and information literacy skills. (3-0-0) Offered fall and winter semesters. Prerequisite: Senior status. Credits: 3

**BIO 499 - Research in Biology**

Can be elected for up to five credits toward the biology major. Number of hours of credit and topic to be arranged with faculty member involved. Offered fall, winter, and spring/summer semesters. Prerequisites: A minimum grade point average of 3.0 in biology and permission of the department. Credits: 1 to 4

**BIO 530 - Aquatic Ecosystems and Processes**

Aquatic ecosystems play vital functions in our biosphere. Understanding the role of aquatic ecosystems requires knowledge of processes occurring in the air and watersheds, and interactions with aquatic organisms. This lecture/discussion course will be a forum for learning about life and its dynamic interactions in earth's aquatic ecosystems. Cross-listed with WAT 530. Course offered fall semester of odd-numbered years. Prerequisite: Graduate standing or permission of instructor. Credits: 3

**BIO 550 - Advanced Population Ecology**

Advanced exploration of the intrinsic and extrinsic controls of population establishment, growth and decline, cohesion, and structure. Offered fall semester of even-numbered years. Prerequisite: Graduate status in the biology department or permission of instructor. Credits: 3

**BIO 570 - Landscape Ecology Theory and Application**

Landscape ecology explores the influence of landscape patterns on ecological processes. Topics include landscape patterns, dynamics, and heterogeneity; issues of scale; and spatial analysis. Students will examine various applications of landscape ecology concepts through discussions of peer-reviewed journal articles, computer-based assignments, and project work. Offered fall semester. Prerequisite: Graduate standing or permission of instructor. Credits: 3

**BIO 580 - Special Topics in Biology**

Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Credits: 1 to 4

**BIO 585 - Molecular Ecology**

This course provides an in depth exploration of the integrative field of molecular ecology which uses molecular genetic tools to study ecology and evolution. Concepts/theories are introduced in lecture and through discussion of scientific literature. Hands-on experience with analysis of genetic data is provided in computer laboratories. Cross-listed with BIO 485, CMB 485, and CMB 585. Course offered winter semester. Prerequisite: Graduate standing. Credits: 3

**BIO 586 - Advanced Restoration Ecology**

This course will introduce students to the science of restoration ecology through an examination of underlying theories and contemporary research in ecosystem restoration. Course is cross-listed with BIO 486, NRM 486, and NRM 586. Course offered winter semester of even-numbered years. Prerequisite: NRM 386 or BIO 386 or permission of instructor. Credits: 3

**BIO 593 - Advanced Univariate Methods**

This course focuses on experimental design in biology, with an emphasis on interpretation of quantitative approaches, communication of quantitative outputs, and the ultimate structuring of experimentation that results in testable hypotheses using univariate tools, such as regression. Concepts are introduced through discussion of sampling regimes and scientific articles. Course offered winter semester. Prerequisite: STA 622, or permission of instructor. Credits: 3

**BIO 594 - Advanced Multivariate Methods**

This course focuses on experimental design in biology, with an emphasis on interpretation of quantitative approaches, communication of quantitative outputs, and the ultimate structuring of experimentation that results in testable hypotheses using multivariate tools, such as principal

component analysis. Concepts are introduced through discussion of sampling regimes and scientific articles. Course offered fall semester. Prerequisite: STA 622 or BIO 593 or permission of instructor. Credits: 3

**BIO 610 - Scientific Methodology**

Contemporary skills of biological scientists including hypothesis development, experimental control, data management, critical interpretation of data, project organization and monitoring, collaborative work habits, and effective communication. Skills will be built as students' progress through case studies of landmark biological experiments, critiquing the primary literature, and creating their own scientific proposal. Offered fall semester. Prerequisite: Admission to the graduate program in biology. Credits: 3

**BIO 651 - Emerging Issues in Water Resources**

The most pressing water resource-related issues facing the planet today will be discussed and analyzed. Particular emphasis will be placed on analyzing these problems from a variety of perspectives, including environmental, economic, societal, and political. Cross-listed with WAT 651. Offered fall semester of odd-numbered years. Prerequisite: BIO 440 or BIO 450. Credits: 2

**BIO 680 - Special Topics in Biology**

Lecture and/or laboratory courses on topics of current interest to graduate students. Offered one time only. Prerequisites: Variable and with permission of instructor. Credits: 1 to 3

**BIO 691 - Graduate Internship**

Full-time, on-the-job work performed at a sponsoring entity under the supervision of an approved mentor in an area related to biological sciences. A written internship analysis and a public oral presentation are required. The student will defend the internship in front of the student's graduate committee. Offered every semester. Prerequisites: BIO 610 and successful completion of qualifying exams. Credits: 3 to 9

**BIO 693 - Graduate Project**

Application of scientific knowledge to a problem in the biological sciences. Projects will be performed under the supervision of an approved mentor from the sponsoring entity. A written report and public oral presentation are required. The student will defend the results in front of the student's graduate committee. Offered every semester. Prerequisites: BIO 610, successful completion of qualifying exams, and completion of the Responsible Conduct of Research Training within last three years. Graded credit/no credit. Credits: 3 to 9

**BIO 695 - Thesis Research**

Original research in an area related to the biological sciences. Work will be performed under the supervision of the graduate committee chair and/or mentor. A written thesis or publication and a public oral presentation are required. The student will defend the thesis in front of the student's graduate committee. Offered every semester. Prerequisites: BIO 610, successful completion of qualifying exams, and completion of the Responsible Conduct of Research Training within last three years. Graded credit/no credit. Credits: 3 to 9

**BIO 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

**BIO 698 - Perspectives in Biology**

This graduate Capstone course provides an integrated examination of the contemporary biological sciences in the context of students' graduate thesis, project, or internship work. The course includes a discussion of scientific ethics, emphasizes the critical evaluation of scientific literature, and further develops students' scientific and professional writing and presentation skills. Offered winter semester. Prerequisites: BIO 610, STA 622, and completion or concurrent enrollment in BIO/NRM 691, BIO/NRM 693, or BIO/NRM 695. Credits: 3

## Course Listings and Descriptions

### **BIO 699 - Independent Study**

Independent study in topics of special interest supervised by a faculty member approved by the student's graduate committee chair. One to three credits. May be elected for up to six credits toward a M.S. in biology or up to three credits toward an M.Ed. Offered each semester. Prerequisites: Permission of instructor, student's committee chair, and department chair. Credits: 1 to 3

### **BMS 100 - Human Health and Disease**

Presents the basic terminology and concepts of medicine and health maintenance for nonscience students. Emphasis is on the interaction of technical concepts of health and disease with the political, economic, legal, and ethical aspects of American society. Fulfills Foundations - Life Sciences. Offered fall, winter and occasionally spring/summer semesters. Credits: 3

### **BMS 105 - Basic Nutrition**

An investigation of the bases of nutrition, from a scientific and social-psychological viewpoint. Problems of malnutrition, food as a social phenomenon, and current controversies in nutrition will be discussed. Offered fall, winter, and occasionally spring/summer semesters. Credits: 3

### **BMS 180 - Special Topics in the Biomedical Sciences**

Special topics not regularly offered, but of interest to students in the biomedical sciences. Courses will be listed in the class schedule. Offered fall and winter semesters. Credits: 1 to 4

### **BMS 202 - Anatomy and Physiology**

An introduction to the human body, its form and function. With the study of each system, correlations between its function and the functions of other systems are emphasized. Lecture and laboratory. Fulfills Foundations - Life Sciences with a lab. (3-0-2) Offered fall and winter semesters. Credits: 4

### **BMS 208 - Human Anatomy**

A lecture course on the gross anatomy of human tissues and organ systems, including pertinent embryology. (3-0-0) Offered each semester. Prerequisite: BIO 120. Credits: 3

### **BMS 212 - Introductory Microbiology**

An introduction to the fundamental principles and techniques of bacteriology, immunology, and virology. Emphasis on the morphology, genetics, and physiology of micro-organisms producing human disease and the human response to these agents. (3-0-0) Offered every semester. Prerequisites: BIO 120 and one of CHM 230, CHM 232, CHM 241, or CHM 245. Credits: 3

### **BMS 213 - Laboratory in Microbiology**

Laboratory investigation into the morphology, isolation techniques, growth, and identification of bacteria. (0-0-4) Offered each semester. Prerequisite: BMS 212 (may be taken concurrently). Credits: 1

### **BMS 222 - Introduction to Public Health**

Introduction to the history, philosophy, current concepts, practice, and administration of public health in the United States. Offered fall semester. Credits: 3

### **BMS 223 - Infectious Human Diseases; Prevention and Control**

An introduction to the strategies and tactics, both past and present, for the control and eradication of infectious and chronic diseases of humans. Offered winter semester. Credits: 3

### **BMS 250 - Anatomy and Physiology I**

The first semester of a two-semester anatomy and physiology sequence. Focus is on the basic principles of homeostasis, cells, and tissues. The structure and function of the skeletal, muscular, and nervous systems will also be covered. Not applicable to BMS major. Offered every semester. Prerequisite: BIO 120. Credits: 4

### **BMS 251 - Anatomy and Physiology II**

This is the second of a two-semester anatomy and physiology sequence. The structure and function of the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems as well as fluid and electrolyte balance, acid base balance, and basic metabolism

will be covered. Not applicable to BMS major. Offered every semester.

Prerequisite: BMS 250. Credits: 4

### **BMS 280 - Special Topics in Biomedical Sciences**

Special topics not regularly offered, but of interest to students in the biomedical sciences. Courses will be listed in the class schedule. Offered fall and winter semesters. Credits: 1 to 4

### **BMS 290 - Human Physiology**

An integrated study of physiological systems with major consideration given to the mechanisms involved in maintaining homeostasis. Normal function is emphasized, but clinical correlations are included where appropriate. Ordinarily, students enrolled in BMS 290 should be enrolled simultaneously in BMS 291. (3-0-0) Offered every semester. Prerequisites: BMS 208 and two semesters of chemistry. Credits: 3

### **BMS 291 - Laboratory in Human Physiology**

Laboratory in Human Physiology is designed to practically demonstrate the principles that govern functions of the human body. This laboratory will emphasize and introduce students to normal physiological values and, therefore, set the framework for future courses of students pursuing a career in health related fields. (0-0-3) Offered every semester. Prerequisite: BMS 290 (may be taken concurrently) or BMS 251 and two semesters of chemistry. Credits: 1

### **BMS 301 - Introduction to Research in the Biomedical Sciences**

Introduces students majoring in any of the science programs to basic steps in carrying out research, literature searching, critical reading of the literature, experimental design, data analysis, and scientific writing. Published papers and experiments will be analyzed. Students will write a variety of papers and reports. Offered fall and winter semesters. Prerequisites: STA 215 and sophomore standing. Credits: 3

### **BMS 305 - Clinical Nutrition**

This course has two objectives: to enable students to understand normal digestion, absorption, and metabolism of nutrients at a sophisticated level, and to make them aware of the nutritional needs of diseased patients. Pathophysiology of the gastrointestinal system will be considered. Offered fall and winter semesters. Prerequisites: BMS 290 or BMS 251 and (CHM 232 or CHM 230 or CHM 461). Credits: 3

### **BMS 306 - Advanced Human Nutrition**

An in-depth examination of the biochemical and physiological functions of nutrients and their relationships to health and disease. The digestion, absorption, and transport of nutrients are discussed. The integrated regulation of metabolism at the physiological, cellular, and molecular levels in response to altered nutritional and hormonal status is emphasized. Offered fall and spring/summer semester. Prerequisites: BMS 290 or MOV 304, and CHM 232 or CHM 461. Credits: 3

### **BMS 309 - Laboratory in Human Anatomy**

A laboratory course covering the gross anatomy of the skeletal, muscular, nervous, circulatory, respiratory, digestive, reproductive, urinary, and endocrine systems through the use of human cadavers. (0-0-3) Offered each semester. Prerequisites: B or better in BMS 208 or BMS 251; and 3.0 GPA or better. Credits: 1

### **BMS 310 - Basic Pathophysiology**

Presentation of disease processes in terms of physiologic dysfunction. Pathophysiology emphasizes the disruption of normal steady state relationships and considers the minor, acute, and chronic aspects of disease. This provides a link between the basic medical sciences and their clinical application. Offered each semester. Prerequisites: BMS 212 and (BMS 290 or BMS 251). Credits: 3

### **BMS 311 - Pharmacological Aspects of Biomedical Sciences**

A lecture course designed to introduce nursing and biomedical sciences students to the principles of pharmacology and pharmacological aspects of the major classes of drugs used in the treatment of disease. Special emphasis on nursing implications associated with the clinical use of the pharmacological agents discussed. Offered every semester. Prerequisite: BMS 310. Credits: 3

**BMS 312 - Bacterial Genetics**

An advanced genetics course using micro-organisms to analyze fundamental biological processes: mutation, replication, recombination, and transposition, along with the expression of genes and the processing of their products. (3-0-0) Offered fall semester of even-numbered years. Prerequisites: BMS 212 or BIO 357, and BIO 355 or BIO 375. Credits: 3

**BMS 313 - Bacterial Genetics Laboratory**

A selected set of experiments to demonstrate important principles of bacterial genetics, including basic microbial methodology, mutagenesis, and gene transfer. (0-0-4) Offered fall semester of even-numbered years. Prerequisite: BMS 312 (may be taken concurrently). Credits: 1

**BMS 355 - Anatomy of Joints**

Lecture and laboratory prosection study of the anatomy of synovial joints found in the human limbs, vertebral column, and skull. Emphasis on normal musculoskeletal anatomy. (1-0-2) Offered winter semester. Prerequisites: BMS 208 and BMS 309 or equivalent human anatomy course. Credits: 2

**BMS 374 - Physiological Aspects of Death and Dying**

An overview of the physiological processes connected with death and dying. Topics include body mechanisms associated with aging and common causes of death, autopsies, decomposition, modes of body disposition (and how they differ among cultures), and methods of body preservation (e.g., embalming and mummification). Not counted as an elective for biomedical sciences majors. Offered fall semester (and spring/summer semester upon demand). Credits: 3

**BMS 375 - The Biology of Aging**

An introductory course in the anatomical and physiological aspects of the normal aging process, designed for students from a broad range of disciplines. Emphasis will be placed on the normal aging process as it occurs in the majority of the population. Offered fall semester. Prerequisites: BMS 208 and BMS 290. Credits: 3

**BMS 380 - Special Topics in the Biomedical Sciences**

Special topics not regularly offered, but of interest to students in the biomedical sciences. Courses will be listed in the class schedule. Offered fall and winter semesters. Credits: 1 to 6

**BMS 392 - Laboratory Assistant in Physiology**

This course provides an opportunity for students to assist human physiology laboratory instructors while reinforcing their understanding of the mechanisms underlying human physiology (may be repeated, but only one credit may be applied toward the biomedical sciences major electives requirements). Offered each semester. Prerequisites: BMS 291 and permission of instructor. Credits: 1

**BMS 393 - Laboratory Assistant in Human Anatomy**

This course provides an opportunity for students to assist in the cadaver-based anatomy laboratory while reinforcing their understanding of anatomical structures, relationships between structures, and functional roles these structures have in the human body. Course offered fall and winter semesters. Prerequisites: BMS 309 and permission of instructor. Credits: 1

**BMS 394 - Laboratory Assistant in Microbiology**

This course provides an opportunity for students to assist the introductory microbiology laboratory instructors while reinforcing their understanding of the various techniques and concepts discussed in introductory microbiology. Course offered every semester. Prerequisites: Completion of BMS 213 and permission of instructor. Credits: 1

**BMS 399 - Readings in the Biomedical Sciences**

Independent, supervised readings on selected topics prearranged with a faculty sponsor and approved by the program chairman. May be elected for one to three hours credit toward a major in any biomedical sciences program, or with permission for group science or biology majors. Offered fall and winter semesters. Prerequisite: Permit only. Credits: 1 to 3

**BMS 404 - Community Nutrition**

This course will cover the field of community nutrition characteristics, purpose, and job opportunities. It will also discuss the following: the methods used to assess a group or community's nutritional status; the tools to evaluate community intervention programs; the cultural diversity found in the community; and the implications of such diversity for health professionals. Offered winter semester. Prerequisites: BMS 105 and junior standing. Credits: 3

**BMS 407 - Nutrition in the Life Cycle**

The course will cover nutritional aspects associated with each phase of the human cycle including pre-pregnancy, pregnancy, infancy, childhood, adolescence and late adulthood. Major pathological conditions that can occur throughout the life cycle will be discussed. Offered winter semester. Prerequisites: BMS 105 or 305 or 306; and either BMS 290/291 or BMS 251. Credits: 3

**BMS 410 - Immunology**

An introduction to the immune response, including the properties of antigens, immunoglobulins, the theories of antibody formation, cell-mediated immunity, and hypersensitivity reactions. Offered fall semester. Prerequisites: BMS 212; and CHM 232 or CHM 461 (may be taken concurrently). Credits: 3

**BMS 412 - Medical Bacteriology**

A study of the host-parasite relationships in bacterial disease. The theoretical basis of isolation and identification of medically important bacteria including anaerobic and newly identified pathogens will be included. Offered winter semester. Prerequisite: BMS 212. Credits: 3

**BMS 413 - Medical Bacteriology Laboratory**

Isolation and identification of the more common bacterial pathogens with emphasis on current clinical methods and normal flora. (0-0-4) Offered winter semester. Prerequisite: BMS 412 or concurrent registration. Credits: 2

**BMS 415 - Nutrition and Physical Performance**

After a brief introduction to the basic concepts of exercise physiology this course will explore how physical activity may alter nutrient needs, and the mechanisms by which nutrition influences physical performance. Emphasis will also be placed on the practical implementation of dietary strategies to optimize exercise performance. Offered winter and spring/summer semesters. Prerequisites: BMS 251 or BMS 290; and CHM 232 or CHM 461. Credits: 3

**BMS 422 - Bacterial Physiology**

An advanced microbiology course covering basic principles of prokaryotic physiology. Micro-organisms will serve as a model system for understanding how an organism accomplishes life functions: bacterial growth, nutrition, response, and metabolic processes. Includes how microbial physiology is studied and applications to human physiology, disease, antibiotic production and resistance, and biotechnology. (3-0-0) Offered fall semester of odd-numbered years. Prerequisite: BMS 212 or BIO 357. Credits: 3

**BMS 423 - Bacterial Physiology Laboratory**

Investigation of the physiology of bacteria. Analysis of bacterial growth, nutrition, responses to the environment, and metabolic processes. Techniques for analysis of bacterial physiology. (0-0-4) Offered fall semester of odd-numbered years. Prerequisite: BMS 422 or concurrent registration. Credits: 2

**BMS 426 - Sensory Systems Neuroscience: Anatomy and Physiology**

Sensory systems neuroscience investigates the five basic human sensory systems: audition, gustation, olfaction, somatosensation and vision. The anatomy and physiology of each sensory system will be covered extensively with an emphasis on signal transduction processes of the senses. Course offered winter semester. Prerequisite: BMS 251 or BMS 290. Credits: 3

**BMS 427 - Neuroanatomy**

Covers the organization of the human nervous system with emphasis on the pathways and nuclei of the central nervous system. Offered fall semester. Prerequisite: BMS 251 or BMS 290. Credits: 1

## Course Listings and Descriptions

### **BMS 428 - Neurosciences**

Covers the function of the human nervous system. Emphasis on somatosensory and somatomotor systems and the cranial nerve nuclei involved in disease. Offered spring/summer semester; winter on demand. Prerequisite: BMS 427. Credits: 3

### **BMS 431 - Medical Virology**

A study of the physical, morphological, and biochemical characteristics of viruses. Emphasis on the pathogenesis, pathology, and control mechanisms of viral diseases in people. Offered winter semester. Prerequisites: BMS 212 and CHM 241. Credits: 3

### **BMS 432 - Medical Mycology**

A study of the human mycoses with emphasis on the pathogenesis and epidemiology of fungal infections. Techniques for isolation and identification of fungi. (2-0-0) Offered fall semester. Credits: 2

### **BMS 433 - Medical Parasitology**

A study of host parasite relationships in humans. Significant human parasites and the pathogenesis and epidemiology of parasite infection. (2-0-2) Offered fall semester. Prerequisites: BMS 212 and CHM 241. Credits: 3

### **BMS 450 - Human Histology**

A lecture/laboratory course in normal human light microscopic anatomy. Students will learn the microanatomy of the primary tissue types, organs and organ systems. Includes discussion of relevant pathological conditions. (2-0-4) Offered fall semester. Prerequisite: BMS 208. Credits: 4

### **BMS 460 - Regional Human Anatomy**

A regional approach to the structure of the human body, concentrating on the interrelationships of different anatomical structures in the limbs, thorax, abdomen, pelvis, and head and neck. (2-0-4) Offered winter semester. Prerequisites: BMS 309 and permission of instructor. Credits: 4

### **BMS 466 - Dynamic Human Performance Lab**

Laboratory investigation of human performance capacities using modern techniques of measurement for dynamic assessment of anthropometric, biomechanical, physiological, pulmonary, cardiovascular, and metabolic parameters. Offered winter semester. Prerequisites: STA 215, MOV 402, MOV 404, or MOV 304. Credits: 2

### **BMS 475 - The Pathology of Aging**

A survey of the disease and functional disabilities of aging. Emphasis is placed on prevention and rehabilitation. Offered winter semester. Credits: 3

### **BMS 480 - Special Topics in the Biomedical Sciences**

Special topics not regularly offered, but of interest to students in the biomedical sciences. Courses will be listed in the class schedule. Offered fall and winter semesters. Credits: 1 to 4

### **BMS 492 - Biomedical Sciences Internship**

The internship is a work experience at a faculty supervisor-approved location appropriate for the student's chosen field of interest. Internships will be experiences of a minimum 10 hours/week/credit. Only three credit hours of BMS 492 may count toward the major. Graded credit/no credit. Offered every semester. Prerequisites: BMS 290, BMS 291; CHM 232 or CHM 461. Credits: 1 to 4

### **BMS 495 - Concepts in Wellness (Capstone)**

This biomedical sciences course will synthesize the materials students have learned from the biomedical sciences core and cognate courses and enable them to write and present professionally styled communications to an audience of their peers and instructors. (3-0-0) Offered for SWS credit. Offered fall, winter and occasionally spring/summer semesters. Prerequisites: BMS 208, BMS 212, BMS 290 or BMS 291, and senior standing. Credits: 3

### **BMS 499 - Research in the Biomedical Sciences**

Independent, supervised research in special areas of the biomedical sciences prearranged with a faculty sponsor and approved by the program chairman. May be elected for up to three hours credit toward a major in

any biomedical sciences program or, with permission, for group science or biology majors. Offered fall and winter semesters. Credits: 1 to 3

### **BMS 501 - Graduate Seminar in Biomedical Sciences**

Students will explore a variety of research topics in biomedical science through faculty presentations, attendance at departmental seminars, and presentations of thesis work by second year students. Orientation to unit and campus resources and expectations of the program will also be provided. Course offered fall semester. Prerequisite: Admission to the Master of Health Science program. Credits: 1

### **BMS 508 - Advanced Human Physiology**

Emphasis on cellular and molecular mechanisms involved in the functioning of the body systems, with emphasis on central nervous system, cardiovascular, renal, and respiratory systems. Study includes the current research literature and current experimental knowledge. Offered fall semester and occasionally winter semester. Prerequisites: BMS 290 and graduate standing. Credits: 3

### **BMS 510 - Immunology**

An introduction to the immune response, including: the properties of antigens, immunoglobulins, the theories of antibody formation, cell-mediated immunity, and hypersensitivity reactions. Prerequisites: BMS 212 and CHM 232 or CHM 461, or concurrent registration and graduate standing. Credits: 3

### **BMS 512 - Medical Bacteriology**

A study of the host-parasite relationships in bacterial disease. The theoretical basis of isolation and identification of medically important bacteria including anaerobic and newly identified pathogens will be included. Prerequisites: BMS 212 and three semesters' chemistry and graduate standing. Credits: 3

### **BMS 523 - Epidemiology**

An introduction to the study of the distribution and determinants of disease frequency in people. Offered fall semester. Prerequisites: STA 215 and graduate standing. Credits: 3

### **BMS 538 - Advanced Neuroscience**

This course will cover the normal anatomy and physiology of the human nervous system. Selected disorders of the human nervous system will also be discussed. Offered spring/summer semester. Prerequisite: Acceptance into the Doctor of Physical Therapy program. Credits: 3

### **BMS 540 - Molecular Ecology of Infectious Disease**

Molecular ecology of infectious disease provides students with instruction in the core techniques of molecular population genetics, molecular phylogenetics, molecular biology, genomics, and bioinformatics in order to answer questions dealing with the ecology and epidemiology of human pathogens. Offered winter semester. Prerequisite: Graduate standing or permission of instructor. Credits: 3

### **BMS 550 - Human Histology**

A lecture/laboratory course in normal human light microscopic anatomy. Students will learn the microanatomy of the primary tissue types, organs, and organ systems. Includes discussion of relevant pathological conditions. Prerequisite: BMS 208 or equivalent. Credits: 4

### **BMS 560 - Regional Human Anatomy**

A regional approach to the structure of the human body, concentrating on the interrelationships of different anatomical structures in the limbs, thorax, abdomen, pelvis, and head and neck. Prerequisites: BMS 208 and BMS 309 or equivalent anatomy courses. Credits: 4

### **BMS 561 - Prosected Regional Anatomy**

A regional approach to the gross anatomy of the human body through the use of prosected cadavers. (3-0-3) Offered fall semester. Prerequisite: Admission to the physical therapy or physician's assistant studies program. Credits: 4

### **BMS 601 - Experimental Design**

Investigation of the steps necessary to select and approach a research problem. Emphasis on the literature search, critical analysis of journal articles, and the preparation of written research proposals. Observation

and inductive and deductive reasoning will be discussed. Offered fall semester. Credits: 3

**BMS 608 - Pathologic Physiology**

A study of the disease processes in humans from the standpoint of physiologic dysfunction. Primary emphasis will be on the cardiovascular, renal, respiratory, and central nervous system. Other areas may be considered but in lesser depth. Offered winter semester and occasionally fall semester. Prerequisites: BMS 508 and graduate standing. Credits: 3

**BMS 612 - Mechanism of Microbial Pathogenicity**

Discussion of the recent advances in the pathogenicities and of infectious disease with emphasis on those caused by bacteria, parasites, and fungi. A seminar format will be used. Offered on demand. Prerequisites: BMS 412 and graduate standing. Credits: 3

**BMS 655 - Advanced Human Anatomy**

Students will complete comprehensive morphological study of selected regions of the human body. Methods include dissection, and histologic, embryologic, or pathologic approaches. Offered on demand. Prerequisites: BMS 460 and graduate standing and permission of instructor. Credits: 3

**BMS 679 - Clinical Practicum**

Experience in a field placement under a qualified supervisor. A final report and a seminar are required. Prerequisites: All other degree requirements must be completed before, or concurrent with, this course. Credits: 3 to 6

**BMS 680 - Special Topics in the Biomedical Sciences**

Supervised study and research in special areas of the biomedical sciences. Must be prearranged with a faculty sponsor. Study may result in a proposal for independent research in the same area. May be elected for a maximum of three hours credit toward degree requirements. Offered fall and winter semesters. Prerequisites: BMS 601 and a signed contract must be submitted before registration. Credits: 1 to 3

**BMS 693 - Project in Biomedical Sciences**

Definition and solution of a problem within the biomedical sciences. The problem may focus on such topics as the development of instructional processes or materials, evaluation or testing procedures and equipment, or other suitable areas of interest. Prerequisites: Completion of all other degree requirements before, or concurrent with, this course and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**BMS 695 - Master's Thesis Research**

Research in the biomedical sciences directed toward the solution of a problem that has potential implications within the field. Preparation of a formal thesis and presentation of a seminar are required during the final year of the student's program. Six credits total, minimum of three per semester. Prerequisites: Permission of program director and completion of the Responsible Conduct of Research Training within last three years. Credits: 3 or 6

**BMS 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

**BUS 101 - Introduction to Business**

Introduces the disciplines of business law, marketing, management, finance, accounting, and economics; seeks to synthesize them into a general view of business; and briefly explores business careers. Primarily for freshmen interested in business, it is open to all students except upper-division students in the Seidman College of Business. Offered fall semester. Credits: 3

**BUS 180 - Special Topics in Business**

Topics covered will reflect special interests of students and/or instructor. Offered as demand warrants. Credits: 1 to 3

**BUS 201 - Legal Environment for Business**

The legal, regulatory, and ethical environment in which business operates is explored, with emphasis on the regulation of business, international law, environmental law, ethics, the political and social factors influencing case and statutory law, contracts, employment law, and business organizations. Offered every semester. Credits: 3

**BUS 301 - International Business and Culture**

Explores how business is done in a country or region, and how culture influences business and its environment. Reviews country's history, economics, politics, government, arts or education. Explores how business practices may differ from U.S. practices. To be taught in that country as part of a study abroad program. Cross-listed with MES 301. Course offered spring/summer semester. Credits: 3

**BUS 380 - Special Topics in Business**

Topics covered will reflect special interests of the students and/or the instructor. Offered as demand warrants. Prerequisite: Permission of instructor. Credits: 1 to 3

**BUS 399 - Readings in Business**

Independent, supervised readings on specific, advanced areas of business. Must be prearranged with appropriate faculty members. May be elected for up to three hours credit toward a B.B.A. degree. Open to juniors and seniors only. Offered on sufficient demand. Credits: 1 to 3

**BUS 490 - Business Internship**

This course will be used to grant business credit to students who complete internships in business generally rather than in a specific discipline. Prerequisites: Junior standing; minimum 2.5 GPA. Graded credit/no credit. Credits: 1 to 6

**BUS 499 - Independent Research**

Independent research in the student's area of interest, supervised by a member of the Seidman faculty and culminating in a written and oral report. Written permission of instructor required. Offered each semester. Credits: 1 to 3

**BUS 531 - Legal Environment of Business**

Explorations of the legal, regulatory, and ethical environment of business, with emphasis on the regulation of business and the political and social factors influencing case and statutory law. Topics covered include contracts, employment law, international law, environmental law, and business organizations. Equivalent to BUS 201. Offered fall and winter semesters. Credits: 2

**BUS 610 - Management Information Systems and Org Processes**

This course will examine common, operational-level organizational processes to understand the nature of such processes and the role of data and management information systems (MIS) in facilitating and integrating organizational processes. In addition, the course will provide an understanding of the strategic role of information systems in organizations and responsibilities of managers to effectively manage their information resources. Offered every semester. Prerequisite: Completion of all M.B.A. background equivalents. Credits: 3

**BUS 631 - Leadership and Organizational Dynamics**

Leadership gives insight into organizational life from the perspective of the practicing manager in terms of individual, group and inter-group behavior. Course is designed to benefit persons in a variety of organizations. The goal of the course is to explore ways to achieve managerial success by becoming effective at utilizing individuals and groups as organizational resources. Special emphasis is given to assessment of personal strengths and weaknesses when dealing with situations of managerial responsibility. Offered every semester. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

**BUS 634 - Sustainability Principles and Practices**

This course, which carries 1.5 credit hours, provides an introduction to, and analysis of, the fundamental theories, concepts, principles, and practices of sustainability in the global society in which we live. Students analyze and apply theories to real-world scenarios, including to their current employers and work assignments. Offered winter semester. Prerequisite: Completion of M.B.A. background equivalents. Credits: 1.5

## Course Listings and Descriptions

### **BUS 635 - Sustainable Small Enterprises**

Fundamental theories, concepts, principles, and best practices of sustainability in the context of small enterprises. The course will examine local enterprises, clean technology start-ups, and the development of small enterprises in the developing world. Course offered every third semester. Prerequisite: Completion of all M.B.A. background equivalents. Credits: 1.5

### **BUS 644 - International Business**

A study of the international business environment within which many firms now operate. Consideration given to why firms trade internationally and/or establish a foreign base of operation. Other topics include the problems an international firm faces, such as foreign currency fluctuations and conflict with host countries. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

### **BUS 656 - Management of Technology**

Teaches technological forecasting, auditing, and strategic planning methodologies. These tools aid managers in developing and maintaining their organizational competitive competencies. Prerequisite: Completion of all M.B.A. background equivalents. Credits: 3

### **BUS 671 - Global Competitiveness**

Explores how firms become global and how they sustain their global position. For many firms, selling in home markets no longer guarantees success. Internationalization forces affect firms' ability to establish and conduct business in foreign markets. Covers knowledge and skills needed to manage firms operating in foreign business environments, and to work effectively with people of other cultures. Offered fall and winter semesters. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

### **BUS 677 - Business Ethical Problems and Perspectives**

The study of ethical problems commonly encountered in modern global business environments. Students will study the ethical issues of character, leadership, decision-making, organizational governance and social responsibility. Prerequisite: Completion of M.B.A. background equivalents. Credits: 1.5

### **BUS 680 - Special Topics in Business**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Prerequisite: Admitted SCB or permit. Credits: 1 to 4

### **BUS 681 - Strategy**

Focuses on the job of the general manager in formulating and implementing short- and long-run business strategy. An integrative course that draws on knowledge and skills acquired in other courses. Offered fall and winter semesters. Prerequisite: Completion of all other core courses or concurrently if taken in final semester. Credits: 3

### **BUS 685 - Study Abroad**

This course helps students prepare for, and complete, a study abroad experience. Students will research the social, cultural, and business environments of their destinations and assess and develop their global leadership skills. The study abroad experience provides first hand observation of the complexities firms face when conducting business internationally. Offered winter semester. Prerequisite: Admission to the FIMBA or M.B.A. program. Credits: 3

### **BUS 698 - Washington Program**

Special intensive study in Washington, D.C., for one week during the summer. Principle topics are policy development in the executive branch, government regulation, Congress (interest groups) lobbying, and domestic and international economic policy issues. Open to graduate students. Special application forms available in the M.B.A. office. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

### **BUS 699 - Independent Study**

Independent research in the student's area of interest, supervised by a member of the Seidman faculty and culminating in a written and oral report. Written permission of supervising faculty required. Credits: 1 to 3

### **CAP 105 - Technology in Public Relations and Advertising**

This course familiarizes students with the technologies currently used in the public relations and advertising professions. Emphasis is on working with technical specialists including graphic designers, photographers, videographers, and website developers. Students learn technology terminology and gain hands-on experience with a variety of technical software and equipment. Offered fall and winter semesters. Credits: 3

### **CAP 115 - Research Basics for Advertising and Public Relations**

This course presents the basic techniques for finding, collecting, evaluating, and using primary data and secondary information relevant to solving communication problems. Explores library resources, search engines, government and commercial websites, corporate documents, and databases. Includes citation formats and presentation methods. Offered fall and winter semesters. Credits: 3

### **CAP 209 - Advertising Basics**

Presents the basics of advertising, including its socioeconomic role, the function and operation of advertising departments and agencies, the creative process, and media characteristics. (Does not count as credit towards the advertising and public relations major or minor). Course offered fall and winter semesters. Prerequisite: WRT 150 with a grade of C (not C-) or better. Credits: 3

### **CAP 210 - Fundamentals of Advertising**

Basic principles of advertising, including its socioeconomic role; the function and operation of client advertising departments and the advertising agency; application of research, budgeting, and the creative process; media characteristics and media selection. Offered every semester. Prerequisites: CAP 105, CAP 115, and WRT 150 with grade of C (not C-) or better. Restricted to advertising and public relations majors and minors. Credits: 3

### **CAP 219 - Public Relations Basics**

Covers the basic principles of PR, its role in society, the places public relations is practiced, and specific applications, including identifying publics, campaigns, and evaluation. (Does not count as credit toward Advertising and Public Relations major or minor.) Course offered fall and winter semesters. Prerequisite: WRT 150 with grade of C (not C-) or better. Credits: 3

### **CAP 220 - Fundamentals of Public Relations**

Basic principles covering the role of public relations in society, public relations principles and their application, procedures for planning and implementing public relations campaigns, the identification of publics and the strategies for influencing them. Course offered every semester. Prerequisites: CAP 105, CAP 115, and WRT 150 with grade of C (not C-) or better. Restricted to advertising and public relations majors and minors. Credits: 3

### **CAP 305 - Sports Promotion**

Deals with the promotion and sponsorship of sports and the active lifestyle industry, including corporate motivation and involvement. Studies the effect of media on sports through critical analysis. Emphasis is placed on defining and applying communication theory, concepts and strategies. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **CAP 310 - Advertising Management and Cases**

Management and direction of the advertising function as viewed and practiced by the client advertising manager, the advertising agency, and the media. Analysis of actual cases and presentation of findings and recommendations. Offered fall and winter semesters. Prerequisite: CAP 210. Credits: 3

### **CAP 315 - Advertising Copywriting**

Practice in the copywriting process, from conception of ideas to finished copy for product and corporate advertising objectives. Offered fall and winter semesters. Credits: 3

### **CAP 320 - Public Relations Management and Cases**

The public relations function viewed from the management, consultant, and employee positions through use of text material and case studies. Offered fall and winter semesters. Prerequisite: CAP 220. Credits: 3

**CAP 321 - Media Relations Writing**

This course prepares public relations students with both knowledge and practice of writing skills used in the public relations profession, with special emphasis on media relations. Students will learn how the news media work in different settings, and how media relations fits into the broader public relations program. Offered fall and winter semesters. Prerequisite: CMJ 256. Credits: 3

**CAP 325 - Advertising and Public Relations Ethics and Law**

Examination of ethical principles and key categories of law as applied specifically to the advertising and public relations professions. The course includes an overview of classical ethical viewpoints and applications to the contemporary practice. Key legal concepts and cases relevant to advertising and public relations are also discussed. Course offered fall and winter semesters. Prerequisites: CAP 210 and CAP 220. Credits: 3

**CAP 380 - Special Topics in Advertising and Public Relations**

A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. May be repeated for credit when content varies. Offered on sufficient demand. Prerequisite: Sophomore standing. Credits: 3

**CAP 399 - Independent Study in Advertising/Public Relations**

Individually designed learning projects. Offered every semester. Prerequisites: Advertising/public relations major, junior status, and permission of advisor. Credits: 1 to 6

**CAP 413 - Media Planning**

Methods of analyzing and evaluating media, selection of media for target audiences, consideration of budget factors, and preparation of media plans. Offered fall and winter semesters. Prerequisites: CAP 210 and CAP 220 or permission of instructor. Credits: 3

**CAP 423 - Writing Corporate Communications**

An advanced writing course on the research, development, and preparation of corporate communications. Uses desktop publishing. Includes brochures, annual reports, employee newsletters, executive speeches, position papers, backgrounders, corporate memos, customer letters, and crisis communications. Offered fall and winter semesters. Credits: 3

**CAP 425 - International Advertising and Public Relations**

Addresses the key issues that advertising and public relations practitioners must keep in mind to create effective communication programs for foreign markets: cultural norms and values, political environments, economic policies, legal considerations, and social contexts. Offered winter semester of odd-numbered years. Prerequisite: CAP 310 or CAP 320. Credits: 3

**CAP 490 - Internship in Advertising/Public Relations**

Practical work-study involving supervised on-the-job experience in advertising and public relations. Offered every semester. Prerequisites: Advertising/public relations major, junior status, and permission of advisor. Credits: 1 to 6

**CAP 495 - Advertising and Public Relations Campaign**

Planning and presentation of a response to an advertising/public relations problem or objective of an actual organization. Includes liaison with the client organization throughout the semester and presentation to the client at the conclusion of the semester's work. Offered fall and winter semesters. Prerequisites: CAP 310 or CAP 320; senior standing. Credits: 3

**CBR 485 - Audio Production III**

Microphone use, mixing, and editing. Final project is an eight-track mix-down. The class uses the facilities of a professional recording studio. Offered fall semester. Prerequisite: CBR 382. Credits: 3

**CBR 490 - Internship in Broadcasting**

A supervised work experience in an area of a student's potential career interest. Initiated by the student, who plans the work experience with the advisor, the faculty sponsor chosen to supervise the internship, and the supervisor at the worksite. Credit is awarded only when the student, the faculty sponsor and the work supervisor have completed evaluations of the internship. Offered every semester. Credits: 1 to 6

**CD 501 - Emerging Professional Practice Issues in Clinical Dietetics**

This course will emphasize emerging professional practice issues in clinical dietetics. It will provide the application of ethical practice, critical thinking, and advocacy to current practice dilemmas. The course will stress the responsibilities of dietetic professionals and describe their interaction in an interdisciplinary health care delivery system. Course offered winter semester. Prerequisite: Admission to the clinical dietetic program. Credits: 2

**CD 505 - Health Care Regulation and Policy in Dietetic Practice**

This thematic course will focus on social determinants and environment of health, health policies and politics in the United States, and the organization, regulation and financing of health services as it relates to the practice of clinical dietetics. Course offered winter semester. Prerequisite: Admission to the clinical dietetics program. Credits: 2

**CD 510 - Nutritional Assessment**

This class provides lecture and laboratory experience in anthropometric, biochemical, and dietary nutrition assessment techniques of individuals and populations. Students will utilize the human performance lab, simulation lab, medical laboratory science lab, and computer lab to augment hybrid lecture and discussion. Course offered winter semester. Prerequisite: Admission to the clinical dietetics program. Credits: 3

**CD 516 - Food and Culinary Science**

This course provides content related to the operation and management of therapeutic food service systems. Experiential and didactic learning will equip the student to better understand the role of palatable food production and service in clinical dietetics. Topics include basic management principles, food regulations, menu analysis, and sensory testing. Prerequisite: Admission to the clinical dietetics program. Credits: 4

**CD 520 - Supervised Practice: Food Management Systems**

This course provides hands-on experiential learning in a variety of food service delivery systems. Students will rotate through several different food systems during this class including acute care, long term care, schools, or community feeding programs. Each placement will address specifically assigned competencies. Course offered winter semester. Prerequisite: Admission to the clinical dietetics program. Corequisite: CD 516. Credits: 3

**CD 530 - Supervised Practice: Community Nutrition I**

This course provides experiential learning in a variety of community settings such as gleaning and food recycling, community health centers, food hubs and pantries, WIC, health departments, and other community programs with a nutrition component. Course offered spring/summer semester. Prerequisite: Admission to the clinical dietetics program. Corequisite: CD 560. Credits: 3

**CD 550 - Food, Culture and the Health Environment**

The purpose of this course is to expose students directly to the role of food in culture, society, environment, and economy through readings and hands-on engagement with world foods and food issues as they pertain to clinical dietetics. Course offered fall semester. Prerequisite: Admission to the clinical dietetics program. Credits: 2

**CD 560 - Advanced Nutrition Education, Counseling, and Coaching**

This course will provide a science-based application of learning, motivation and behavioral change theories as they pertain to informal education, counseling, and coaching for the dietetic pre-professional. A variety of communication strategies will be implemented to facilitate healthy nutrition and behavior change. Course offered spring/summer semester. Prerequisite: Admission to clinical dietetics program. Credits: 2

**CD 600 - Advanced Medical Nutritional Therapy I**

This course will apply the nutrition care process to a variety of disease states including pathology of the neurological, gastrointestinal, cardiovascular, hormonal, and renal systems. Course offered spring/summer semester. Prerequisites: Admission to the clinical dietetics program and CD 510. Credits: 3

## Course Listings and Descriptions

### CD 610 - Advanced Medical Nutritional Therapy II

This course will apply the nutrition care process to a variety of disease states including pathology of the liver, pancreas, and the immune system, terminally ill, artificial feeding across the lifespan, inheritable diseases and epigenetics, burns and wounds, obesity, and special needs of the acute and chronically ill pediatric patient. Course offered each semester. Prerequisites: Admission to the clinical dietetics program and CD 600. Credits: 3

### CD 620 - Micronutrient Metabolism and Genetic Considerations in Clinical Dietetics

This course will present evidence based research to help understand the complex effects of diet on health. Using a nutritional genomics model, students will learn how nutrients affect gene expression, how nutrients and genes interact through metabolic pathways, and how nutrients affect the process of aging and disease. Course offered spring/summer semester. Prerequisites: Admission to the clinical dietetics program and CD 610. Credits: 3

### CD 625 - Supervised Practice: Clinical Nutrition I

This course provides hands-on experiential learning in a variety of chronic and acute settings. Students will complete competency standards in large/regional medical centers, community hospitals, dialysis centers, cardiac rehabilitation/heart centers, and skilled nursing facilities. Course offered fall semester. Prerequisite: Admission to the clinical dietetics program. Corequisite: CD 610. Credits: 5

### CD 630 - Supervised Practice: Community Nutrition II

This course provides hands-on experiential learning focusing on program planning, implementation, and assessment of diverse age groups and disease states in the community setting. Sixty hours of the 120 total hours of supervised practice rotation may be taken outside of the U.S. Course offered fall semester. Prerequisites: Admission to the clinical dietetics program, CD 530, CD 560, and CD 600. Credits: 2

### CD 640 - Supervised Practice: Clinical Nutrition II

This course provides hands-on experiential learning in a variety of acute and chronic settings. Students will complete competency standards in large/regional medical centers, community hospitals, long term care centers, pediatric hospitals, and dialysis units. Course offered winter semester. Prerequisites: Admission to the clinical dietetics program and CD 625. Credits: 5

### CD 650 - Supervised Practice: Area of Specialization

This course provides in-depth experiential learning in a selected area of clinical dietetics and will provide students with an opportunity to implement a group or individual research project. This 120-hour rotation requires prior approval and may be taken outside of the U.S. Course offered winter semester. Prerequisites: Admission to the clinical dietetics program, CD 520, CD 630, and CD 640. Credits: 2

### CD 689 - Seminar in Clinical Dietetics

This course will provide an intensive and comprehensive review of didactic material covered in the program. This course is established to meet the mission of the program in preparing students to be master's prepared registered dietitians/nutritionists. Course offered winter semester. Prerequisites: Admission to the clinical dietetics program and approval of advisor. Credits: 1

### CD 690 - Research Methodology in Clinical Dietetics

This class provides an overview of research methods for undertaking research and program evaluation within food and nutrition organizations and systems. Students will acquire competencies in evaluating the scientific and clinical merit of published research, identify gaps in reviewed literature and use the literature review in crafting a research question. Course offered winter and spring/summer semesters. Prerequisites: Admission to the clinical dietetics program and admission by instructor permit. Credits: 1

### CD 693 - Master's Project

Application of scientific knowledge to a problem in clinical dietetics. Projects will be performed under the supervision of an approved mentor

from the sponsoring entity. A written report and public oral presentation are required. Course offered as one to three credits, with three total required. Course offered fall and winter semesters. Prerequisites: Admission to the clinical dietetics program, CD 690 (current enrollment allowed), and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 3

### CD 695 - Thesis Research in Clinical Dietetics

Original research in an area of clinical dietetics. Work will be performed under the supervision of the graduate committee chair and/or mentor. A written thesis or publication and a public oral presentation are required. Credits one to six with at least six credits required. Offered each semester. Prerequisites: Admission to the clinical dietetics program, CD 690, and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 6

### CD 696 - Continuation of Master's Thesis or Project

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### CFV 123 - Survey of Media Production Modes

Introductory course in the critical study of the various modes of film/video/animation/new media production. Examines distinctive formal elements of each mode as well as the economic and cultural context of production and reception. A prerequisite course for film and video production. Offered fall and winter semesters. Prerequisite: Restricted to film and video, communication studies, health communication, multimedia journalism, photography, advertising/public relations, and theatre majors. Credits: 3

### CFV 125 - Media Production I

Fundamentals of video production, including the techniques and the aesthetics of shooting, lighting, and editing. Emphasizes hands-on production experience, using digital video. A preadmission course for film and video production. Offered fall and winter semesters. Prerequisite: Restricted to film and video, communication studies, health communication, multimedia journalism, photography, advertising/public relations, and theatre majors. Credits: 3

### CFV 225 - Film Culture

Introductory course on film as a significant cultural form. Examines the formal elements through which films tell stories, and the kind of stories they tell in response to audience needs and desires. Focuses on how audience interaction shapes narrative filmmaking. Fulfills Foundations - Arts. Offered every semester. Credits: 3

### CFV 226 - Media Production II

The second course in the video production sequence, emphasizing the techniques and aesthetics of shooting and editing. Additional emphasis placed on concept development and production management. Offered fall and winter semesters. Prerequisite: Admission to major. Corequisite: CFV 227. Credits: 3

### CFV 227 - Digital Media Lab

Intermediate-level digital media editing lab to be taken in conjunction with CFV 226. Tutorials and workshops designed to advance editing skills in support of course-related projects and upper-level production courses within the major. Offered fall and winter semesters. Prerequisite: Admission to the major. Corequisite: CFV 226. Credits: 1

### CFV 261 - Scriptwriting I

Writing for film, video, radio, and mixed media. Writing exercises in dramatic, informational, documentary, public service announcements, and commercial formats. Offered fall and winter semesters. Prerequisite: Restricted to film/video or broadcasting majors. Credits: 3

**CFV 282 - Audio Production I**

Introduction to general principles of sound and to hardware and software of radio and other major media uses of sound. This is a production course. Offered fall, winter, and spring/summer semesters. Prerequisite: Restricted to film/video, broadcasting, communication studies, and multimedia journalism majors. Credits: 3

**CFV 321 - Fiction Filmmaking I**

This is an intermediate-level production course using class members as the production unit focusing on fiction filmmaking, including story development, production/post techniques, directing and interpretation of drama from script to screen. Offered fall and winter semesters. Prerequisites: CFV 226 and CFV 227. Credits: 3

**CFV 322 - Documentary Production I**

Working in production teams, students produce a documentary video about a substantial topic of their choice. Includes viewings and readings. Offered every year. Prerequisite: CFV 226. Credits: 3

**CFV 323 - Media Technologies**

Basic electronics theory, audio and video recording, synthesizing on audio or video signal, and signal processing. Offered fall semester. Prerequisite: CFV 226 or CBR 281; Physics 226 or 229 recommended. Credits: 3

**CFV 324 - 3D Computer Animation**

Introduction to 3D modeling and animation using computers. Students will demonstrate proficiency at basic modeling skills, surfacing, lighting, and animation. There will be consideration of how color, shape, lighting, and texture influence meaning. Work in critical analysis provides a context for the animation process. Offered winter semester. Prerequisite: Admission to the major. Credits: 3

**CFV 325 - Animation I**

An introductory course in animation filmmaking. Students will work in small groups on animation and movement exercises and will individually produce a short final film. Readings will be assigned, films will be viewed and discussed. Offered fall semester. Prerequisite: Admission to major. Credits: 3

**CFV 326 - New Media I**

An introduction to theory and practice of new media production as a means for storytelling and creative expression. Explores the practice of user-testing and participation, image manipulation and multimedia production with a focus on emerging and traditional forms of media production. Offered fall semester. Prerequisite: CFV 226. Credits: 3

**CFV 327 - Film and Video Art**

A practical examination of the elemental codes and structures of film and video. Exercises in lighting, sequencing, sound, color, and composition. Viewings and readings. Offered winter semester. Prerequisites: Admission to major and CFV 226. Credits: 3

**CFV 328 - Intermediate Film Practicum**

Explores the craft of narrative drama in motion pictures. Students with some background in film, video, and/or audio gain an understanding of the professional model of media production by assisting in the planning and shooting of a dramatic film. Offered spring/summer semester. Prerequisite: Permission of instructor. Credits: 3 or 6

**CFV 330 - Digital Post Production**

Explores conceptual issues in editing images and sound in a digital production environment. Offered fall and winter semesters. Prerequisites: Admission to major and CFV 226. Credits: 3

**CFV 348 - Film Theories**

This course will introduce various perspectives on the study of film in order to explore and explain how films generate meaning and pleasure. Students will gain an historical understanding of film, and learn to write in the language of scholarly film criticism. Offered fall and winter semesters. Prerequisite: CFV 123. Credits: 3

**CFV 362 - Scriptwriting II**

A seminar in which students work on individual scripting projects of substantial length, using class and instructor for critical analysis. Offered

fall semester. Prerequisites: Admission to the major and CFV 261.

Credits: 3

**CFV 368 - Lighting for Film and Video Productions**

The process of studio and location lighting for film and video; principles, instruments, measurement tools, filters/diffusers, single/multiple setups. Offered fall and winter semesters. Prerequisites: Admission to major and CFV 226. Credits: 3

**CFV 370 - American Cinema**

A historical survey of American cinema which examines the cultural and aesthetic significance of film as well as the changing economic and technological contexts of the U.S. film industry. Offered fall semester. Prerequisite: CFV 123. Credits: 3

**CFV 371 - History of Animation**

A global historical survey of animated film and video production that examines styles of animation, how animation techniques evolved as technology changed and the economic determinants of the production and reception of animated films. Offered fall semester of even-numbered years. Prerequisite: CFV 123. Credits: 3

**CFV 372 - History of Documentary Film**

A historical survey of nonfiction film and video that examines the theoretical context for documentary production, the varied functions and styles of documentary work, how documentary technique evolved as technology changed and the economic determinants of documentary production. Offered fall semester of odd-numbered years. Prerequisite: CFV 123. Credits: 3

**CFV 373 - Issues of Representation**

This course investigates the representation of gender, race and ethnicity, sexual orientation and identity, and class in contemporary cinema. It focuses on the role cinematic representation plays in the construction of identity and stereotypes, and ways in which film can also challenge conventional representations. Offered winter semester of odd-numbered years. Prerequisite: CFV 123. Credits: 3

**CFV 374 - Experimental Film and Video**

This course examines the international history of experimental film and video and contemporary practice within the mode. The course emphasizes the theoretical and critical analysis of significant work in its historical context. Offered winter semester of even-numbered years. Prerequisite: CFV 123. Credits: 3

**CFV 375 - World Cinema**

Explores the economic, historical, and cultural context for film production and exhibition in several countries to understand the relationship between cinema and national culture. Examines the influence and significance of films that have constituted alternatives to the Hollywood entertainment model. Close textual readings of foreign films. Offered winter semester. Prerequisite: CFV 123. Credits: 3

**CFV 376 - Latin American Cinema**

A survey of cinema in Latin America. The course will analyze representative films as works of art and examine them as cultural, historical, political, and economic products that characterize and reveal diverse perspectives from significant film producing countries in Latin America. Course is cross-listed with LAS 376. Offered fall semester. Credits: 3

**CFV 380 - Special Topics in Film and Video**

A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. May be repeated for credit when content varies. Prerequisite: Admission to major. Credits: 3

**CFV 382 - Audio Production II**

A two-part course: First, core topics that are the foundation of all audio production. Second, topics of special interest, such as radio, TV, film, music recording, and digital audio. Throughout the course, professionalism will be stressed both in the final products and in the individual performance. Offered winter and spring/summer semesters. Prerequisites: CFV 282 and restricted to film/video, broadcasting, communication studies, and multimedia journalism majors. Credits: 3

## Course Listings and Descriptions

### CFV 399 - Independent Study

An experience of an essentially scholarly and/or creative nature undertaken by a student under the supervision of one or more faculty members. Initiated by the student who has a special interest in a subject that is not available in the current curriculum. The student and the faculty sponsor agree on the scope of the study, its components, and methods of evaluation. Prerequisite: Admission to major. Credits: 1 to 6

### CFV 421 - Fiction Filmmaking II

In this advanced workshop, students will work in large production crews to produce short, dramatic fiction motion pictures from their original scripts. Offered fall and winter semesters. Prerequisites: Admission to major and CFV 321. Credits: 3

### CFV 422 - Documentary Production II

Working in production teams, students produce a documentary video about a socially significant topic of their choosing. Readings and assignments will develop an understanding of the methods for producing independent documentary and the accompanying issues commonly encountered. Offered winter semester. Prerequisites: Admission to the major and CFV 322. Credits: 3

### CFV 425 - Animation II

Continued work in animation production for character and graphic animation. Introduction to 3D computer animation and current technologies for special effects in motion pictures. Students will design, storyboard, and complete an animation project. Offered winter semester. Prerequisites: Admission to major and CFV 325. Credits: 3

### CFV 426 - New Media II

A continuation of theory and practice of new media production as a means for storytelling and creative expression. This course further expands the focus on conceptual and technical skills in emerging and traditional forms of media production. Offered winter semester. Prerequisite: CFV 326 or permission of the instructor. Credits: 3

### CFV 428 - Advanced Film Practicum

Explores the craft of narrative drama in motion pictures. At an advanced level, film students gain theoretical and practical experience in the production of a dramatic film. Students fill skilled positions on the film's crew. Offered spring/summer semester. Prerequisites: Admission to major and CFV 421. Credits: 3 or 6

### CFV 429 - Post Production Practicum

The process of audio, film, and video postproduction, emphasizing the draft/revision process. Editing will proceed in a nonlinear digital environment. Offered fall semester. Prerequisites: CFV 261 and either CFV 330 or CBR 281. Credits: 3

### CFV 470 - Producing for Clients

Students produce media solutions to meet the goals of nonprofit clients. Projects are field-tested to ensure professional-level media production standards. Offered fall semester. Prerequisites: Admission to major and one intermediate video production course (CFV 320 or higher). Credits: 3

### CFV 482 - Sound Design for Film and Video

In-depth study of recording and manipulating sound to enhance visual communications. Students sharpen their skills in adapting standard recording tools to the requirements of video/film. The class encourages critical thinking about how sounds conveys meaning and transforms the meaning of the image. Offered winter semester. Prerequisites: Admission to major and CBR 281. Credits: 3

### CFV 490 - Internship

A supervised work experience in an area of a student's potential career interest. Initiated by the student, who plans the work experience with the advisor, the faculty sponsor chosen to supervise the internship, and the supervisor at the worksite. Credit is awarded only when the student, the faculty sponsor, and the work supervisor have completed evaluations of the internship. Offered every semester. Prerequisite: Admission to the major. Credits: 1 to 6

### CFV 495 - Issues in Film and Media Arts

A culminating course in which students demonstrate their conceptual understanding and creative abilities as they relate to film and media arts. Each student completes a thesis presentation for peer critique in a public forum and prepares a portfolio of creative or scholarly work. Course offered fall and winter semesters. Prerequisites: Admission to the film and video major and senior standing. Credits: 3

### CFV 498 - Senior Thesis/Project

The senior thesis/project demonstrates both depth and sophistication in the major. Offered fall and winter semesters. Prerequisite: Admission to the major. Credits: 1 to 6

### CFV 499 - Independent Study

An independent research project of an interdisciplinary nature based on knowledge acquired in other courses, the internship experience, or courses taken in the program. The research will be in the area of the student's interest. Prerequisite: Permission of instructor. Credits: 1 to 5

### CHI 101 - Beginning Chinese I: Language and Culture

An introduction to the Chinese language. Practice in speaking, listening, reading, writing at the beginning level. Introduction of Chinese culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Offered fall semester. Credits: 4

### CHI 102 - Beginning Chinese II: Language and Culture

Continuation of CHI 101. Practice in speaking, listening, reading, writing at the beginning level. Introduction of Chinese culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Prerequisite: C (not C-) or better in CHI 101, or credit, or appropriate placement test score. Credits: 4

### CHI 180 - Special Topics in Chinese

Course content varies. Expectations of students approximate those in other 100-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

### CHI 185 - Supplementary Elementary Chinese

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### CHI 201 - Intermediate Chinese I: Language and Culture

Continuation of CHI 102. Practice in speaking, listening, reading, writing at the intermediate level. Chinese culture introduced through authentic texts and multimedia materials. Supplemented by multimedia and the Language Resource Center. Offered fall semester. Prerequisite: C (not C-) or better in CHI 102, or credit, or appropriate placement test score. Credits: 4

### CHI 202 - Intermediate Chinese II: Language and Culture

Continued practice in speaking, listening, reading, writing at the intermediate level. Chinese culture introduced through authentic texts and multimedia materials. Counts towards the Chinese minor, the East Asian studies minor, and the Chinese studies major. Fulfills World Perspectives requirement. Prerequisite: C (not C-) or better in CHI 201, or credit, or appropriate placement test score. Credits: 4

### CHI 280 - Special Topics in Chinese

Course content varies. Expectations of students approximate those in other 200-level courses. May be repeated for credit when content differs. No more than four credits can be applied to the minor or major. Offered on sufficient demand. Credits: 1 to 4

### CHI 285 - Supplementary Intermediate Chinese

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### CHI 301 - Advanced Intermediate Chinese I

This is a continuation of Intermediate Chinese II CHI 202. In this class, students continue to build vocabulary and sentence structures of Mandarin

Chinese. More importantly, students shall become more proficient in the language, both written and spoken. Offered fall semester. Prerequisite: CHI 202. Credits: 3

### **CHI 302 - Advanced Intermediate Chinese II**

This is a continuation of Advanced Intermediate Chinese I CHI 301. In this class, students continue to build vocabulary and sentence structures of Mandarin Chinese. More importantly, students shall become more proficient in the language, both written and spoken. Offered winter semester. Prerequisite: CHI 301. Credits: 3

### **CHI 321 - Ancient Chinese Culture**

Explores the beautiful and rich lifestyle of ancient China through arts, music, and literature in translation. Covers archaic times (12th century B.C.) through post Han dynasty (fifth century A.D.). Offered fall semester on demand. Credits: 3

### **CHI 322 - Classical Chinese Culture**

Explores the beautiful and rich lifestyle of classical China through art, music, and literature in translation. Covers the Sui-T'ang (sixth century A.D.) through the Ch'ing dynasty (nineteenth century). Offered winter semester on demand. Credits: 3

### **CHI 323 - Late Imperial Chinese Culture**

This course offers an overview of different components of Chinese civilization in the last three imperial dynasties: Yuan (1279-1368), Ming (1368-1644) and Qing (1644-1912). The course materials include fiction, drama, prose, poetry, biography and autobiography, and various forms of traditional arts. Fulfills Cultures - World Perspectives. Course offered winter semester of odd-numbered years. Credits: 3

### **CHI 341 - Introduction to Classical Chinese**

The classical Chinese language, also known as literary Chinese, is the doorway into the fascinating world of Chinese culture. It has been the primary form of communication for at least three thousand years. In this course, we will study the language through readings in early philosophical, historical, and poetic texts. Offered winter semester. Prerequisite: CHI 201. Credits: 3

### **CHI 351 - Practical Chinese**

Learning a language from a textbook is only the beginning of the journey to becoming proficient in that language. This course will explore the practical uses of Mandarin Chinese in such areas as different forms of mass media, advertising, nonfiction reference materials, packaging, entertainment, music and the Internet. Offered fall semester. Prerequisite: CHI 202. Credits: 3

### **CHI 380 - Special Topics in Chinese**

Offered on sufficient demand. Credits: 3

### **CHI 385 - Supplementary Advanced Intermediate Chinese**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### **CHI 386 - Chinese Culture and Society - in Taiwan**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### **CHI 387 - Chinese Culture and Society - in China**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### **CHI 399 - Independent Reading**

Offered fall and winter semesters. Credits: 1 to 4

### **CHI 480 - Special Topics in Chinese**

Course content varies. Expectations of students approximate those in other 400-level courses. May be repeated for credit when content varies. Offered on sufficient demand. Credits: 1 to 4

### **CHM 102 - Chemistry and Society**

A survey of some of the many ways in which chemistry is involved with people's day-to-day existence. This course is not applicable for a chemistry major or minor. Fulfills Foundations - Physical Sciences. (3-0-0) Offered fall and winter semesters. Credits: 3

### **CHM 109 - Introductory Chemistry**

An introductory study of general chemistry that presents the basic chemical principles and their applications. Designed for general education and students in programs that require a chemistry background but not the rigor of a full year of general chemistry. Does not count toward a chemistry major. Fulfills Foundations - Physical Sciences with a lab. (3-1-2) Offered every semester. Credits: 4

### **CHM 111 - Introduction to Green Chemistry**

Green chemistry, also known as sustainable chemistry, is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. The course presents basic concepts of green chemistry and engineering. It is not applicable for chemistry majors or minors. Fulfills Foundations - Physical Sciences. Credits: 3

### **CHM 115 - Principles of Chemistry I**

First semester in the two-semester general chemistry sequence for the sciences. Concepts of atomic structure, development of the principles of modern chemistry, connections between atomic/molecular structure and observed behavior. Students continuing with CHM 116 should take MTH 122 or 125 concurrently with CHM 115. (3-0-3). Fulfills Foundations - Physical Sciences with a lab. Offered every semester. Prerequisites: High school chemistry and MTH 110 or MTH 122 or MTH 125 or MTH 201. Credits: 4

### **CHM 116 - Principles of Chemistry II**

The second semester in the two-semester general chemistry sequence for the sciences. Builds on the theoretical foundation of CHM 115 to develop the concepts of equilibria, solubility, acids and bases, kinetics, and thermodynamics. (4-0-3) Offered every semester. Prerequisites: CHM 115 and (MTH 122 or MTH 124 or MTH 125 or equivalent by placement or exam). Credits: 5

### **CHM 180 - Special Topics in Chemistry**

Special topics for the first year in college chemistry. Offered upon sufficient demand. Prerequisite: Permission of chemistry department. Credits: 1 to 3

### **CHM 201 - Introduction to Chemical Sciences**

Introduction to chemical sciences emphasizing the descriptive approach. Lectures, demonstrations, discussions, experiments, and assignments illustrate the chemical concepts as appropriate for K-8 teaching. K-8 science classroom visits will be arranged for students who plan to teach. Other students will write a term paper as part of course requirement. Fulfills Foundations - Physical Sciences with a lab. (3-0-2) Offered fall and winter semesters. Credits: 4

### **CHM 221 - Survey of Analytical Chemistry**

Survey course on classic wet chemical and instrumental methods of analysis with a focus on practical laboratory skills. Topics include gravimetric, titrimetric, and potentiometric techniques. Basic issues concerning UV-Vis and atomic absorption spectroscopy and gas and liquid chromatography are also covered. (3-0-4) Offered every semester. Prerequisite: CHM 116 or one full year of general chemistry. Credits: 4

### **CHM 230 - Introduction to Organic and Biochemistry**

A survey of organic and biochemistry. Topics include the biologically significant classes of organic compounds and their reactions, classes of biological compounds, and the major metabolic pathways. Does not apply to a chemistry major or minor. (3-0-2) Offered fall and winter semesters. Prerequisite: CHM 109 or equivalent. Credits: 4

### **CHM 231 - Introductory Organic Chemistry**

An introduction to organic chemistry. Topics include the classes of organic compounds, reactions, synthesis, and mechanisms. Includes laboratory. (3-1-2) Offered every semester. Prerequisite: CHM 109 or CHM 116. Credits: 4

## Course Listings and Descriptions

### CHM 232 - Biological Chemistry

An introductory course in biochemistry. Topics include carbohydrates, proteins, lipids, nucleic acids, enzymes, metabolism, and protein synthesis. Includes laboratory. (3-1-2) Offered every semester.

Prerequisite: CHM 231. Credits: 4

### CHM 241 - Organic Chemistry for Life Sciences I

The first semester of a two-semester sequence of organic chemistry designed to meet the specific needs of life science students. Topics include classes of organic compounds, nomenclature, transformations and reaction mechanisms, stereochemistry, and spectroscopy. This course emphasizes the importance and application of functional group organic chemistry in living systems. (4-0-3) Offered every semester. Prerequisite: CHM 116.

Credits: 5

### CHM 242 - Organic Chemistry for Life Sciences II

A continuation of CHM 241. Topics include the nomenclature, organic transformations, mechanisms, stereochemistry, spectroscopy, and the chemistry of alcohols, carbonyls, carboxylic acid derivatives, amines, and carbohydrates. This course emphasizes the importance and application of functional group organic chemistry in living systems. (3-0-3). Offered every semester. Prerequisite: CHM 241. Credits: 4

### CHM 245 - Principles of Organic Chemistry I

A comprehensive overview of organic chemistry, focusing on nomenclature, chemical transformations (reactions), reaction energetics, and stereochemistry. In particular, this course will examine the chemistry of hydrocarbons and the use of spectroscopic techniques to determine chemical structures. A mechanistic approach in organic problem solving will be stressed. (4-0-0) Offered fall semester. Prerequisite: CHM 116.

Corequisite: CHM 246. Credits: 4

### CHM 246 - Principles of Organic Chemistry I Lab

An introduction to laboratory techniques and procedures of synthetic organic chemistry including analysis of organic compounds using modern spectroscopic techniques. (0-0-4) Offered fall semester. Prerequisite: CHM 116. Corequisite: CHM 245. Credits: 1

### CHM 247 - Principles of Organic Chemistry II

An examination of the chemistry of alkyl halides, aromatic compounds, aldehydes, ketones, carboxylic acids, and derivatives of carboxylic acids. This course will build on the principles learned in CHM 245, emphasizing reaction energetics, stereochemistry, and spectroscopic analysis of reaction products. A mechanistic approach in organic problem solving will be stressed. (3-0-0) Offered winter semester. Prerequisite: CHM 245. Corequisite: CHM 248. Credits: 3

### CHM 248 - Principles of Organic Chemistry II Lab

A continuation of CHM 246, covering laboratory techniques and procedures of synthetic organic chemistry including analysis of organic compounds using modern spectroscopic techniques. (0-0-4) Offered winter semester. Prerequisites: CHM 245 and CHM 246. Corequisite: CHM 247. Credits: 1

### CHM 273 - Principles of Inorganic Chemistry

A one-semester introduction to the basics of inorganic chemistry, through the application of descriptive models of atomic and molecular orbital theory. Students will be taken through a progression of structural topics, including molecular and extended solids, with a focus on d-block, and transition metal chemistry. Three hours of lecture per week. Course offered fall semester. Prerequisite: CHM 116. Credits: 3

### CHM 280 - Special Topics in Chemistry

Special topics for the second year in college chemistry. Offered upon sufficient demand. Prerequisite: Permission of Chemistry Department. Credits: 1 to 3

### CHM 325 - Instrumental Analysis

The theory and application of advanced analytical instrumentation. Emphasis is given to sample preparation methodology, liquid and gas chromatography, capillary electrophoresis, atomic spectroscopy, mass spectrometry, voltammetry, and writing instruction. The laboratory experience focuses on practical utilization of analytical techniques. Three hours of lecture and three hours of lab per week. Course offered winter

semester. Prerequisites: CHM 221 or 222; WRT 150 with a grade of C or better. Credits: 4

### CHM 351 - Introduction to Physical Chemistry

A one-semester survey of the concepts of physical chemistry. Topics include the first and second laws of thermodynamics, free energy and equilibrium, kinetic theory of matter, reaction kinetics and mechanisms, and an introduction to quantum mechanics. Three hours of lecture per week. Offered fall semester. Prerequisites: CHM 116, MTH 201, and PHY 220 or PHY 230 (may be taken concurrently). Credits: 3

### CHM 352 - Applied Physical Chemistry

Laboratory experiments in physical chemistry to accompany physical chemistry lecture courses. Topics will include thermodynamics, equilibrium, spectroscopy, and kinetics. Three hours of lab per week. Prerequisites: CHM 351 or CHM 358 (may be taken concurrently). Credits: 1

### CHM 356 - Physical Chemistry I

Introduction to the mathematical-physical interpretation of chemical theory. Topics include quantum mechanics, atomic and molecular structure, spectroscopy, and chemical kinetics. (3-1-0) Offered fall semester. Prerequisites: CHM 116, MTH 202, and PHY 230. Credits: 3

### CHM 358 - Physical Chemistry II

Study of the mathematical-physical interpretation of chemical theory. Topics include kinetic-molecular theory of gases, thermodynamics, and statistical mechanics. (3-0-0) Offered winter semester. Prerequisites: CHM 356 and PHY 231 (may be taken concurrently). Credits: 3

### CHM 380 - Special Topics in Chemistry

Special topics for the third year in college chemistry. Offered upon sufficient demand. Prerequisite: Permission of chemistry department. Credits: 1 to 3

### CHM 391 - Chemistry Seminar I

Preparation and presentation of a short seminar based on a paper from the primary chemical literature, and observations of both student and external speakers. Class presentation and discussion of literature search techniques, professional development for chemists, laboratory safety practices, career opportunities, and job search skills. Offered fall and winter semesters. Prerequisites: 18 credits of chemistry, junior status, chemistry major or biochemistry major or chemistry minor. Credits: 1

### CHM 399 - Readings in Chemistry

Independent supervised reading in selected topics or supervised independent laboratory work in chemistry. The topics, hours, and amount of credit must be arranged with a faculty member and approved by the department chairman before registration. May be taken for a maximum of four credits. Offered on demand. Credits: 1 or 2

### CHM 419 - Chemistry in Secondary Education

Expands the perspectives on the teaching of specific topics in an introductory chemistry course. Emphasis on lecture demonstrations, laboratory experiments, computer applications, lab safety and stockroom management. Three hours of lecture per week. Offered winter semester. Prerequisites: Chemistry major or minor, teacher certification candidate, and 18 credits in chemistry. Credits: 3

### CHM 421 - Green Chemistry for Sustainable Environment

Practical aspects of environmental and health issues are discussed following the principles of green chemistry. Environmental chemistry methods, application of green chemistry, benign design, and lifecycle analysis, through experimental design secure fundamental understanding of methodologies used in environmental laboratories and applications of green chemistry. Three hours of lecture per week. Course offered fall semester. Prerequisite: One of CHM 231, CHM 242, or CHM 247. Credits: 3

### CHM 427 - Green and Environmental Chemistry Laboratory

Students are exposed to the methods used in environmental chemistry analysis and the application of green chemistry principles, benign design, life cycle analysis through experimental design, practical aspects of environmental, and human health issues. A solid understanding of

methodology used in environmental laboratories and application of green chemistry is attained. Course offered winter semester. Prerequisites: CHM 221; CHM 241, or CHM 245 and CHM 246. Credits: 3

#### **CHM 441 - Advanced Topics in Organic Chemistry**

Advanced topics in organic chemistry selected from current examples in the scientific literature including reactions, mechanisms, and synthetic methods. Three hours of lecture per week. Prerequisite: CHM 242 or CHM 247. Credits: 3

#### **CHM 442 - Synthetic Polymers: Life Cycle and Emerging Sustainable Technologies**

Synthetic and analytical approaches to polymer and materials development using the principles of green chemistry. Coverage of how chemists incorporate principles of green chemistry and sustainable technologies into their workflow to assess the life cycles of polymers and materials. Three hours of lecture per week. Offered winter semester of even-numbered years. Prerequisite: CHM 242 or CHM 247. Credits: 3

#### **CHM 447 - Organic Synthesis and Characterization**

Advanced techniques in organic chemistry, including the synthesis and characterization of organic compounds. One hour of lecture and five hours of lab per week. Course offered fall semester. Prerequisites: CHM 242; or CHM 247 and CHM 248. Credits: 3

#### **CHM 457 - Advanced Physical and Instrumental Chemistry Laboratory**

Advanced laboratory experiments in physical and analytical chemistry. Topics include chemical and physical equilibrium, chemical kinetics, spectroscopy and molecular structure, experimental design, and instrumental analysis. One hour of lecture and four hours of lab per week. Course offered fall semester. Prerequisites: CHM 221 and CHM 352. Credits: 3

#### **CHM 461 - Biochemistry I**

Structure and function of biological compounds, bioenergetics, intermediary metabolism, and protein synthesis. (4-0-0) Offered every semester. Prerequisite: CHM 242, CHM 247, or CHM 248. Credits: 4

#### **CHM 462 - Techniques in Biochemistry**

Laboratory experiments and lectures covering techniques used in modern biochemical research. One hour of lecture and six hours of lab per week. Offered fall and winter semesters. Prerequisite: CHM 461. Credits: 3

#### **CHM 463 - Biochemistry II**

A continuation of CHM 461. An in-depth coverage of advanced and recent topics in biochemistry, which may include amino acid, lipid, nucleotide metabolism, nucleic acid structure and function, and the control of biochemical processes at the protein and gene level. Three hours of lecture per week. Offered winter semester. Prerequisites: CHM 461 and BIO 120. Credits: 3

#### **CHM 471 - Advanced Inorganic Chemistry**

A graduate-prep lecture course covering topics in inorganic chemistry, including chemical applications of group theory (molecular orbital analysis and symmetry selection rules), advanced topics in transition-metal chemistry, and a survey of organometallic synthesis and mechanisms. Three hours of lecture per week. Offered fall semester. Prerequisites: CHM 242 or CHM 248; CHM 273; CHM 351 or CHM 356 (CHM 351 or CHM 356 may be taken concurrently). Credits: 3

#### **CHM 475 - Electrochemistry**

This course introduces the basic concepts of electrochemistry. Course content builds upon chemical reactivity to include electron transfer and electromotive force. Topics focus on electroanalytical methods, energy storage electrochemistry, and chemical / electrical energy conversion. Applications to advanced energy systems will also be discussed. Cross-listed with CHM 575. Course offered winter semester of odd numbered years. Prerequisites: CHM 115 and one of PHY 221, PHY 231, or PHY 234; or permission of instructor. Credits: 3

#### **CHM 477 - Synthetic Inorganic Chemistry**

A laboratory and lecture course extending student experience from organic chemistry to air-free handling techniques in chemical synthesis, structural

analysis, and methods unique to the synthesis and characterization of inorganic and organometallic compounds. One hour of lecture and five hours of lab per week. Course offered winter semester. Prerequisites: CHM 273 or CHM 471; CHM 242 or CHM 248. Credits: 3

#### **CHM 480 - Special Topics in Chemistry**

Special topics for the fourth year in college chemistry. Offered upon sufficient demand. Prerequisite: Permission of Chemistry Department. Credits: 1 to 3

#### **CHM 490 - Chemistry Laboratory Internship**

Practical on-the-job training and independent study in specialized areas of chemistry. Offered on demand. Prerequisites: Chemistry major with a minimum of 20 hours in chemistry and permission of instructor. Can be taken for a maximum of four credits. Credits: 1 to 4

#### **CHM 491 - Chemistry Seminar II**

Invited speaker and student presentation of topics from current chemical literature. Student presentations will be based on undergraduate research or a series of articles from the primary literature. Capstone for all chemistry and biochemistry majors. Offered fall and winter semesters. Prerequisites: CHM 391, senior standing, chemistry or biochemistry major. Credits: 1

#### **CHM 498 - Senior Project**

A summative research experience course designed to integrate several semesters of research into a single extensive written manuscript, or a poster presented at a regional or national scientific meeting. Offered every semester. Prerequisite: CHM 499 or permission of instructor. Credits: 1

#### **CHM 499 - Investigation Problems**

Supervised research in chemistry for junior and senior chemistry majors. Offered every semester. Prerequisite: Permission of instructor. Can be taken for a maximum of seven credits. Credits: 1 to 5

#### **CHM 575 - Electrochemistry**

This course introduces the basic concepts of electrochemistry. Course content builds upon chemical reactivity to include electron transfer and electromotive force. Topics focus on electroanalytical methods, energy storage electrochemistry, and chemical/electrical energy conversion. Applications to advanced energy systems will also be discussed. Cross-listed with CHM 475. Course offered winter semester of odd-numbered years. Prerequisite: Admission to the engineering graduate program or permission of instructor. Credits: 3

#### **CHM 580 - Special Topics in Chemistry**

Special topics appropriate for graduate study in college chemistry. Offered upon sufficient demand. Credits: 1 to 3

#### **CHS 202 - Introduction to Traditional Chinese Culture**

A broad introduction to the basic facts and fundamental characteristics that define the traditional Chinese culture before 1900, including its core traditional values, basic composition and history of Chinese written scripts, major literary works, art forms, architecture, and medicine. Offered spring/summer semester. Credits: 2

#### **CHS 203 - Introduction to Modern Chinese Culture**

A broad introduction to the basic facts and fundamental characteristics that define the modern Chinese culture after 1900, including the role of its traditional values, religious orientations, major literary works, art forms, folk customs, and life styles. Offered spring/summer semester. Credits: 2

#### **CHS 301 - Comparing Civilizations, China and Western**

An in-depth comparative study of Chinese and Western civilizations into different understandings about key aspects of human life, such as what it means to be human, how should we learn, the role and structure of family, our relation to the environment, the meaning of authority, and fundamental values. Offered spring/summer semester. Credits: 3

#### **CHS 333 - Study Abroad - Chinese Studies**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits may vary. Offered as needed. Prerequisites: Specific to course and instructor. Credits: 1 to 6

## Course Listings and Descriptions

### **CHS 380 - Special Topics in Chinese Studies**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 300-level courses. May be repeated for credit when the content varies. Credits: 1 to 9

### **CHS 495 - Advanced Topics in Chinese Studies**

Gives students the opportunity to integrate the diverse dimensions of Chinese studies from an interdisciplinary perspective. Through active reading, discussion, and production of a thesis, students will review Chinese literature and culture, historical and political trajectories, philosophical thoughts, the challenges of development and modernity, and major contemporary issues. Offered winter semester. Prerequisites: Senior standing with a major in Chinese studies. Credits: 3

### **CIS 150 - Introduction to Computing**

Basic principles of computing, including study of the major components of a computer system. Introduction to software packages such as word processors, spreadsheets, databases, and languages. (3-0-0) Offered every semester. Credits: 3

### **CIS 160 - Programming with Visual Basic**

Emphasis on problem solving, algorithms, structure, style, and object-oriented/event-driven programming. Includes subroutines, loops, arrays, debugging files, graphics, and graphical user interface. Fulfills Foundations - Mathematical Sciences. (3-0-0) Offered every semester. Prerequisite: MTH 110. Credits: 3

### **CIS 161 - Computational Science**

Computational science is the field of study concerned with using computers to analyze, model, simulate, and solve problems in various mathematical and scientific disciplines. Course offered winter semester. Prerequisite: MTH 201. Credits: 3

### **CIS 162 - Computer Science I**

Introduction to programming and computer science through lab and lecture. Simple and structured data types and program control structures. Problem analysis, algorithm design, and computer implementation using a high-level language. Offered every semester. Prerequisite: MTH 110. Credits: 4

### **CIS 163 - Computer Science II**

Intermediate object-oriented programming: inheritance, abstract classes, interfaces, and exception handling. Introduction to algorithms and data structures: basic analysis of performance using big O(), recursion, searching, sorting, linked lists, stacks, queues, and basics of trees and tree traversal algorithms. (3-0-2) Offered every semester. Prerequisites: A grade of C or better in CIS 162, and a grade of C or better in MTH 122. Credits: 4

### **CIS 180 - Special Topics in Computer Information Systems**

Readings, lectures, discussions, or labs (or any combination) in specific computer science topics at an introductory or elementary level. Offered on demand. Prerequisite: Permission of the instructor. Credits: 1 to 4

### **CIS 230 - Hardware and Software**

Principles of computer hardware and software will be presented with the theoretical underpinnings, installation, and configuration. This course provides the hardware/software technology background to enable systems development personnel to understand tradeoffs in computer architecture for effective use in a business environment including system architecture for networked systems and operating systems. (3-0-0) Offered every semester. Prerequisite: CIS 150. Credits: 3

### **CIS 231 - Problem Solving Using Spreadsheets**

An introduction to Excel spreadsheets and its use as a tool in problem solving and applications. (3-0-0) Offered fall and winter semesters. Prerequisite: MTH 110 or MTH 115 or MTH 122 or MTH 201. Credits: 3

### **CIS 233 - Concepts of Database Systems**

Introduces key concepts of relational database management systems (DBMS) and database design. Provides hands-on experience in data modeling, database implementation, and the design of graphical user interfaces (GUI) suitable for querying and managing the database. Offered fall and winter semesters. Prerequisite: CIS 150, or CIS 160, or CIS 162. Credits: 3

### **CIS 237 - Introduction to Network Management**

An introduction to practical problems in network management such as reliability, performance, security, wire-line systems, wireless systems, data communications, local and wide-area networking protocols, SNMP protocol, and SNMP-based management. Offered winter semester. Prerequisite: CIS 150. Credits: 3

### **CIS 238 - Internet Media and Programming**

Study of the technology of Internet media, including graphics, video, audio, XML, and other emerging Internet technologies. Examines advanced features of the hardware and software requirements of those media. Also covers the implementation of those technologies through Web interface development. (3-0-0) Offered fall and winter semesters. Prerequisite: CIS 160 or CIS 162. Credits: 3

### **CIS 241 - System-level Programming and Utilities**

Introduction software infrastructure underlying development of computer programs. Topics include Linux utilities, shell scripting, processes, facilities for programming, the C programming language, libraries, structures, pointers, dynamic memory management, and system calls. Course offered winter semester. Prerequisite: CIS 163. Credits: 3

### **CIS 253 - COBOL**

Introduction to the COBOL language; file management techniques; mid-range computer processing; program design, testing and implementation methodology with emphasis on structured programming. Topics include validation, reporting, file updating; tables; character manipulation; SORT and COPY statements; the Report Writer feature. (4-0-0) Offered fall and winter semesters. Prerequisite: CIS 162. Credits: 4

### **CIS 260 - Application Development in Visual Basic**

Builds on a student's knowledge of programming to explore applications designed for PCs and networks. Emphasis is placed on GUI development and accessing data in a legacy environment. Numerous programming assignments give experience using Visual Basic in a programming environment, designing interactive forms, and using objects and controls to write applications. (3-0-2) Offered fall and winter semesters. Prerequisite: CIS 162. Credits: 4

### **CIS 261 - Structured Programming in C**

An introduction to structured and modular software problem solving using C. Numerous programming assignments develop the practical skills necessary to ensure students are capable of writing, testing, debugging, and validating programs. Basic concepts in numerical methods techniques are introduced through assigned programming problems. (2-0-2) Offered fall and winter semesters. Prerequisite: MTH 201. May be taken concurrently. Credits: 3

### **CIS 263 - Data Structures and Algorithms**

Advanced data structures, including lists, trees, sets and graphs. Analysis of algorithms. Emphasis on abstract data types, their representations, and role as models in the development of computer algorithms. (3-0-0) Offered fall and winter semesters. Prerequisite: CIS 163. Credits: 3

### **CIS 280 - Special Topics in Computer Information Systems**

Readings, lectures, discussions, or labs (or any combination) in specific computer science topics. Permission of instructor required. Offered on demand. Credits: 1 to 3

### **CIS 290 - CIS Internship Preparation**

An overview of the information technology profession and preparation for the School of Computing and Information Systems internship experience. This course must be completed two semesters prior to CIS 490 Internship. Offered fall and winter semesters. Prerequisite: Admitted to CIS or INF major. Credits: 1

### **CIS 309 - Teaching Computer Science**

Emphasis on the use of the computer as an educational tool, including hardware and software selection, CAI, CMI, review of LOGO and BASIC. Discussion of social and personal issues, including legal, ethical, and economic concerns. (3-0-0) Offered winter semester of even-numbered years. Prerequisites: CIS 163 and ED 205. Credits: 3

**CIS 310 - Introduction to the Structure and Mechanics of Social Networks**

A study of networks as implemented in typical online social network sites. This course examines a) the basics of representing and analyzing networks, b) the tools for implementing and managing an online social network, and c) the techniques for discovering and exploiting valuable information that resides in networks. Part of the Information, Innovation, and Technology Issue. Course offered fall semester. Prerequisites: MTH 110 and junior standing. Credits: 3

**CIS 320 - Visualization of Data and Information**

An introduction into the broad field of visualization and provides practical skills in developing engaging visuals (e.g., infographics, mapping, 3D objects, animations, trees, graphs, illustrations, and document spaces). Design and create visual representations of quantitative and qualitative content using the breadth of visualization software that do not require technical backgrounds. Part of the Information, Innovation, and Technology Issue. Course offered winter semester. Prerequisite: Junior standing. Credits: 3

**CIS 330 - Systems Analysis and Design**

Examines the system development and modification process. Emphasizes factors for effective communication with users and interpersonal skill development. Structured and object-oriented analysis and design, use of modeling (CASE) tools, methodological life cycle and project management standards. (3-0-0) Offered fall and winter semesters. Prerequisites: CIS 162 and MGT 268. Credits: 3

**CIS 331 - Data Analysis Tools and Techniques**

A high-level spreadsheet course for users of current versions of spreadsheet programs, who will be expected to create multisheet and multifile professional spreadsheet applications. Students completing this course will be prepared to serve as in-house consultants on spreadsheet applications. (3-0-0) Offered fall semester. Prerequisites: CIS 231 and either CIS 160 or CIS 162. Credits: 3

**CIS 333 - Database Management and Implementation**

Covers information systems design and implementation within a database management system environment. Students will design and construct a physical system using database management system software to implement the logical design. Examination of the system development and modification process. Emphasis on factors for effective communication with users and interpersonal skill development. (3-0-0) Offered every semester. Prerequisites: CIS 162 or CIS 160, and MGT 268. Restrictions: Must be enrolled in Padnos College of Engineering and Computing or in the management major. Credits: 3

**CIS 335 - Data Mining**

Data mining is the application of computational techniques to the discovery of useful information in large data sets. This course will provide a hands-on study of computational methods for such knowledge discovery. Topics include clustering, classification techniques, and selected data mining software. Course offered winter semester. Prerequisites: CIS 160 or CIS 161 or CIS 162; and STA 215. Credits: 3

**CIS 337 - Network Systems Management**

Provides Information Systems students with the knowledge and skills necessary to manage the sophisticated Local Area Networks available today. It approaches the subjects of network design, installation, and management from the corporate view of networking. (2-0-2) Offered fall and winter semesters. Prerequisite: CIS 162. Credits: 3

**CIS 338 - Wide Area Network Engineering**

Course covers the technologies, equipment and protocols of the Internet. Lectures cover the design principles of WAN transport and routing protocols, Internet addresses, subnetting, and the Internet Protocol/Transmission Control Protocol. A set of laboratory experiments will provide hands-on experience with engineering a wide-area network and extensive work with routing equipment. (2-0-2) Offered fall semester. Prerequisites: CIS 237, CIS 337, or CIS 457 and admitted to CIS major. Credits: 3

**CIS 339 - IT Project Management**

A structured approach to project management, including project specifications, requirements gathering, system analysis, project budgeting, technical writing, and project implementation. Semester-long projects are developed using a programming language, a spreadsheet application, or a database management system. Offered winter semester. Prerequisites: CIS 231 and CIS 233. Credits: 3

**CIS 340 - Health Care Information Systems**

Introduces principles of information systems in health care with focus on hospitals and ambulatory care. Individuals with various backgrounds can become familiar with computer applications in medicine and the fundamentals of Electronic Health Records, medical decision making, and other aspects of health informatics. A major project integrates different aspects of informatics. (3-0-2) Offered fall semester. Prerequisites: CIS 233, CIS 333, CIS 353, or CIS 360. Credits: 3

**CIS 343 - Structure of Programming Languages**

Language definition structure. Data types and structures. Control structures and data flow. Lexical analysis and parsing. Interpretive languages. Run time considerations. Survey of programming languages. (3-0-0) Offered winter semester. Prerequisite: Admitted to CIS major. Credits: 3

**CIS 350 - Introduction to Software Engineering**

Systems development life cycle from project request through project implementation and evaluation. Systems analysis and design concepts, tools and techniques are emphasized. Traditional and structured approaches. Project management. (3-0-0) Offered fall and winter semesters. Prerequisite: CIS 163. Credits: 3

**CIS 351 - Computer Organization and Assembly Language**

Introduction to the logical structure of computers, including combinational and sequential logic, arithmetic, data paths, CPU control, caches, and basic pipelining. Introduction to assembly language including data movement, arithmetic, comparing and branching, bit manipulation, procedure calling, memory access, and implementation of high-level language constructs. (3-0-2) Course offered fall and winter semesters. Prerequisites: MTH 225, CIS 241, and (CIS major or CIS minor standing). Credits: 4

**CIS 353 - Database**

The study and application of established sound principles in the modeling, design, implementation, and manipulation of databases using industrial-strength Database Management Systems (DBMS). Key features and services offered by a typical DBMS are also introduced. Offered fall and winter semesters. Prerequisite: CIS 163. Credits: 3

**CIS 357 - Mobile Application Development**

Fundamental concepts and technologies underlying mobile application development. All aspects of developing and deploying conventional mobile applications are covered, including mobile user interfaces, location-based services, integration with social media and other cloud-based services. Also covered will be effective use of mobile analytics and privacy concerns. Offered fall semester. Prerequisite: CIS 163 or 260. Credits: 3

**CIS 358 - Information Assurance**

Introduction to security, privacy, and information assurance. Coverage will include not only security threats, attacks, and defenses, but also issues important to information assurance such as risk management, security planning, and ethical issues. Perspectives of computing professionals as well as computing users from other professions will be discussed. Part of the Information, Innovation, and Technology Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

**CIS 360 - Information Management and Science**

Introduction to information representation, modeling, storage, retrieval, processing, analysis, visualization, and science. Topics may include digital libraries, repositories, collections, metadata, databases, ontologies, vocabularies, dictionaries, and multimedia, as applied to complex and compound content at a large scale. Approaches will be discussed for

## Course Listings and Descriptions

business, medical, humanities, and scientific contexts. Course offered fall semester. Prerequisites: CIS 160 or CIS 161 or CIS 162; and STA 215 or STA 312. Credits: 3

### **CIS 365 - Artificial Intelligence**

Introduction to the concepts of artificial intelligence using the LISP programming language. Knowledge representation and problem solving applied to expert systems, natural language understanding, machine learning, and vision. (3-0-0) Offered winter of even-numbered years. Prerequisite: Admitted to CIS major. Credits: 3

### **CIS 367 - Computer Graphics**

Principles of computer graphics. I/O devices. Basic graphic primitives and attributes. Transformations: translation, scaling, and rotation. World and screen coordinates, windows and viewports, clipping. Circle drawing. Graphics and text modes. Raster graphics. Filling algorithms. 3D graphics. Hidden line/surface elimination. (3-0-0) Offered winter semester of odd-numbered years. Prerequisites: CIS 263 and admitted to CIS major. Credits: 3

### **CIS 368 - Usability Design and Evaluation**

The usability engineering design cycle. Discount usability evaluation techniques. Graphical user interface development. Technical communication skills. (3-0-0) Offered fall semester. Prerequisite: Admitted to CIS major. Credits: 3

### **CIS 371 - Web Application Programming**

The tools and techniques for developing dynamic Web applications. Topics include scripting languages, markup languages, database connectivity, Web standards and security issues. Offered winter semester. Prerequisites: CIS 260 or CIS 163; and CIS 333 or CIS 353. Credits: 3

### **CIS 375 - Wireless Networking Systems**

A multidisciplinary, hands-on oriented course that integrates topics at all layers of wireless networks and mobile systems, starting from wireless physical layer through application layer. The course emphasizes hands-on learning through experiments, case studies, and design projects. Offered every semester. Prerequisites: CIS 337 or CIS 457. Credits: 3

### **CIS 380 - Special Topics in Computer Information Systems**

Readings, lectures, discussions, or labs (or any combination) in specific computer science topics. Offered on demand. Prerequisite: CIS major standing or permission of the instructor. Credits: 1 to 4

### **CIS 399 - Independent Readings**

Hours, credit, topics, and time to be arranged with individual staff members with approval of the department. Offered fall and winter semesters. Credits: 1 to 4

### **CIS 430 - Computer and Cyber Forensics**

Introduction to the fundamental concepts of digital forensics and cybercrime. The course covers the recovery and analysis of digital evidence, addressing both legal and technical issues. Hands on labs activities use primarily open source and commercial forensics toolkits and a variety of hardware to reinforce the concepts discussed in lecture. Course offered fall and winter semesters. Prerequisite: One of CIS 237, CIS 337, CIS 457.

### **CIS 437 - Distributed Computing**

Foundations of distributed computing: modern operating systems and computer networks. Comparative discussions of commercially important OSs. Network programming paradigms, network applications, and client/server development. Laboratory exercises in network and client/server programming. (3-0-2) Offered fall and winter semesters. Prerequisites: CIS 333, CIS 337 and admitted to CIS major. Credits: 4

### **CIS 443 - Software Development Tools**

Advanced online programming, incorporating: contemporary multiplatform computing technologies, application development environments, multi-and/or cross-platform database applications, and application data integration. The course may utilize one or more representative application development environments. Offered winter semester. Prerequisites: (CIS 330 or CIS 350), and (CIS 333 or CIS 353), and admitted to CIS major. Credits: 3

### **CIS 450 - IS Project Management**

This course covers factors necessary for successful management of information systems development or enhancement projects. Both technical and behavioral aspects of project management are applied within the context of an information systems development project. (3-0-0) Offered fall semester. Prerequisites: CIS 330, CIS 333, and admitted to CIS major. Credits: 3

### **CIS 451 - Computer Architecture**

Boolean algebra, combinatorial circuits and sequential circuits. Survey of computer architecture. Organization of a RISC microprocessor: instruction set, CPU, memory hierarchy, I/O, bus and interrupts. Advanced computer architecture: pipelining, super-scalar, multiprocessors and multicomputers, software and performance issues. (3-0-2) Offered fall and winter semesters. Prerequisites: CIS 351 or EGR 326 and admitted to CIS major or EGR major standing. Credits: 3

### **CIS 452 - Operating Systems Concepts**

Fundamental operating systems concepts: processes and threads, CPU scheduling, coordination and synchronization, deadlock, memory management, input/output devices, file systems, distributed systems, protection and security. Case studies and lab exercises using modern operating systems. Offered fall and winter semesters. Prerequisites: CIS 241 and (CIS 351 or (EGR 326 and EGR major standing)). Credits: 4

### **CIS 457 - Data Communications**

An introduction to data communications techniques, particularly as applied to computer networks. Physical media and devices, data link and network protocols, and other data communications topics will be studied. (3-0-2) Offered fall and winter semesters. Prerequisites: CIS 241 and CIS major, CIS minor, or EGR major. Credits: 4

### **CIS 458 - System Security**

Learn the tools needed to protect computer systems from both inside attacks and network based attacks. Theory and applications of various techniques will be explored. (2-0-1) Offered fall semester. Prerequisites: CIS 337 or CIS 457 and admitted to CIS major. Credits: 3

### **CIS 459 - Embedded Computer Systems**

Software design issues and methodologies for real-time, embedded computer systems development. Reliability and fault-tolerance, scheduling, synchronization, concurrency, and data communications in real-time embedded systems. Real-time operating systems, embedded systems and distributed computing. Programming in a high-level, real-time language. (3-0-0) Offered spring/summer semester of even-numbered years. Prerequisites: EGR 326, CIS 350, CIS 452 and CIS 457. Credits: 3

### **CIS 460 - Management of Information Systems**

This course integrates the information needs of the organization with the technology of information systems. Administration and policy are applied to specific areas of information systems management. (3-0-0) Offered fall and winter semesters. Prerequisites: CIS 330, MGT 331, and admitted to CIS major. Credits: 3

### **CIS 461 - Compiler Design and Construction**

Basics of compiler construction. Topics include lexical analysis, grammars for programming languages, parsing algorithms, symbol table construction and management, code generation and optimization. A term project consists of writing a compiler for a specified language. (3-0-0) Offered fall semester of even-numbered years. Prerequisites: CIS 351, CIS 263, and admitted to CIS major. Credits: 3

### **CIS 463 - Information Systems Project**

Formal evaluation of a software/hardware package or of a proposed or existing system, or the analysis, design, and implementation of an application system. Formal reports and presentations required. (3-0-0) Offered fall and winter semesters. Prerequisites: CIS 450 and admitted to CIS major. Credits: 3

### **CIS 465 - Automata and Theory of Computation**

Introduction to basic mathematical models of computation and the finite representation of infinite objects. Finite automata, regular languages, nondeterminism, pushdown automata, context-free languages, Turing

machines and variants, halting problem, time complexity of algorithms, and NP-complete problems. (3-0-0) Cross-listed with MTH 465. Offered fall semester of odd-numbered years. Prerequisites: MTH 325, CIS 162 and admitted to CIS major. Credits: 3

#### **CIS 467 - Computer Science Project**

Individual or group projects using the department's laboratory facilities. (3-0-0) Offered fall and winter semesters. Prerequisites: CIS 350 and either CIS 452 or CIS 457 and admitted to CIS major. Credits: 3

#### **CIS 480 - Special Topics in Computer Information Systems**

Readings, lectures, discussions, or labs (or any combination) in specific computer science topics. Offered on demand. Prerequisites dependent upon topic selected. Permission of the instructor required. Credits: 1 to 4

#### **CIS 490 - Internship**

Internship in a computing situation with individual faculty supervision to allow students to apply academic knowledge to actual and professional experience. A minimum of 16 hours of actual fieldwork per week under the supervision of a work supervisor is required. Offered every semester. Prerequisites: CIS 290, junior status, permission of instructor. Credits: 2 to 5

#### **CIS 499 - Independent Study and Research**

Hours, credit, topics, and time to be arranged with individual staff members with approval of the department. Offered every semester. Credits: 1 to 4

#### **CIS 500 - Fundamentals of Software Practice**

Focuses on advanced programming concepts, common data structures and collections, concurrency, software modeling, searching and sorting algorithms. Elements of discrete mathematics are integrated through lectures and programming projects. Offered fall semester. Prerequisite: Admission to the CIS program. Credits: 3

#### **CIS 501 - Fundamentals of Modern Computer Systems**

Survey of the fundamental systems of computing: computer architectures, operating systems, networks, and databases. Offered winter semester. Prerequisite: Admission to the CIS program. Credits: 3

#### **CIS 611 - Introduction to Software Engineering**

Examination of traditional and alternative software development life cycles and their associated systems analysis techniques. Models for data, process, and control are related both to information required by various life cycle models and to the development of traditional and object-oriented software. (3-0-0) Offered winter semester. Prerequisite: Admission to CIS program or permission of instructor. Credits: 3

#### **CIS 612 - Requirements Specification**

Both the process and the product aspects of requirements specification are examined; the concepts are applicable to systems and to software. The advantages and limitations of several requirements specification techniques are presented. (3-0-0) Offered fall semester. Credits: 3

#### **CIS 613 - Software Testing**

Discussion of the major techniques of software testing: software technical reviews, software testing techniques, proofs of correctness, and simulation/prototyping. Concludes with guidelines on organizational implications of software verification and validation activities. (3-0-0) Offered winter semester. Credits: 3

#### **CIS 615 - Information Security Principles**

This course presents the principles of information security, and how to integrate these principles into the systems life-cycle. Coverage includes a broad overview of information security concepts, requirements, threats, vulnerabilities, and countermeasures, with an emphasis on designing for security, risk management, and security policies. Course offered fall semester. Prerequisite: Admission to the M.S.-CIS program. Credits: 3

#### **CIS 616 - Data Security and Privacy**

This course covers advanced concepts and techniques to secure data and preserve privacy in a distributed multiuser environment. Topics include applied cryptography, network security, operating system security, and privacy preserving techniques. Course offered fall and winter semesters. Prerequisite: CIS 501. Credits: 3

#### **CIS 617 - Digital Forensics and Investigations**

An introduction to the application of digital forensics principles and practices to collect, examine, analyze and preserve digital evidence in support of cyber forensics investigations in various computing systems. This course is a blended mix of lecture and hands on exercises to reinforce the concepts discussed in the lecture. Course offered every semester. Prerequisite: CIS 501. Credits: 3

#### **CIS 618 - Secure Software Engineering**

This course explores characteristics that make software secure and less vulnerable to attacks. Basic techniques for securing applications such as input validation, output encoding, memory management, race conditions, vulnerability analysis and testing, authentication, access control and secure database management will be covered in detail. Course offered fall and winter semesters. Prerequisite: CIS 500. Credits: 3

#### **CIS 622 - Software Design Methodologies**

Focuses on concepts, notations, and guiding principles for object-oriented design. Other design methods (such as structured design and data-oriented design) are discussed and compared to object-oriented design. (3-0-0) Offered winter semester. Prerequisite: CIS 500. Credits: 3

#### **CIS 623 - Graphical User Interface Design**

Topics include basic concepts, models, and methods in graphical user interface (GUI) design, as well as underlying software architectures. In addition, students will gain practical experience with a typical GUI building tool. (3-0-0) Offered fall semester. Prerequisite: CIS 500. Credits: 3

#### **CIS 635 - Knowledge Discovery and Data Mining**

A survey of computational methods for knowledge discovery in bioinformatics and medicine. Topics covered are dynamic programming (sequence alignment, BLAST search engine), Hidden Markov Models (phylogenetic trees, structure prediction), clustering and discriminations models for micro-array analysis (Gene Expression Data), selected data mining software, and working with biological databases. Offered winter semester. Prerequisite: CIS 500. Credits: 3

#### **CIS 641 - Systems Analysis and Design**

Models and techniques for the major phases of software development, with emphasis on requirements specification, design, testing, and software maintenance. Description of the roles of project management, quality assurance, and configuration management. (3-0-0) Offered fall semester. Prerequisite: Admission to CIS program or permission of instructor. Credits: 3

#### **CIS 642 - IS Project Management**

Planning, organizing, staffing, controlling, and directing information systems projects. Major emphasis on project planning, techniques and tools for monitoring and controlling projects, and teamwork and leadership issues. A term project that involves the development of a project plan for a nontrivial IS project using project management tools is required. Offered winter semester. Prerequisite: CIS 611 or CIS 641. Credits: 3

#### **CIS 643 - Information Systems Policy and Strategy**

Operational, strategic, and tactical facets of the planning cycle, with an emphasis on strategic planning, including hardware and software considerations, system migration, capacity and contingency planning, project selection and prioritization, and outsourcing, culminating in the creation of a strategic information systems plan. (3-0-0) Offered fall semester. Prerequisite: CIS 642. Credits: 3

#### **CIS 654 - Computer Networking**

Data communications and computer networking concepts, Internet architecture and protocols. Selected examples of client/server applications to introduce the functional requirements of internetworking. Basic cryptography and its applications, introduction to network security (firewalls, IPsec, VPN and SSL). (3-0-0) Offered winter semester. Prerequisites: CIS 500 and CIS 501. Credits: 3

## Course Listings and Descriptions

### **CIS 656 - Distributed Systems**

Fundamental principles of distributed systems: systems and software architectures, virtualization, code migration, threading, RPC, message-oriented middleware, multicast, distributed naming systems, DHTs, clock synchronization, logical clocks, consistency and replication, overview of distributed Web technologies, fault tolerance and security considerations. Exposure to current research topics in distributed systems, and hands-on experience building distributed systems. Offered fall semester. Prerequisites: CIS 500 and CIS 501. Credits: 3

### **CIS 657 - Mobile Application Development**

Fundamental concepts and technologies underlying mobile application development. Important aspects of developing and deploying conventional mobile applications are covered, such as mobile user interfaces, location-based services, integration with social media and other Web-based services. Effective use of mobile analytics and privacy concerns will also be covered. Offered fall semester. Prerequisites: CIS 500 and 501. Credits: 3

### **CIS 658 - Web Architectures**

Current and emerging Web-based technologies, protocols, system architectures, development frameworks, and languages. Offered winter semester. Prerequisites: CIS 500 and CIS 501. Credits: 3

### **CIS 660 - Information Management and Science**

An introduction to information modeling, retrieval, analysis, visualization, and science as applied to large-scale content. Information access and utilization within the context of commonly used management and analysis methodologies. Course offered winter semester. Prerequisite: CIS 500 or CIS 661. Credits: 3

### **CIS 661 - Introduction to Medical and Bioinformatics**

A survey of fundamental concepts of medical and bioinformatics methods and techniques involved in the integration of computer systems in medical centers and life science industries. Introduction to biomedical information systems; data representation, modeling, management and mining; systems evaluation; project management practices for biomedical decision-making. Legal and ethical considerations. Offered fall and winter semesters. Credits: 3

### **CIS 665 - Clinical Information Systems**

Historical development of clinical information systems, including hospital information systems and community health information systems. Topics covered include clinical information systems and medical informatics, components of clinical information systems, examples of clinical information systems. Offered fall semester. Prerequisite: CIS 661. Credits: 3

### **CIS 671 - Information Visualization**

Concepts of information visualization, principles in vision and perception, algorithms for building information spaces, and principles of user interface design. Case studies demonstrate information visualization used to solve specific retrieval and decision problems for biological data. Evolution of visual user interfaces and visualization tools, visual information retrieval and knowledge representation. Offered winter semester. Prerequisite: CIS 500 or CIS 661 or equivalent. Credits: 3

### **CIS 672 - Computer Systems Architecture**

Provides a general understanding of computer architecture and the logical organization of modern digital computers. CPU organization and input/output subsystem organizations are emphasized. The relationship between the computer architecture and the operating system is studied. (3-0-0) Offered on demand. Prerequisite: CIS 500. Credits: 3

### **CIS 673 - Principles of Database Design**

Techniques and tools used in the design of applications that utilize database management systems. Detailed treatment of conceptual modeling, logical and physical design, and query languages. Services provided by database management systems to the level of detail needed by application designers. Introduces students to the scope of the database field. (3-0-0) Offered fall semester. Prerequisites: CIS 500 and CIS 501. Credits: 3

### **CIS 675 - Compiler Construction**

A study of language translation and interpretation. Existing tools such as lexical analyzer generators and parser generators to facilitate compilation are introduced. A substantial programming project is required that consists of writing a small compiler. (3-0-0) Offered on demand. Prerequisite: CIS 500. Credits: 3

### **CIS 676 - Database Systems Performance**

Coverage of key database management systems features that are relevant to performance tuning. Topics include database management system (DBMS) architecture, buffer management, data storage and organization, query processing and optimization, concurrency control, recovery, and distributed and parallel database systems. (3-0-0) Offered winter semester. Prerequisite: CIS 673. Credits: 3

### **CIS 677 - High-performance Computing**

Introduction to parallel and high-performance computing. Coverage includes modern scalable parallel and distributed architectures, design and analysis of algorithms, communication and synchronization issues, software development environments, and performance evaluation. Case studies include applications in bioinformatics, evolutionary computing, data mining of biological and clinical databases, and knowledge-based systems. Offered fall semester. Prerequisite: CIS 500 or CIS 661 or equivalent. Credits: 3

### **CIS 678 - Machine Learning**

Broad introduction to machine learning computer programs that improve their performance with experience. Topics include decision trees, neural networks, statistical methods, genetic algorithms, Bayesian learning methods, explanation-based goal regression, reinforcement learning, and learning frameworks. Includes an applied machine learning component that provides exposure to established algorithms and machine learning programs. Offered winter semester. Prerequisite: CIS 500 or CIS 661 or equivalent. Credits: 3

### **CIS 679 - Advanced Topics in Database Management**

This course covers a selection of advanced topics in database management systems and their applications. Specific content and level of emphasis of each topic is determined by trends in the field and by the interests and expertise of faculty and students. (3-0-0) Offered fall semester. Prerequisite: CIS 676. Credits: 3

### **CIS 680 - Special Topics in Computer Information Systems**

Discussion of current advances in computer information systems theory, methodologies, and support systems. (3-0-0) Offered on demand. Credits: 3

### **CIS 685 - Computing Practicum**

Field-based experience designed to provide professional experience for graduate students (especially full-time international students). Each practicum must be with approval by the graduate program chair, or the director of the School of Computing and Information Systems. Offered every semester. Credits: 1

### **CIS 690 - Thesis Research Preparation**

Faculty-supervised study and research on a suitable topic in computer information systems. Offered every semester. Prerequisite: Consent of thesis advisor. Credits: 3

### **CIS 691 - Medical and Bioinformatics Capstone**

An integrative Capstone that synthesizes topics covered in medical/bioinformatics. Promotes advanced writing and broad perspectives of issues in contemporary information systems. Students will demonstrate ability to integrate concepts to a practical situation by leading discussions and presenting a paper on a current topic. Offered winter semester. Prerequisite: Completion of directed courses in medical and bioinformatics. Credits: 3

### **CIS 692 - Master's Capstone**

An integrative Capstone course that promotes synthesis of topics in at least two content areas. Seminar for students having completed all courses in two content areas. Students will demonstrate ability to apply concepts to a practical situation by leading a critical discussion and presenting a

paper on a current topic. Offered fall and winter semesters. Prerequisite: Completion of technical thread. Credits: 3

#### **CIS 693 - Master's Project**

Individual student project involving the development or evaluation of a complex software, information, or database system. Offered every semester. Prerequisites: Completion of technical thread and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

#### **CIS 695 - Master's Thesis**

Continuation of faculty supervised study and research on topic identified in CIS 690. Offered every semester. Prerequisites: Consent of Thesis Committee and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

#### **CIS 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

#### **CIS 699 - Directed Readings in Computer Science**

Independent supervised reading on selected topics in computer information systems or software engineering. Credits and topics must be prearranged with a faculty member and approved by the department. Offered every semester. Prerequisite: Consent of course advisor. Credits: 1 to 3

#### **CJ 101 - Justice and Society**

This introduction to the study of crime and justice includes theories and methodologies from a variety of social science disciplines. The course also provides an introduction to the study of social control and to the origins of crime at individual, structural, and cultural levels. Fulfills Foundations - Social and Behavioral Sciences. Offered fall and winter semesters. Credits: 3

#### **CJ 201 - Criminology**

An analysis of crime, criminal behavior, punishment, and the theories of deviancy from historical perspectives. Offered fall and winter semesters. Prerequisite: CJ 101 (may be taken concurrently). Credits: 3

#### **CJ 300 - Research Methods in Criminal Justice**

This course involves an examination of basic investigatory methods in criminal justice. Focus is on the logic and theory of criminological research, the formulation and testing of hypotheses, research design, sampling, modes of data production, and the ethics of conducting research in criminology and criminal justice. Offered fall and winter semesters. Prerequisites: STA 215, CJ or LS major, and junior standing. Credits: 3

#### **CJ 302 - Criminal Law**

The sources, specific and general elements, and limitations of modern criminal laws, and the role of criminal law in the definition and control of deviant behavior in contemporary society. Offered fall and winter semesters. Credits: 3

#### **CJ 305 - Constitutional Rights and Civil Liberties**

Survey of the nature and extent of protection of civil liberties and civil rights of the accused under the U.S. Constitution through examination of landmark Supreme Court decisions. Offered fall and winter semesters. Credits: 3

#### **CJ 311 - Criminal Investigation**

Modern police field investigative techniques in collection and preservation of physical evidence and interrogation and preparation of formal statements of witnesses and suspects. Offered fall and winter semesters. Credits: 3

#### **CJ 312 - Police Process**

Functions of law enforcement and the roles of the police in contemporary society. Study of the police from several perspectives: historical,

sociological, psychological, organizational, and political. Issues, research, and trends pertinent to law enforcement organizations. Offered fall and winter semesters. Prerequisite: CJ 201. Credits: 3

#### **CJ 315 - Principles of Security**

An in-depth analysis of the historical perspectives, current status components, and opportunities in private security. Special emphasis is placed on technology, internal and external threats, and fire prevention and safety. Offered fall semester. Credits: 3

#### **CJ 320 - Crimes Against Women**

An in-depth study of crimes committed almost exclusively against women. Such crimes include sexual harassment, rape, and certain types of murder. The course is taught within the framework of feminist theory and research. Cross-listed with WGS 320. Offered fall semester. Credits: 3

#### **CJ 325 - Criminal Justice and Human Rights**

A comparative study of criminal justice in relation to past, current, and emerging human rights claims, violations, protections and enforcement locally, regionally, nationally, and internationally. Part of the Human Rights Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

#### **CJ 330 - Correctional Process**

An examination and discussion of the American correctional process with emphasis on correctional institutions, inmate social system, institutional, and community programs and procedures, probation, parole, and contemporary issues. Offered fall and winter semesters. Prerequisite: CJ 201. Credits: 3

#### **CJ 340 - Courts Process**

An examination of the federal, state, and juvenile court systems in the United States, emphasizing comparison of civil and criminal court systems; the roles and responsibilities of the legal actors; the dynamics of courthouse justice from pretrial through postconviction processes; and historical and contemporary challenges to judicial branch authority. Offered fall and winter semesters. Prerequisite: CJ 201. Credits: 3

#### **CJ 350 - Juvenile Justice Process**

An analysis of the historical and philosophical foundations of the juvenile justice process and system. Special attention is given to legal and administrative issues, reforms, and controversies. Offered fall and winter semesters. Prerequisite: CJ 201. Credits: 3

#### **CJ 355 - Youth Culture and Crime**

The study of the emergence of youth subcultures over the course of the 20th century and its relationship to issues of crime and delinquency. Special attention will be given to the social and cultural context of youth, including the family, neighborhood, media drugs, gangs, guns, race, class, and gender roles. Offered fall and winter semesters. Credits: 3

#### **CJ 360 - Inside-Out Prison Exchange Program**

An analysis of contemporary issues in criminal justice and corrections. Class is held inside a prison and allows for interaction between GVSU students and inmates in order for them to study and learn together. Special focus is placed on topics relevant to offending and corrections. Offered fall semester. Prerequisites: CJ major or minor, CJ 330, GPA of 2.8 or above, instructor permission. Credits: 3

#### **CJ 370 - Environmental Crime and Justice**

This course examines environmental crime, the laws designed to prevent and/or mitigate it, enforcement of those laws, and the relationship between race, class, and exposure to environmental harm around the world. Offered winter semester. Prerequisite: Junior standing. Credits: 3

#### **CJ 380 - Special Topics in Criminal Justice and Legal Studies**

Focuses on topics not ordinarily dealt with in other courses. Topics will be determined by faculty interest and student request. While the course can be repeated, no more than six credits can be applied to a criminal justice or legal studies major. Offered on sufficient demand. Credits: 1 to 3

#### **CJ 399 - Independent Readings in Criminal Justice**

Independent supervised readings on selected topics not dealt with in-depth in another course. Offered every semester. Prerequisites: Junior or senior status and permission of instructor. Graded credit/no credit. Credits: 1 to 3

## Course Listings and Descriptions

### **CJ 400 - Qualitative Methods**

This course examines qualitative methods focusing primarily on participant-observation, asking questions, writing field notes, and the transformation of these primary field data into written ethnographic documents. Students will also explore unstructured and semi-structured interviewing, direct observation, open-ended survey questions, and sampling from preexisting texts. Offered fall and winter semesters. Prerequisites: CJ 300 and junior status. Credits: 3

### **CJ 405 - Terrorism**

A survey of modern domestic and international terrorism. Examines the structure and dynamics of terrorist groups, types of terrorist violence, and justification of violence. Analyses of geographical regions, religion, ideology, technology, counter measures, media, and mass destruction. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **CJ 408 - White-Collar and Corporate Crime**

An overview of the types, causes and implications of white collar and corporate crime, and examines the political, physical and financial harm caused by wayward corporations, corporate officials and employees. Emphasis is placed on ethical and legal decision-making and regulatory monitoring and control of white collar and corporate activity. Offered winter semester of even-numbered years. Prerequisite: Junior status. Credits: 3

### **CJ 411 - Community Policing**

Community policing philosophy, applications, issues, and contemporary research. Theoretical and practical aspects pertaining to the relationship between police agencies and the total community. Domestic and international community policing and problem solving models. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **CJ 415 - Law Enforcement Physical Education, Defensive Tactics and Firearms**

A required course for Michigan Law Enforcement Certification. Ninety hours to ensure that basic state requirements are met in physical education, defensive tactics, and firearms. Offered spring/summer semester. Restricted enrollment. Credits: 3

### **CJ 416 - Special Operations and Training**

The skills and knowledge essential for the law enforcement officer to function effectively and professionally in the community. The course includes a wide range of subjects including police communications, domestic complaints, and human relations. Required for law enforcement certification. Offered spring/summer semester. Restricted enrollment. Credits: 3

### **CJ 417 - Criminal Investigations II**

An advanced class in techniques and theories of all aspects of the discovery and preservation of evidence to ensure the legal admissibility of such evidence under Michigan law. Required for law enforcement certification. Offered spring/summer semester. Restricted enrollment. Credits: 3

### **CJ 418 - Patrol and Traffic Administration and Procedure**

Designed to analyze the necessity for and the theory of regulatory laws to protect life and property and to promote theories of safety. Required for law enforcement certification. Offered spring/summer semester. Restricted enrollment. Credits: 3

### **CJ 419 - Michigan Criminal Law**

A study of the basic criminal statutes of Michigan. Promotes knowledge of the regulations to control criminal behavior and deviance from the norms of society. Required for law enforcement certification. Offered spring/summer semester. Restricted enrollment. Credits: 3

### **CJ 420 - Juvenile Correctional Counseling**

This class is designed to provide education and practice strategies for establishing rapport, gathering information, conducting assessment, modifying delinquent youth's emotional state and maladaptive behaviors, assessing suicide risk, and making referrals. Specific techniques in addition to understanding specific counseling paradigms used with

resistant and delinquent youth will be explored. Offered winter semester. Prerequisite: Junior status. Credits: 3

### **CJ 442 - Victimology**

Examines patterns, current practice and trends concerning crime victims, including the role of victims in crime, their treatment by the criminal justice system, victims blaming arguments, victims decisions to report crimes and help prosecute offenders, victim assistance programs, victim compensation and restitution, and victim empowerment. Offered fall semester of even-numbered years. Prerequisite: Junior standing. Credits: 3

### **CJ 464 - Security Management**

An in-depth analysis of critical issues in the administration and supervision of private security organizations with an emphasis on the related legal issues. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### **CJ 465 - Criminal Justice Administration**

An in-depth analysis of criminal justice organizations and their respective administrative strategies. Special emphasis is placed on management, operational, and legal issues involving employees, clients, and offenders. Offered fall and winter semesters. Prerequisite: Junior status. Credits: 3

### **CJ 482 - Culture, Crime and Justice**

An exploration of the relationships between culture, crime, and justice that seeks to increase students' cultural competence in relation to the administration of justice and the justice professions. Offered fall semester. Prerequisites: CJ 201 and junior standing. Credits: 3

### **CJ 490 - Criminal Justice Internship**

Internship in local agencies with individual faculty supervision to apply academic knowledge to actual and professional experience. May be repeated for up to nine credits. Offered each semester. Prerequisites: Junior status and permission of internship coordinator. Credits: 1 to 9

### **CJ 495 - Issues in Criminal Justice (Capstone)**

A Capstone course that will entail readings and discussion on contemporary criminal justice issues, ethics, and trends resulting in a senior paper/project. Offered fall and winter semesters. Prerequisites: CJ 201 and senior status. Credits: 3

### **CJ 499 - Independent Study and Research**

An independent research project of an interdisciplinary nature based on knowledge acquired in other courses, the internship experience, or courses taken in the program. The research will be in the area of the student's interest. Offered every semester. Prerequisites: Permission of the instructor and senior standing. Graded credit/no credit. Credits: 1 to 3

### **CJ 600 - Qualitative Methodology**

This course examines qualitative methods focusing primarily on participant-observation, asking questions, writing field notes, and the transformation of these primary field data into written ethnographic documents. Students will also explore unstructured and semi-structured interviewing, direct observation, open-ended survey questions, and sampling from preexisting texts. Cross-listed with SW 693. Offered fall and winter semesters. Prerequisite: Admission to GVSU graduate program or permission of the MCJ graduate program coordinator. Credits: 3

### **CJ 601 - Criminal Justice Leadership**

Addresses visionary leadership applied to the administration of criminal justice. Includes an orientation to criminal justice graduate studies. Offered fall semester. Prerequisite: Admission to GVSU graduate program or permission of MCJ graduate program coordinator. Credits: 3

### **CJ 602 - Legal and Ethical Issues**

Provides students an opportunity to analyze the impact of constitutional, statutory, case, and administrative law on all segments of the criminal justice system. Ethical principles and professional standards are also studied. Offered fall semester of even-numbered years. Prerequisite: Admission to GVSU graduate program or permission of the MCJ graduate program coordinator. Credits: 3

### **CJ 604 - Criminal Justice Policy and Program Evaluation**

Survey of policy and program evaluation methods. Well-known criminal justice policy and program evaluation studies will be critiqued. Policy

formulated models and strategies will be studied and applied to crime control and other criminal justice problems. Offered winter semester of odd-numbered years. Prerequisite: Admission to a GVSU graduate program or permission of the MCJ graduate director. Credits: 3

#### **CJ 606 - Research Methodology and Data Analysis**

This course examines basic and advanced concepts of quantitative research methodology and data analysis. Students will become familiar with research and data analysis techniques necessary for review of criminal justice issues. Students will learn to critically evaluate research and understand how to create professional, empirical, and evaluation research proposals. Offered winter semester. Prerequisite: Admission to a CCPS graduate program. Credits: 3

#### **CJ 607 - Criminology**

This course focuses on defining crime, tracing the evolution of criminological theories, and identifying the role that theory plays in the operation of the criminal justice system. Offered fall semester of odd-numbered years. Prerequisite: Admission to GVSU graduate program or permission of MCJ graduate program coordinator. Credits: 3

#### **CJ 620 - Policing and Society**

In-depth study of past and present policing, organizational and law enforcement system development, and current issues surrounding policing in the 21st century. Offered winter semester of odd-numbered years. Prerequisite: Admission to GVSU graduate program or permission of MCJ graduate program coordinator. Credits: 3

#### **CJ 621 - Corrections and Punishment**

In-depth study of past and present philosophies and systems of punishment and corrections, as well as management philosophies and current issues surrounding corrections and punishment in the United States. Offered fall semester of even-numbered years. Prerequisite: Admission to GVSU graduate program or permission of MCJ graduate program coordinator. Credits: 3

#### **CJ 622 - Juvenile Justice Systems and Issues**

In-depth study of juvenile justice organizations, organizational and system development, management philosophies and current issues of most concern to regional and national juvenile justice executives. Offered fall semester of odd-numbered years. Prerequisite: Admission to GVSU graduate program or permission of MCJ graduate program coordinator. Credits: 3

#### **CJ 640 - Graduate Internship**

A supervised criminal justice or private security agency administrative internship. This course is required of students who have no work experience in criminal justice or private security. Those who have prior work experience may earn internship credit with advisor approval. Credit/no credit. Offered every semester. Prerequisites: Admission to CJ graduate program and permission of instructor. Credits: 3

#### **CJ 642 - Victimology**

Examines patterns, current practices and trends concerning crime victims, including the role of victims of crime, their treatment by the criminal justice system, victims-blaming arguments, victims' decisions to report crimes and help prosecute offenders, victim assistance programs, victim compensation and restitution, and victim empowerment. Offered fall semester of even-numbered years. Prerequisite: Admission to GVSU graduate program or permission of MCJ graduate program coordinator. Credits: 3

#### **CJ 680 - Special Topics in Criminal Justice and Legal Studies**

A seminar for the study of important topics not ordinarily covered in other courses. Course may be taken more than once when topic is different. Offered on sufficient demand. Prerequisite: Admission to CJ graduate program or permission of graduate director. Credits: 1 to 4

#### **CJ 685 - Criminal Justice Workshops**

One-credit workshops designed to provide students opportunities to learn from and study with people who have considerable expertise in special topics. Offered every semester. Prerequisites may be established and advisor approval is required. No more than three hours of CJ 685 may be used to meet the graduate degree requirements. Credits: 1

#### **CJ 691 - Issues in Research and Writing**

This course will focus on different writing strategies/styles necessary to advance graduate students in their academic and professional careers. This course focuses on preparing graduate students for their thesis or project. Offered winter semester. Prerequisite: Admission to a GVSU graduate program or permission of MCJ graduate director. Credits: 3

#### **CJ 693 - Criminal Justice Project**

In accordance with program policies and procedures, students will design an original project to: 1) work with an agency to address a criminal justice issue or 2) write a comprehensive overview of a body of scholarship addressing a criminal justice related issue. Formal presentation of finished product required. Prerequisites: Admission to MCJ graduate program, 18 credits of graduate coursework completed, approved committee, permission of MCJ graduate program coordinator, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

#### **CJ 695 - Criminal Justice Thesis**

Preparation of an extensive research and writing assignment under faculty supervision. Involves working with a thesis committee and formal defense of the thesis. Offered every semester. Prerequisites: Admission to MCJ graduate program, 18 credits of graduate coursework completed, permission of MCJ graduate program coordinator and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 6

#### **CJ 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

#### **CJ 699 - Directed Readings**

A library research or readings project, program proposal, research proposal, or other activity requiring extensive readings that enhance the student's knowledge. Offered every semester. Prerequisite: Admission to GVSU graduate program or permission of MCJ graduate program coordinator. Credits: 1 to 3

#### **CLA 101 - Greek and Roman Mythology**

An introduction to the gods and heroes of ancient Greek and Roman myths in their cultural and historical contexts, as well as their modern influence. Fulfills Foundations - Philosophy and Literature. Offered fall semester. Credits: 3

#### **CLA 121 - Greek Civilization**

An introduction to the major cultural accomplishments of ancient Greece from the Bronze Age through the death of Alexander the Great. Emphasis on Greek literature, art, philosophy, and political institutions both in their historical contexts and as achievements of continuing importance in the contemporary world. Fulfills Foundations - Historical Perspectives. Offered fall semester. Credits: 3

#### **CLA 131 - Introduction to Roman Civilization**

An introduction to the major accomplishments of ancient Rome from the Iron Age to Late Antiquity. The course examines significant aspects of Roman political, social and cultural life, both in their primary context and in terms of their relevance to society today. Fulfills Foundations - Historical Perspectives. Offered winter semester. Credits: 3

#### **CLA 195 - Introduction to Ancient Greece and Rome**

Introduction to the study of the breadth and variety of ancient Greek and Roman culture - including languages and literatures, art and archaeology, religious and philosophical traditions, and social and legal forms - from the Bronze Age through the late Roman Empire and early Christianity. Offered fall semester. Credits: 1

#### **CLA 201 - Classical Literature**

Great works from the ancient world in translation, selected from Homeric epics, plays of Aeschylus, Sophocles, Euripides, and Aristophanes, and

## Course Listings and Descriptions

from such other classic works as Virgil's Aeneid, the Bible, and Eastern epics such as Gilgamesh. Fulfills Foundations - Philosophy and Literature. Offered winter semester. Prerequisite: WRT 150. Credits: 3

### **CLA 250 - Classical Art and Archaeology**

Survey of the art and archaeology of the classical world from the Bronze Age through the dissolution of the Roman Empire. Emphasis on the development of the characteristic forms of classical art, the aesthetic and historical contexts of specific works, and the techniques of classical archaeology that have revealed them. Fulfills Foundations - Arts. Offered winter semester. Prerequisite: WRT 150. Credits: 3

### **CLA 301 - Re-imagining the Classics**

Study of classical authors, genres, ideas, or aspects of visual culture and the ways they have been understood, adapted, and transformed in new cultural environments of later periods. The course may consider genres such as epic, lyric, or comedy; mythology or the history of ideas; styles of architecture or painting. Part of the Globalization Issue. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **CLA 302 - The Stages of Greek and Roman Drama**

Readings of Greek and Roman tragedies and comedies by playwrights such as Sophocles, Euripides, Aristophanes, and Plautus (in English translation) will be augmented by considerations of cultural contexts, both ancient and modern global, and staging or adaptation. The dramas engage issues from competing perspectives on violence, gender, class, and justice. Part of the Globalization Issue. Offered winter semester. Prerequisites: Junior standing and WRT 150. Credits: 3

### **CLA 311 - Ancient Great Philosophers**

A study of one or several ancient great philosophers, such as the preSocratics, Plato, Aristotle, Lucretius. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. Cross-listed with PHI 311. May be repeated for credit if content differs. Offered fall and winter semesters. Prerequisite: Prior work in philosophy or classics, or permission of the instructor. Credits: 3

### **CLA 315 - Ancient Religion**

A study of the religious beliefs and practices of the ancient world, emphasizing the religious traditions of Greece, Rome, Egypt, and the Near East. Topics include views of the afterlife, temples and sanctuaries, religion in daily life, "mystery" religions, and the rise of the monotheistic religions of Judaism and Christianity. Offered fall semester. Prerequisite: WRT 150. Credits: 3

### **CLA 325 - Body, Gender, Sexuality in Antiquity**

Introduction to views about the body, gender, and sexuality in ancient Greece and Rome. Special attention is given to ancient texts that inform feminist and queer theory. Topics include ancient medicine and modern dietetics; the figure of Antigone in feminist and postcolonial literature; Greek homosexuality, Victorian Hellenism, and American law. Part of the Identity Issue. Cross-listed with WGS 325. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **CLA 350 - Issues in Classical Archaeology**

Advanced study of current issues in classical archaeology, based on multidisciplinary approaches to topics such as ethnicity, cult, technology, economy, provincial identities and imperial propaganda. Particular attention to synthesis of archaeological, art-historical, literary, and anthropological models and interpretive methods. May be repeated for credit when content varies. Offered fall semester in odd-numbered years. Prerequisite: CLA 250, or HNR 221/222. Credits: 3

### **CLA 365 - Stoicism, Identity and the Happy Life**

This course will address, through the life and thought of prominent Stoics, both the evolution of self and the development of an individual's identity from the Stoic perspective. Through readings, writing, and journaling, students will explore the significance and relevance of key Stoic ideas about identity. Part of the Identity Issue. Offered fall semester of even-numbered years. Prerequisite: Junior standing. Credits: 3

### **CLA 367 - Thinking Like a (Roman) Lawyer**

Many legal concepts we take for granted come directly from Roman law, the influence of which continues to be felt world-wide today. This course

introduces legal reasoning and analysis through a discussion-based, case-by-case approach focusing on primary sources in translation. Especially valuable for prelaw students. Part of the Human Rights Issue. Offered fall semester in odd-numbered years. Prerequisites: Junior standing and WRT 150. Credits: 3

### **CLA 380 - Special Topics in Classics**

The study of special topics or areas in Classics and the Classical Tradition not offered in the regular curriculum. May be repeated for credit when content varies. Credits: 3

### **CLA 385 - Study Abroad: Classical Civilization**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

### **CLA 395 - Research Methods in Classics**

Explores research methods in Classics, focusing both on the multidisciplinary nature of Classics and the primary methodologies employed across the discipline. Examines the ways that research questions are shaped, and the types of evidence used to address those questions, in classics and in the humanities more broadly. Offered fall semester. Credits: 2

### **CLA 415 - Museum Studies**

Examines the history of museums; the organization, operation and multiple functions of museums; their contributions to public life; and the political, legal, ethical, and other contemporary debates concerning the roles of museums as cultural institutions. Also introduces practical skills such as collections management, exhibition design, and public outreach and education. Cross-listed with HST 415. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

### **CLA 495 - Notions of the Classics (Capstone)**

A critical examination of the concepts of "the classics" and "classicism" as a context for the contemporary field of classics, emphasizing the shifting range of the terms and the different ways both they and the classical world have been and can be understood, adapted, and transformed. Required for majors. Offered winter semester. Prerequisites: Senior standing and CLA 395. Credits: 3

### **CLA 499 - Independent Study and Research**

Supervised individual research in an area of interest to the student; culminates in a research paper. Prerequisites: Junior standing and the permission of the instructor supervising the research. Credits: 1 to 3

### **CMB 150 - Biotechnology and Society**

An introduction to biotechnology, focuses on its application in, and impacts on, our society. Scientific, ethical, economic, legal, social and historical aspects of biotechnology will be covered. Class discussions and laboratory investigations of current topics including: cloning; agricultural biotechnology; genetically modified foods; stem cells; and medical biotechnology highlight the course. Fulfills Foundations - Life Sciences with a lab. Offered every semester. Credits: 4

### **CMB 250 - Introduction to Biotechnology**

Introduction to basic principles, methodologies and applications of cell and molecular biology and biotechnology. Fundamentals of microbial growth, isolation, and manipulation; DNA cloning and recombination, hybridization, transformation and electrophoresis; protein expression and analysis will be covered. Reading and discussions will address the relationship of biotechnology with ethical and policy considerations. Offered fall and winter semesters. Prerequisites: BIO 120 (or BIO 112), and CHM 116. Credits: 3

### **CMB 321 - Designing Our Future: Babies, Food, Medicine, and Biotechnology**

Issues course which introduces the concepts and theories of biotechnology, and includes an in-depth exploration of a biotechnology issue, such as designer babies, GMO food, and personalized medicine, within a group setting. Student groups will create a White Paper and lead a discussion on the biotechnology issue of their choice. Part of

the Information, Innovation, and Technology Issue. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

#### **CMB 350 - Foundations of Brewing**

Introduction to history, culture, theory and practice of brewing. Students design and brew a beer of choice. Implications of beer consumption on social, psychological and biological health are emphasized. Effects of human migration, technological advances, economics, culture and globalization on beer production are also addressed. Course offered fall and winter semester. Part of the Health Issue. Prerequisite: Junior standing. Credits: 3

#### **CMB 351 - Bioinformatics: Tools and Techniques for Life Scientists**

In the age of genomics, bioinformatics has become an integral component of all life sciences. This course will focus on practical applications of bioinformatics resources and tools for solving problems in life sciences. Major topics include biological databases, sequence analysis, molecular phylogeny, microarray data analysis, proteomics and genomics. Offered fall semester. Prerequisites: Junior standing, BIO 120 and either CMB 250 or BIO 375, or permission of instructor. Credits: 3

#### **CMB 380 - Special Topics in Cell and Molecular Biology**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

#### **CMB 405 - Cell and Molecular Biology**

Investigation of the structure and phenomena of cells at the macromolecular and cellular levels. (4-0-0) Offered each semester. Prerequisites: (BIO 375 or BIO 355) and BIO 376 and (CHM 232 or CHM 242 or CHM 247 may be taken concurrently). Credits: 4

#### **CMB 406 - Cell and Molecular Biology Laboratory**

A unified experimental approach to cell and molecular biology with emphasis on instrumentation and student initiative. Offered fall and winter semesters. Prerequisite: CMB 405 (may be taken concurrently). Credits: 2

#### **CMB 411 - Genetics of Development and Cancer**

An advanced genetics course, covering genetic mechanisms of normal and abnormal development, cancer production, and aging. Current research techniques will be highlighted. (3-0-0) Offered winter semester. Prerequisites: (BIO 375 and BIO 376) or (BIO 355 and CHM 232). Credits: 3

#### **CMB 414 - Molecular Biology of the Gene**

Explores how genes are expressed and regulated so that tasks such as differentiation, development, homeostasis, and communication are accomplished, and how this is affected by evolution and biotechnology. (3-0-0) Offered fall semester. Prerequisites: BIO 375 and BIO 376. Credits: 3

#### **CMB 426 - Nucleic Acids Laboratory**

Investigation of an original problem in molecular biology using advanced molecular laboratory techniques found in most molecular academic and biotechnology laboratories. Introduction to computer DNA sequence analysis and bioinformatics. Offered fall and winter semesters. Prerequisite: CMB 406. Credits: 3

#### **CMB 440 - Research Applications in Drosophila Genomics**

Collaborative research investigation of a contemporary genomics problem using the model organism *Drosophila*. Students participate in an inquiry-based genomics research project which includes manipulation of large data sets (such as improving sequence data from various *Drosophila* species) and computer-aided analysis of sequence data (annotating the DNA sequence). Course offered winter semester. Prerequisite: CMB 250 or BIO 355 or BIO 376. Credits: 3

#### **CMB 452 - Computational Biology**

Computational methods have expanded in scope and play a crucial role in developing quantitative models of biological systems at all levels of complexity. This course covers three groups of topics in computational structural biology: protein structure prediction, molecular simulations and structure-based drug design, focusing on sequence-structure-function relationships in biomolecules. Offered winter semester. Prerequisites:

BIO 120, CHM 115, CHM 116, (CMB 250 or CHM 461), (MTH 122, MTH 123, MTH 125) or (MTH 201, MTH 202), (PHY220, PHY 221) or (PHY 230, PHY 231) or permission of instructor. Credits: 3

#### **CMB 480 - Special Topics in Cell and Molecular Biology**

The study of special topics or areas in cell and molecular biology not offered in the regular curriculum. May be repeated for credit when content varies. Credits: 1 to 9

#### **CMB 485 - Molecular Ecology**

This course provides an in-depth exploration of the integrative field of molecular ecology which uses molecular genetic tools to study ecology and evolution. Concepts/theories are introduced in lecture and through discussion of scientific literature. Hands-on experience with analysis of genetic data is provided in computer laboratories. Cross-listed with CMB 585, BIO 485, and BIO 585. Course offered winter semester. Prerequisite: BIO 375. Credits: 3

#### **CMB 495 - Perspectives in Cell and Molecular Biology**

Students will integrate the principles learned from the CMB core and the practical experiences of their own research by critically reading and reporting from the primary literature and by discussing current issues in cellular and molecular biology. The focus of these discussion themes will change each semester. Offered winter semester. Prerequisites: CMB 499, BIO 499, BMS 499 or CHM 499. Credits: 3

#### **CMB 499 - Research in Cell and Molecular Biology**

Independent research in areas related to cell and molecular biology of special interest to the student. Research will be supervised by a CMB faculty member. Can be elected for up to six credits toward the CMB degree. Amount of credit and topic to be arranged with the supervising faculty member. Offered every semester. Prerequisites: Permission of the program director and instructor. Credits: 1 to 3

#### **CMB 501 - Scientific Communication for the Life Sciences and Professional Science Masters**

Students will discuss and practice extensively some of the most important communication skills for scientists, including preparing and delivering oral presentations and posters, writing scientific articles, participating in a scientific discussion, peer review, proper use of source materials and making the most of a scientific conference. Prerequisite: Admission to a GVSU graduate program. Credits: 3

#### **CMB 505 - Advanced Cell Biology**

Focus on current research in several areas of study, including membrane transport, signal transduction, energetics, motility, protein synthesis and transport, cell division, and evolution of eukaryotic cells. Offered winter semester. Prerequisite: Admission to a graduate program in the life sciences. Credits: 3

#### **CMB 506 - Advanced Molecular Biology**

Theory, history, techniques, and current research in selected areas of molecular biology. Topics include DNA replication, repair and recombination; control of gene expression; signal transduction; isolation, cloning, and sequencing of DNA. Offered fall semester. Prerequisite: Admission to a graduate school in the life sciences. Credits: 3

#### **CMB 551 - Bioinformatics: Tools and Techniques for Life Scientists**

In the age of genomics, bioinformatics became an integral component of all life sciences. This course will focus on practical applications of bioinformatics resources and tools for solving problems in life sciences, primarily biology. Major topics include biological databases, sequence analysis, molecular phylogeny, microarray data analysis, proteomics, and genomics. Offered fall semester. Prerequisite: Graduate standing or permission of instructor. Credits: 3

#### **CMB 552 - Advanced Computational Biology**

Computational methods play a crucial role in developing quantitative models of biological systems at all levels of complexity. This course will cover three groups of topics in computational structural biology, protein structure prediction, molecular simulations and structure-based drug design, focusing on sequence-structure-function relationships in biomolecules. Prerequisite: Graduate standing or permission of instructor. Credits: 3

## Course Listings and Descriptions

### **CMB 580 - Special Topics in Cell and Molecular Biology**

Readings, lecture, discussions, seminars, or lab experience (or any combination) on a specific topic related to cell and molecular biology. Offered on sufficient demand. Prerequisites: Variable; depends on topics. Credits: 1 to 4

### **CMB 585 - Molecular Ecology**

This course provides an in-depth exploration of the integrative field of molecular ecology which uses molecular genetic tools to study ecology and evolution. Concepts/theories are introduced in lecture and through discussion of scientific literature. Hands-on experience with analysis of genetic data is provided in computer laboratories. Cross-listed with CMB 485, BIO 485, and BIO 585. Course offered winter semester. Prerequisite: Graduate standing. Credits: 3

### **CMB 610 - Foundations of Biotechnology**

Introduction to the methods and strategies used for the manipulation of biological systems to produce food, drugs, and other products. Topics include experimental systems, gene and protein analysis, genetic engineering, recombinant DNA technology, transgenic organisms, gene therapy, and plant biotechnology. Offered winter semester. Prerequisite: Admission to a professional science master's program. Credits: 3

### **CMB 620 - Cell and Tissue Culture**

Theory and techniques of cell and tissue culture. Basic culture methods for eukaryotic and prokaryotic cells will be carried out. The application of culture methods for use in biotechnology will be stressed. Offered winter semester. Prerequisite: Admission to a graduate program in the life sciences. Credits: 2

### **CMB 626 - Advanced Nucleic Acids Laboratory**

Theory and techniques involved in manipulating DNA and RNA. Students will investigate an original problem using advanced molecular laboratory techniques practiced in most molecular academic and biotechnology laboratories. Offered winter semester. Prerequisites: Admission to a graduate program in the life sciences and successful completion of BIO 406. Credits: 3

### **CMB 680 - Special Topics in Cell and Molecular Biology**

Lectures and/or laboratory course on topics of current interest related to cell and molecular biology. Prerequisites: Variable; depends on topic. Credits: 1 to 4

### **CMB 695 - Thesis Research**

Under the guidance of a research mentor, students perform research that will lead to a publicly disseminated thesis. The thesis topic is determined by the student in consultation with the chair of his or her CMB Student Graduate Committee. The topic must be approved by the CMB Student Graduate Committee. Offered on demand. Prerequisites: Graduate status in the research emphasis of the cell and molecular biology M.S., approval of the CMB graduate program coordinator, and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 9

### **CMB 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **CMB 697 - Colloquium in Biotechnology**

A graduate colloquium in biotechnology focusing on case studies moving products from research to commercial application. Relevant technical literature is also discussed. Offered winter semester. Prerequisite or corequisite: PSM 691. Credits: 2

### **CMB 698 - Colloquium in Cell and Molecular Biology**

A graduate colloquium in cell and molecular biology focusing on some of the most recent and interesting developments in the field. Faculty and

students will lead discussions of the current literature as well as their own research. Offered winter semester. Prerequisite: CMB 695 (may be taken concurrently). Credits: 2

### **CMB 699 - Grad Research in Cell and Molecular Biology**

Independent graduate research in an area of cell and molecular biology of special interest to the student. Research will be supervised by CMB faculty. Can be elected for up to six credits toward the M.S. in CMB. Amount of credit and topic to be arranged with the supervising faculty member. Offered every semester. Prerequisite: Permit required. Credits: 1 to 6

### **CMJ 184 - Television Media Production**

Emphasis on studio and field production skills for broadcast journalism. Students will learn fundamentals of field production, development of news stories for television, and studio production specific to information programs and newscasts. Offered every semester. Prerequisite: Restricted to multimedia journalism majors or with permission from instructor. Credits: 3

### **CMJ 236 - News in Society**

News as a social phenomenon. Who decides what news is and how it is perceived, collected, stored, selected, displayed, and distributed. Analysis, criticism, and some projects. Offered fall and winter semesters. Credits: 3

### **CMJ 256 - News Reporting**

Development of skills in reporting, writing, and copy-editing for multimedia presentation. Work on developing and organizing public affairs news stories, finding information, interviewing, and writing to meet deadlines. Offered every semester. Prerequisite: WRT 150. Credits: 3

### **CMJ 260 - Multimedia Journalism Workshop**

This course is designed to provide fundamental theories and lab experience to produce multimedia news stories that combine different media formats: text, hypertext, audio, and photo. Students will learn concepts and skills necessary for developing news judgment, and gathering and production of news in changing media environments. Offered fall and winter semesters. Prerequisite: CMJ 256. Credits: 3

### **CMJ 265 - Introduction to Radio**

A survey course covering multiple aspects of radio broadcasting. Emphasis on writing, performance, production and general operations. Requires up to two-hours per week assignment at campus student radio station. This course is specifically geared toward students interested in pursuing radio internships and broadening their skills for a multimedia industry. Offered fall semester. Credits: 3

### **CMJ 284 - Broadcast News I**

Introductory course to broadcast writing and production for news. Focus on script format, writing style, developing sources, accuracy, field production, and video editing. Offered winter semester. Prerequisites: CMJ 256, CMJ 184, or permission of instructor. Credits: 3

### **CMJ 290 - Journalism History**

Readings of and about significant journalists, from the development of the printing press to the present. Ranges from statements on freedom of opinion (Milton, Mill) to classic essayists and contemporary reporters who use a variety of styles in news reports, editorials, articles, and essays. Includes the history of the African American and Native American press, and the development of journalism in radio, television, and cable. Offered fall and winter semesters. Credits: 3

### **CMJ 310 - Advanced Reporting Techniques**

This class covers numerical and quantitative concepts and skills for news reporting and writing. Students will also learn computer-assisted research and analysis techniques using software programs for news stories based on public databases, records, and information. Offered fall and winter semesters. Prerequisite: CMJ 256 or permission of instructor. Credits: 3

### **CMJ 316 - News Editing and Graphics**

How to edit and present news from a reader's point of view. Principles of rhetoric, logic, grammar, AP style, and visual communication applied to the vision, revision, and production of nonfiction news and graphics.

Analysis of criteria for editorial judgment. Offered fall and winter semesters. Prerequisite: CMJ 256 or permission of instructor. Credits: 3

### **CMJ 320 - Advanced TV Studio Production**

Advanced TV studio production techniques, building on concepts and skills developed in CBR 220. Class uses production facilities of WGUV. Offered winter semester. Credits: 3

### **CMJ 325 - Issues in Journalism**

A seminar on two troublesome areas in contemporary journalism, spanning all media of mass communication: (1) changes in journalism wrought by technology and techniques, and (2) the rights and responsibilities of the press, involving ethical and legal issues. Offered fall semester of even-numbered years. Prerequisite: Junior standing. Credits: 3

### **CMJ 364 - Feature Journalism**

Practice in feature-length articles on factual subjects. Primary emphasis is on the intersection of human-interest and public affairs reporting; the impact of government policy on people. The goal is the writing and presentation of knowledgeable and readable material for print and digital outlets. Prerequisite: CMJ 256 or permission of instructor. Credits: 3

### **CMJ 365 - Advanced Editing**

Focuses on the style and delivery components of the editing process. Methods for technical delivery of the written product, including headlines, text, photos, and captions; story and page design and packaging; working with photos and art; color considerations; and generating infographics to accompany stories. Offered winter semester. Prerequisite: CMJ 316 or permission of instructor. Credits: 3

### **CMJ 366 - Arts and Entertainment Journalism**

A workshop in writing about the arts. The focus is on presenting information about artifacts, exhibits, and performance across multimedia. Film, video, theatre, music, dance, painting, sculpture, and other arts will be subjects, depending on the particular emphasis of the semester and the interests of the students. Offered fall semester of odd-numbered years. Prerequisite: CMJ 256 or permission of instructor. Credits: 3

### **CMJ 380 - Special Topics in Multimedia Journalism**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 9

### **CMJ 384 - Broadcast News II**

Prepares students to work in electronic journalism as reporters, writers, anchors, editors, or producers. Students rotate through all aspects of the televised news process, including gathering, writing, editing, and reporting. Offered fall and winter semesters. Prerequisites: CMJ 284 and CFV 125. Credits: 3

### **CMJ 390 - Technical Writing**

The interpretation, rewriting, and editing of specialized material for professional and general readers. Students read professional journals in a scientific or technical field. Practice in analyzing, organizing and presenting multimedia information to a variety of audiences for different purposes. Assignments may include writing definitions, abstracts, and instruction guides. Offered winter semester. Prerequisite: CMJ 256 or permission of instructor. Credits: 3

### **CMJ 399 - Independent Study**

An experience of an essentially scholarly and/or creative nature undertaken by a student under the supervision of one or more faculty members. Initiated by the student who has a special interest in a subject that is not available in the current curriculum. The student and the faculty sponsor agree on the scope of the study, its components, and methods of evaluation. Offered every semester. Credits: 1 to 6

### **CMJ 460 - Multimedia Reporting**

Focus on intermediate and advanced reporting on multimedia platforms. Students will apply multimedia production skills and report news for a variety of online formats, blending text, photos, audio, video and graphics. This course will also cover hands-on training and key theoretical and professional issues of journalism arising from new technologies. Offered fall and winter semesters. Prerequisites: CMJ 184 and CMJ 260. Credits: 3

### **CMJ 481 - Investigative Reporting**

Discusses the techniques as well as the problems and pitfalls of journalistic investigation. Develops skills in investigation and reporting through the use of classroom examples and individual and team assignments. Emphasis on real-life situations and submission of articles for publication on and off campus. Offered winter semester. Prerequisite: CMJ 316 or permission of instructor. Credits: 3

### **CMJ 484 - TV News Workshop**

Intensive involvement in the TV news process, building on concepts and skills developed in Broadcast News I and II. Researching, shooting, reporting, and editing stories for weekly campus cable TV newscast. Students serve as reporters, anchors, and producers. May be repeated once for credit. Offered fall and winter semesters. Prerequisite: CMJ 384. Credits: 3

### **CMJ 490 - Internship**

A supervised work experience in an area of a student's potential career interest. Initiated by the student, who plans the work experience with the advisor, the faculty sponsor chosen to supervise the internship, and the supervisor at the worksite. Credit is awarded only when the student, the faculty sponsor, and the work supervisor have completed evaluations of the internship. Offered every semester. Graded credit/no credit. Prerequisite: Permission of internship coordinator. Credits: 3

### **COM 101 - Concepts of Communication**

An introduction to concepts and principles that are fundamental to understanding the dynamics and consequences of communication. School of Communications majors must take 101 within the first three semesters of declaring their major. Offered every semester. Credits: 3

### **COM 201 - Speech**

Focuses on oral communication. The student will examine practical programs in speech preparation, delivery, informative and persuasive strategies, and listening and responding to messages of others. Most of what a student gains from this course will come not only from reading a text but also from in-class projects, simulation exercises, and skills training. Offered every semester. Credits: 3

### **COM 202 - Critical Interpretation**

Practice in the art of reading and listening with understanding. Stresses interpretation as an activity common to the writer, speaker, reader, and listener. Fulfills Foundations - Philosophy and Literature. Offered fall and winter semesters. Credits: 3

### **COM 203 - Argument and Analysis**

Being able, in speaking or writing, to present arguments for a position and to analyze the arguments of others are skills that are basic to almost any human activity. In this course, participants will practice the skills of argument and analysis in discussing the nature of argument itself. Offered fall semester. Credits: 3

### **COM 209 - Health Communication Systems**

A general systems approach applied to understanding the interplay of individuals, institutions, audiences, purposes, and tasks relevant to the health communication professional. Offered fall and winter semesters. Prerequisite: Sophomore standing. Credits: 3

### **COM 210 - Nonverbal Communication**

Introduction to sending and receiving nonverbal messages. Theory and skill development in thinking visually: in voice and articulation, body action, artifacts, time, space, and distance, and in listening. Emphasis on interpersonal, professional and cross-culture applications. Offered fall and winter semesters. Credits: 3

### **COM 215 - Story Making**

How to create a story, scene, or image in your mind and render it in a variety of modes: oral story, written story, one-shot image told verbally, short script, previsualization for media, previsualization for dance, etc. Course includes discussion of the nature of narrative. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

## Course Listings and Descriptions

### COM 220 - Media Literacy

Introductory course in the critical study of media. Students develop the ability to access, analyze, evaluate, and critique mediated communication in a variety of forms. Particular attention to how images, sounds, and words are combined to create meaning, and the economic determinants of the media in the United States. Offered every semester. Credits: 3

### COM 271 - History of Communications Technologies

Introduces students to historical impacts communication technologies have had in shaping and sustaining civilization and modernity. Examines communicative media as extensions of the human habitat, and critically considers their social and personal consequences. At least half of the course focuses on media prior to the telegraph. Offered winter semesters. Prerequisite: COM 101. Credits: 3

### COM 275 - Foundations of Communication Research

Examination of issues and topics associated with communication research conducted by scholars and practitioners. Introduction to research areas in the discipline, library research strategies, the ethics of research, qualitative and quantitative research methodologies. Prerequisite: COM 101. Credits: 3

### COM 295 - Communication Theory

A critical survey of major theories of human communication. Analysis and application of concepts from representative primary sources to understand what they presuppose, say and imply about the nature of communication. Offered every semester. Prerequisite: COM 101. Credits: 3

### COM 301 - Interpersonal Communication

Introduces students to theory, research, and practical issues involved in interpersonal communication, including topics such as language, nonverbal expression, face-to-face interaction, self-identity, and communication ethics. Stresses how everyday talk with one another is a cornerstone of ethics and human civilization. Offered spring/summer semester. Credits: 3

### COM 302 - Small Group Communication

The study of the committee, task force, panel, and class. Weekly practice in decision-making, conflict resolution, and socialization through class discussion groups. Offered on sufficient demand. Credits: 3

### COM 303 - Debate

Instruction in techniques of argumentation and debate. Research methodology, logical analysis and argumentation, rhetorical strategies, technique of public presentation. Intercollegiate competition will not be a part of this class. Offered on sufficient demand. Prerequisite: COM 201. Credits: 3

### COM 320 - Vision and Culture

A historical survey of the evolving modes and techniques of vision, visibility, and representation in art, science, and mass media in order to examine how those modes of vision have both reflected and influenced our ways of knowing ourselves and the world. Offered fall of even-numbered years. Credits: 3

### COM 371 - Media and Society

Examines the communications environment of societies and current issues affecting media. May be repeated for credit when content differs. Offered every semester. Credits: 3

### COM 372 - Global Communications

A global focus on the relationship between media and society. The nature of global media in a world community. Varieties of media technologies, contents, and effects. How media encourage cross-cultural unity, or increase tensions within and between nations. Offered fall semester. Credits: 3

### COM 375 - Communication Research

Examination of empirical methodologies used in the evaluation of audiences, media, and products. Special attention given to the integration of empirically derived information in the communication process. Offered fall and winter semesters. Prerequisites: COM 275 and STA 215. Credits: 3

### COM 376 - Communications Policy and Law

A survey of key policies and recent developments in communication law that shape media industries (print, broadcast, cable, telephone, and the Internet) and communication practices in media environments. In this context, theories of policymaking, regulation, and the public interest are examined. Offered fall semester. Credits: 3

### COM 378 - Intercultural Communication

This course introduces a range of theories to examine the intersection of communication, culture, and identity. Students explore the challenges of intercultural interactions in the context of globalization. Topics include communication and culture; influence of culture on perceptions; national and cultural identity; intercultural conflict; and cross-cultural adaptation. Course offered fall semester. Credits: 3

### COM 380 - Special Topics in Communications

A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. May be repeated for credit when content varies. Offered on sufficient demand. Prerequisite: Sophomore standing. Credits: 1 to 6

### COM 399 - Independent Study

An experience of an essentially scholarly and/or creative nature undertaken by a student under the supervision of one or more faculty members. Initiated by the student who has a special interest in a subject that is not available in the current curriculum. The student and the faculty sponsor agree on the scope of the study, its components, and methods of evaluation. Offered every semester. Credits: 1 to 6

### COM 410 - Senior Seminar in Health Communication

This course serves as a bridge between the student's academic and professional careers. The course helps students synthesize their communication education into a view of the dominant themes, issues and trends of the health communication field. Offered winter semester. Prerequisites: COM 209 and senior standing. Credits: 3

### COM 438 - Communication Ethics

An upper-division course for the study of communications ethics. Students explore how language and innocence are mutually exclusive, examine how rhetoric, ideology, and information bear upon social and personal evil, and consider ethics issues relating specifically to communicative media. Focus is directed to the assessment and development of ethical sense-making. Part of the Identity Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### COM 490 - Internship

A supervised work experience in an area of a student's potential career interest. Initiated by the student, who plans the work experience with the advisor, the faculty sponsor chosen to supervise the internship, and the supervisor at the worksite. Credit is awarded only when the student, the faculty sponsor, and the work supervisor have completed evaluations of the internship. Offered every semester. Credits: 1 to 6

### COM 495 - Issues in Communication (Capstone)

Selected communications theories are examined in the context of contemporary issues/questions. Seminar-style analysis and application of concepts based on readings selected to support discussions about one or more current critical issues in communication. Topics vary with instructor/semester. Offered every semester. Prerequisites: Senior standing and School of Communications major. Credits: 3

### COM 498 - Senior Thesis/Project

The senior thesis/project demonstrates depth and sophistication in the major. Offered fall and winter semesters. Credits: 1 to 6

### COM 600 - Systems Theory and Communication

An advanced theory class that takes a systems theory approach to understanding human communication and professional communication problems and issues. Prerequisites: COM 495, PSY 300, and STA 215, each with a grade of B or better. Credits: 3

### COM 610 - Secondary Information and Analysis

Examines available sources of information, how they are accessed, and how to interpret and analyze findings. Attention is also given to

data retrieval, storage and analysis, creating files analysis of trends, and aggregating and collapsing information. Prerequisite: COM 600. Credits: 3

#### **COM 620 - Empirical Methods in Communication**

The primary approaches to communication research with special emphasis on content analysis, survey research, focus groups, discourse analysis, projective techniques, sampling techniques, and proposal and report writing. Prerequisite: COM 600. Credits: 3

#### **COM 624 - Public Health Communication**

Examines the fundamentals of public health communication, the role that it plays in health care delivery, disease prevention, and health promotion. Explores public health challenges and identifies strategies to confront them. Applies research-based models and theories of health assessment and promotion at individual, organizational, agency, governmental, and public levels. Course offered each semester. Prerequisite: Admission to the Master of Public Health program or the Master of Science in communication program. Credits: 3

#### **COM 634 - Ethics in Professional Communication**

An examination of ethical issues and problems in professional communication. Special attention is given to understanding the connections between the communication industry and society, government, economics, and the law. Prerequisite: COM 600. Credits: 3

#### **COM 641 - Emerging Communication Technologies**

A graduate seminar exploring the nature of technological mediation, focusing upon the social and psychological impact of emerging communication technologies. Prerequisite: Admission to a Grand Valley master's program. Credits: 3

#### **COM 642 - Communication Law**

An examination of the law as it relates to communication. An appraisal of current thinking in communication law and future trends. Prerequisite: Admission to a Grand Valley master's program. Credits: 3

#### **COM 643 - Small Group Communication and Leadership**

Examines the life cycle and communication structure of the problem-solving group or task force. Emphasis on the emergence of roles and leadership as a result of the communication within the group. Also, communicative and behavioral patterns associated with leadership. Prerequisites: COM 600 and BUS 631. Credits: 3

#### **COM 660 - Communication Management and Cases**

The conceptualization of communication problems, definition of terms, determination of information needs, conceptualization/operationalization of primary research where needed, and implementation of findings into the decision-making process. Prerequisites: COM 620 and BUS 631. Credits: 3

#### **COM 680 - Special Topics in Communications**

A study of special topics not regularly covered in the curriculum. Prerequisite: COM 600. Credits: 3

#### **COM 693 - Master's Project**

Master's project completed in consultation with the student's advisor and committee. Prerequisites: COM 660 and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

#### **COM 695 - Master's Thesis**

Master's thesis completed in consultation with the student's advisor and committee. Prerequisites: COM 660 and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

#### **COM 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

#### **COM 699 - Independent Study**

Initiated by the student who has a special interest in a subject not available in the current curriculum. The student and the faculty sponsor agree on the scope of the study, its components, and methods of evaluation. Prerequisites: COM 600 and COM 610. Credits: 1 to 4

#### **CPH 171 - Photography I**

An introductory course in the use of the still camera and in the essentials of black-and-white darkroom photography. Emphasis on the basic aesthetics and techniques that underlie photographic communication. Offered every semester. Access to a 35mm film camera, with manual control option, required. Credits: 4

#### **CPH 172 - Photography II**

The aesthetic and technical concepts beyond basic photography. Emphasis on fine-tuning black-and-white negative and printing methods, including the zone system. Students register for one lab section in addition to lecture. Access to 35mm camera, with manual control option, required. Offered every semester. Credits: 3

#### **CPH 175 - Understanding Still Photography**

An introductory course in still photography without darkroom instruction. Covers camera operation, composition, aesthetics, image manipulation, and visual communication. Access to 35mm digital or film camera, with manual control options, required. Counts toward the photography minor, but not the major. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

#### **CPH 266 - History of Photography I**

A survey of the origins and developmental phases of photography. Technical innovations will be examined, but emphasis will be on the historical motivations and changing climates of aesthetic intent, philosophical rationale, and visual experimentation in the history of photography from the early 19th century to the present. Offered fall semester. Credits: 3

#### **CPH 272 - Digital Photography 1**

Introduction to the use of computers in photography with emphasis on digital image processing. Students will gain experience with hardware and software used to access, manipulate, and output photographs for use in display, print, and the digital environment. Offered every semester. Prerequisites: ART 149 or 150 and one of the following: CPH 175, CPH 172, CFV 226, or permission of instructor. Credits: 3

#### **CPH 273 - Classic 4 x 5 Photography**

Emphasis upon the use and application of the large format camera, the zone system of previsualization and exposure/development control, and the production of the classic black and white print. Subject areas represent the classic themes drawn from the history of photography. Offered fall and winter semesters. Prerequisite: CPH 172 or permission of instructor. Credits: 3

#### **CPH 279 - Color Photography 1**

Introduction to color theory and expressive use of color in photography. Offered fall and winter semesters. Prerequisite: CPH 272. Credits: 3

#### **CPH 280 - Special Topics in Photography**

A study of topics not regularly covered in the curriculum. May be repeated for credit when topic varies. Prerequisite: Sophomore standing or permission of instructor. Credits: 1 to 3

#### **CPH 366 - History of Photography II**

An examination of the principle theories and debates in photography from the early 19th century to the present, their social and political contexts, and their expression in both photographic practice and critical writings. Offered winter semester. Prerequisites: CPH 266 and junior standing; or permission of the instructor. Credits: 3

#### **CPH 371 - Experimental Black and White Photography**

An advanced production course that investigates experimental and nontraditional applications of black-and-white imaging materials and processes. Historical and contemporary experimental work will be examined. Emphasis is on the expressive and visual significance of experimentally generated imagery. Offered winter semester. Prerequisite: CPH 273. Credits: 3

## Course Listings and Descriptions

### **CPH 373 - Digital Photography 2**

An exploration of the history, contemporary trends, and future possibilities of digital imaging processes. Includes an examination of visual communication within the digital environment. Student readings and discussions will be augmented with digital imaging projects. Offered winter semester. Prerequisite: CPH 272 or permission of instructor. Credits: 3

### **CPH 374 - Color Photography 2**

An advanced course emphasizing various approaches to color photographic image making. Areas of investigation include color theory, color and perception, color and light, color strategies, and color as image, as well as contemporary trends in color photography. Offered winter semester. Prerequisite: CPH 279 or permission of instructor. Credits: 3

### **CPH 375 - Studio Photography**

Creation of studio still-lives, artificial studio lighting, and principles of studio portraiture. All work done with digital photography. Prerequisite: CPH 272. Credits: 3

### **CPH 377 - The Social Eye**

Explores the photographic tradition of the social documentary. Practical emphasis on black-and-white image making depicting people: their activities, relationships, conditions. (Color slides optional with permission of instructor.) Photo essays will be produced. Lab to be arranged. Offered fall semester, even-numbered years. Prerequisite: CPH 272. Credits: 4

### **CPH 378 - Advanced Problems in Photography**

An intensive investigation and a sustained image-making activity in one area of photographic practice. Examines both historical and contemporary approaches, as well as aesthetic and cultural attitudes that have informed them. Students will produce various solutions within the course theme. Offered fall semester. Prerequisite: CPH 272 Credits: 3

### **CPH 380 - Special Topics in Photography**

A study of advanced topics not regularly covered in the curriculum. May be repeated for credit when topic varies. Prerequisite: Junior standing or permission of instructor. Credits: 1 to 3

### **CPH 399 - Independent Study**

An experience of an essentially scholarly and/or creative nature undertaken by a student under the supervision of one or more faculty members. Initiated by the student who has a special interest in a subject that is not available in the current curriculum. The student and the faculty sponsor agree on the scope of the study, its components, and methods of evaluation. Offered every semester. Credits: 1 to 6

### **CPH 480 - Special Topics in Photography**

A study of advanced topics not regularly covered in the curriculum. May be repeated for credit when topic varies. Prerequisite: Senior standing or permission of instructor. Credits: 1 to 3

### **CPH 490 - Internship**

A supervised work experience in an area of a student's potential career interest. Initiated by the student, who plans the work experience with the advisor, the faculty sponsor chosen to supervise the internship, and the supervisor at the worksite. Credit is awarded only when the student, the faculty sponsor, and the work supervisor have completed evaluations of the internship. Offered every semester. Credits: 1 to 6

### **CPH 495 - Photography Capstone and Thesis Seminar**

A culminating course in which students demonstrate their conceptual understanding and creative abilities in photography and visual communication. Each student develops a coherent body of work and a thesis paper reflecting on that work from a personal, historical, and critical perspective. Offered fall and winter semesters, but not necessarily in the summer. Prerequisites: CPH 266 with a grade of C or better and CPH 366. Credits: 1 to 6

### **CTH 101 - Introduction to Theatre**

Basic course in theatre. Emphasis upon contemporary stage practice and theory, not theatre history. Students will experience a wide variety of

live, filmed, and taped performances, analyze their reactions to them, and present two reports on them. Fulfills Foundations - Arts. Offered every semester. Credits: 3

### **CTH 151 - Acting Process**

An introduction to the process of acting through improvisation, freeing the natural performer by means of physical, intellectual, emotional, and intuitive exercises and games. Extensive experiential work and subsequent evaluation. Offered fall and winter semesters. Credits: 3

### **CTH 152 - Voice for the Actor**

This course develops basic techniques of strengthening vocal, verbal and movement resources for performance. It focuses on developing skills with voice phonation, relaxation, and projection; strengthening movement skills for scene and monolog presentations; and improving interpretation skills. Students will participate in lecture/discussions, class exercises, lab experiences and studio performances. Offered winter semester of odd-numbered years. Credits: 3

### **CTH 161 - Theatre Production**

An introduction to the collaborative nature of the theatrical process, production practices, and theatrical operations. The course examines the duties and responsibilities of the various collaborative artists, such as actors, directors, designers, producers, managers. Students will participate in the production activities of the college. Course is required for theatre majors. Fulfills Foundations - Arts. Offered fall semester. Credits: 3

### **CTH 162 - Play Analysis**

Develops abilities to read and interpret play texts. Students examine conventions of dramatic art as they learn to approach a text both verbally and nonverbally. Frequent short writing assignments and several video recordings supplement class lectures and discussions. Required attendance at two university play performances. Offered winter semester of odd-numbered years. Credits: 3

### **CTH 198 - Rehearsal and Performance**

Participation as a performer (acting, dance) in the college's production program. Offered every semester. Prerequisite: Permission of instructor. May be repeated for credit. Credits: 1 to 3

### **CTH 250 - Theatre Management**

An introduction to theatre management, including production management, stage management and front of house management. Class lectures and discussions are augmented by work on projects and actual performance. The course covers the structure and business of the theatre and duties and responsibilities of production, stage, and house managers. Offered winter semester. Credits: 3

### **CTH 252 - Acting Characterization**

Methods of developing a character for the stage. Free exercises, improvisations, analysis, and scene (or project) presentations. Emphasis on the total integration of all the actor's resources. Offered fall and winter semesters. Prerequisite: CTH 151. Credits: 3

### **CTH 261 - Stagecraft I**

A study of the basic techniques for constructing and painting stage scenery and simple stage properties. Additional emphasis on the principle of stage lighting. Offered on sufficient demand. Credits: 3

### **CTH 262 - Costume Construction**

A laboratory course in beginning sewing techniques, including instruction in basic pattern drafting and draping for costumes (depending on the students' level of sewing experience). Final project includes the construction of a complete garment. Offered on sufficient demand. Credits: 3

### **CTH 263 - Makeup**

A laboratory course dealing with the principles of makeup application and design. Demonstration and practice in makeup techniques and in the use of makeup equipment and materials, including crepe hair, prosthetics, and masks. Course taught from the performer's point of view. Offered on sufficient demand. Credits: 2

**CTH 298 - Applied Theatre Practice**

Participation in a technical or design capacity (scenery, lighting, costumes, stage management, etc.) in the college's production program. Offered every semester. Prerequisite: Permission of instructor. May be repeated for credit. Credits: 1 to 3

**CTH 300 - Storytelling**

Exploration of stories and their possible uses through the oral tradition. Students will locate, create, and share stories; explore stories as a reflection of culture; and engage in practical activities that will provide a plethora of ideas for understanding and using storytelling in multiple aspects of one's life. Offered fall of even-numbered years. Prerequisite: Junior standing. Credits: 3

**CTH 356 - Acting for the Camera**

Introduction to special techniques of performing for camera, including script preparation, studio rehearsals, and actual camera performance. Essays, journals, and on-camera projects such as resume/interviews, advertisements, news reports, and dramatic scenes are required. Offered winter semester. Prerequisites: Two courses in acting. Credits: 3

**CTH 362 - Production Dramaturgy**

Study and practice in production dramaturgy. Specific theatre topics and production focus will vary. The course integrates play analysis and theatre research with production practices in order to prepare research and production materials to assist with upcoming theatre production work. May be repeated for credit. Course offered fall semester. Prerequisite: Sophomore standing. Credits: 3

**CTH 365 - Directing I**

Study and practical application of the fundamental concepts of play directing: play selection, script analysis and interpretation, artistic choices, articulation of ideas, communication with actors, and critique. Rehearsal and presentation of realistic scenes. Offered winter semester of even-numbered years. Prerequisites: CTH 151, 161, 250 or 261 or by permission of instructor. Credits: 3

**CTH 366 - Drama in Education**

An orientation to the function of dramatics in education. Workshop exercises combined with background studies and theory. Skills for conducting creative dramatic activities with elementary and secondary students, exploring theatre games, and improvisations with ensemble. Offered winter semester. Credits: 3

**CTH 367 - Scenography**

An introduction to the basic theoretical and artistic concepts and procedures for designing a live performance. Physical scenery, lighting, projections, costumes, and makeup are considered as integrated parts of a unified design. Individual projects exploring varied design contexts. Students will participate in the production activities of the college. Offered winter semester of odd-numbered years. Prerequisites: CTH 161 and CTH 261 or permission of instructor. Credits: 3

**CTH 368 - Lighting Design**

An exploration of the theory and techniques of lighting live performances. The basics of theatre electrics, including instrumentation, color, control systems, and paperwork techniques. Principles of lighting design, exploration of the qualities of light, and their manipulation in theatrical situations. Offered fall semester of odd-numbered years. Prerequisite: CTH 161. Credits: 3

**CTH 369 - Costume Design**

Study of the principles of costume design, including figure drawing and rendering techniques. An introduction to the history of costume. Final project will include the design of costumes for an assigned play. Offered fall semester of odd-numbered years. Prerequisites: CTH 161 and CTH 262 or permission of instructor. Credits: 3

**CTH 371 - Theatre History I**

The study of the development of theatre from its origins up to the 17th century. The course emphasizes dramatic theory, playwriting styles, theatrical production styles, physical theatres, and the impact of theatre

on society. Specifically, the course examines Asian theatre, and the development of Western theatre. Offered winter semester. Prerequisite: WRT 150. Credits: 3

**CTH 372 - Theatre History II**

The study of the development of theatre from the Restoration period to the present with emphasis on dramatic theory, playwriting styles, theatrical production styles, physical theatres, and the impact of theatre on society. Offered winter semester. Prerequisite: WRT 150. Credits: 3

**CTH 380 - Special Topics in Theatre**

A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. Offered on sufficient demand. Prerequisite: Sophomore standing. May be repeated for credit when content varies. Credits: 1 to 3

**CTH 399 - Independent Reading**

Directed readings or research work in theatre literature or theatrical practice. Offered every semester. Prerequisites: Junior standing and permission of the instructor. Credits: 1 to 3

**CTH 400 - Touring Theatre Production**

An eight-week course in the study, rehearsal, performance and production of a touring play. Students gain a broad understanding of Shakespeare and the theatrical touring process through four weeks of rehearsals and four weeks of touring to outreach audiences. May be repeated for credit. Prerequisite: Permission of instructor, by audition only. Credits: 3

**CTH 454 - Acting Advanced Scene Study**

Scene and monologue work with emphasis on auditioning. Practice with prepared and unprepared material. Training in selecting, editing, rehearsing, resume writing, performing. Offered winter semester. Prerequisites: Two of the following: CTH 151, CTH 252, or CTH 356 or equivalent. Credits: 3

**CTH 455 - Shakespeare Performance**

A six-week course in acting skills in conjunction with Shakespeare Festival productions. Students must audition for roles during the semester prior to the course. Lectures and studio work focus on characterization, vocal skills, text interpretation and scene work. May be repeated for credit. Prerequisite: Permission of instructor, by audition only. Credits: 3

**CTH 465 - Directing II**

Includes study of directing for proscenium, thrust, and the round. Special attention paid to directing plays from other periods, children's plays, musicals, and placing plays in a transferred period. Students will direct a one-act play for public performance. Offered on sufficient demand. Prerequisite: CTH 365 or by permission of instructor. Credits: 3

**CTH 490 - Internship**

Practical work and study in the area of acting, arts management, or technical production with a professional regional theatre. Offered every semester. Prerequisites: Senior standing, selected coursework in background to the specific area of the internship, and permission of theatre chairman. Credits: 1 to 6

**CTH 499 - Independent Research**

Scholarly library project and critical essay in some area of theatre. Seniors majoring in theatre and dance. Offered every semester. Credits: 1 to 3

**DAN 175 - Freshman Company**

Rehearsal and performance of faculty or visiting-artist choreographed projects, production coursework, and technical crew assignments. May include touring, performance at school functions, and participation in off-campus events, annual concerts, or other programs. Must be taken twice by dance majors. Course offered fall and winter semesters. Prerequisite: Restricted to dance majors and minors. Credits: 1

**DAN 200 - Introduction to Dance**

An introduction to dance as an art form. This course is designed for the liberal arts student interested in learning to appreciate, understand, discuss, and write about dance. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

## Course Listings and Descriptions

### DAN 211 - Choreography and Improvisation

Study and investigation of choreography and improvisation. Course will focus on developing choreographic principles, devices and inspirations through structured exercises in human movement. Improvisational practices that enhance and further develop choreographic ideas will also be studied. Course offered winter semester. Prerequisite: Restricted to dance majors and minors. Credits: 3

### DAN 231 - Ballet Partnering

Sequential training in partnering technique, stressing the importance of strength and timing. Study of various performance styles as well as the relationship and harmony between male and female dancers. May be repeated for credit, up to a maximum of five credit hours. Offered fall semester. Prerequisite: Permission of the instructor. Credits: 1

### DAN 241 - Ballet Technique 2

Sequential training in the technique and vocabulary of classical ballet with an emphasis on placement, alignment, coordination, flexibility, and movement quality. May be repeated for credit. Offered fall and winter semesters. Prerequisite: Restricted to dance majors and minors. Credits: 2

### DAN 245 - Dance History: Evolving Traditions

The interdisciplinary nature of dance as a cross-cultural phenomenon, tracing dance practices around the world including the early history of Western concert dance; writings and video from a variety of methodological backgrounds, including those from a historical, sociological, critical, aesthetic, and ethnological viewpoint. Course offered fall semester. Prerequisite: Restricted to dance majors and minors. Credits: 3

### DAN 251 - Modern Technique 2

Sequential training in classical and postmodern dance techniques with an emphasis on breath, coordination, flexibility, movement dynamics, and musicality. May be repeated for credit. Offered fall and winter semesters. Prerequisite: Restricted to dance majors and minors. Credits: 2

### DAN 262 - Pointe

Sequential training in the principles of pointe technique and performance styles, emphasizing placement and strength of the feet and legs. May be repeated for credit, up to a maximum of five credit hours. Offered fall and winter semesters. Prerequisites: Audition and permission of the instructor. Credits: 1

### DAN 271 - Men's Technique

Sequential training in male ballet technique with concentration on turns, beats, and big jumps. May be repeated for credit, up to a maximum of five credit hours. Offered fall and winter semesters. Prerequisite: Permission of the instructor. Credits: 1

### DAN 275 - Dance Company

Rehearsal and performance of faculty or visiting artist choreographed projects. May include touring, performance at school functions, and participation in off-campus events, annual concerts, or other programs. Must be taken twice by dance majors. Offered fall and winter semesters. Prerequisites: Restricted to dance majors and DAN 175 with a C or better. Corequisites: One of DAN 231, 241, 251, 262, 271, 281, 341, 351, 381, 441, 451, or 481. Credits: 1

### DAN 281 - Jazz Technique 2

Sequential training in jazz technique drawn from a variety of sources both classical and contemporary. Dancers will be expected to improve speed, stamina, strength, flexibility, and rhythm. May be repeated for credit. Offered fall and winter semesters. Prerequisite: Restricted to dance majors and minors. Credits: 2

### DAN 311 - Choreography and Production

Advanced study and investigation of choreography. Course will focus on developing choreographic principles, devices and inspirations through structured exercises in human movement. Technical theatre production practices that enhance and further develop choreographic ideas will also be studied. Offered winter semester. Prerequisites: Restricted to dance majors and minors and DAN 211 with a C or better. Credits: 3

### DAN 333 - Dance Costuming

Study of the principles of costume design as it applies to body form and dance performance. Course offered winter semester. Prerequisite: Restricted to dance majors and minors. Credits: 2

### DAN 341 - Ballet Technique 3

Sequential training in the technique and vocabulary of classical ballet with an emphasis on placement, alignment, coordination, flexibility, and movement quality. May be repeated for credit. Course offered fall and winter semesters. Prerequisites: Restricted to dance majors and minors, DAN 241 with a C or better, and permission of the instructor. Credits: 2

### DAN 345 - Dance History: Expanding Performance

The interdisciplinary nature of dance as a cross-cultural phenomenon, investigating developments in concert dance in the modern era; writings and video from a variety of methodological backgrounds, including those from a historical, sociological, critical, aesthetic, and ethnological viewpoint. Offered fall semester. Prerequisites: Restricted to dance majors and minors and C or better in DAN 245. Credits: 3

### DAN 351 - Modern Technique 3

Sequential training in classical and postmodern dance techniques with an emphasis on breath, coordination, flexibility, movement dynamics, and musicality. May be repeated for credit. Course offered fall and winter semesters. Prerequisites: Restricted to dance majors and minors and DAN 251 with a C or better and permission of the instructor. Credits: 2

### DAN 380 - Special Topics in Dance

The opportunity to develop certain advanced skills or study material not regularly offered as part of the dance curriculum. Offered on sufficient demand. Prerequisite: Permission of instructor. Credits: 1 to 4

### DAN 381 - Jazz Technique 3

Sequential training in jazz technique drawn from a variety of sources both classical and contemporary. Dancers will be expected to improve speed, stamina, strength, flexibility, and rhythm. May be repeated for credit. Course offered fall and winter semesters. Prerequisites: Restricted to dance majors and minors and DAN 281 with a C or better, and permission of the instructor. Credits: 2

### DAN 392 - Site-Specific Dance

An intensive practicum in effective practices in principles of choreography, specifically focusing on site-specific choreography. Students will create collaborative and solo works within site specific parameters and integrating dance, theatre, and environment. Course offered fall, every fourth year. Prerequisite: Restricted to dance majors and minors. Credits: 3

### DAN 393 - Dance Conditioning

An intensive practicum in conditioning for dance focusing on flexibility, coordination, strength, and endurance. Course offered fall semester, every fourth year. Prerequisite: Restricted to dance majors and minors. Credits: 3

### DAN 394 - Dance On Camera

An intensive practicum in effective practices and principles of choreography for the camera, specifically focusing on camera techniques, video-editing software and developing choreography viewed through the lens of a video camera. Course offered fall semester, every fourth year. Prerequisite: Restricted to dance majors and minors. Credits: 3

### DAN 420 - Dance Pedagogy

An intensive study of the theory and practice of dance teaching in arts education. Students will gain an understanding of current research and theories of dance education through readings, videos, and observations as a basis for developing a personal pedagogy. Course offered winter semester. Prerequisite: Restricted to dance majors and minors. Credits: 3

### DAN 441 - Ballet Technique 4

Sequential training in the technique and vocabulary of classical ballet with an emphasis on placement, alignment, coordination, flexibility, and movement quality. May be repeated for credit. Offered fall and winter semesters. Prerequisites: Restricted to dance majors and minors, DAN 241 and DAN 341 with a C or better, and permission of the instructor. Credits: 2

**DAN 451 - Modern Technique 4**

Sequential training in classical and postmodern dance techniques with an emphasis on breath, coordination, flexibility, movement dynamics, and musicality. May be repeated for credit. Offered fall and winter semesters. Prerequisites: Restricted to dance majors and minors. DAN 251 and DAN 351 with a C or better and permission of the instructor. Credits: 2

**DAN 481 - Jazz Technique 4**

Sequential training in jazz technique drawn from a variety of sources both classical and contemporary. Dancers will be expected to improve speed, stamina, strength, flexibility, and rhythm. May be repeated for credit. Offered fall and winter semesters. Prerequisites: Restricted to dance majors and minors, DAN 281 and DAN 381 with a C or better, and permission of the instructor. Credits: 2

**DAN 495 - Senior Project**

Preparation, presentation and/or performance of a dance concert in the student's senior year. Offered on demand. Prerequisite: Permission of the instructor. Credits: 3

**DAN 499 - Dance Independent Study and Research in Dance**

Advanced independent study in problems of dance and dance education. To be arranged with the instructor. Course offered fall and winter semesters as needed. Prerequisite: Permission of the instructor. Credits: 1 to 4

**DS 201 - Digital Identities and Communities**

Students will reflect on their participation in digital cultures and communities to examine the structure and function of digital environments. They will explore how digital platforms inform and are informed by self-understanding, identity performance, community membership, and material experiences. Fulfills Foundations - Social and Behavioral Sciences. Offered fall and winter semesters. Credits: 3

**DS 202 - Digital Data and Design**

Students will gain a fundamental understanding of how digital data is collected, analyzed, and visualized/represented on various platforms. They will learn to locate and assess sources of data, and effectively and ethically represent those data, using relevant communication tools. Offered fall and winter semesters. Credits: 3

**DS 310 - Digital Preservation and Archiving**

Explores challenges in digitization and managing digital content over time. Analyzes the methods librarians, archivists, curators, and other information professionals use to preserve and make digital content accessible. Emphasizes the changing nature of digital content, digital loss and persistence, and how technology helps and hinders archiving and accessibility. Offered fall and winter semesters. Credits: 3

**DS 350 - Social Media in Culture**

An examination of social media's role in shaping individuals and communities. Students evaluate how social media platforms express political, social, and cultural power. Students analyze how social media expands and limits conversations on issues concerning race, gender, sexuality, and diaspora. Part of the Information, Innovation, and Technology Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**DS 360 - Ethics of Digital Culture**

This course will investigate the ethical concepts emerging alongside digital innovation. Students will explore topics such as (but not limited to) social media, issues of privacy and security, cyber warfare, virtual representation, and internet access, plagiarism, and sustainability. Offered fall and winter semesters. Credits: 3

**DS 490 - Internship in Digital Studies**

Internship experience in digital studies with individual faculty supervision focusing on either digital cultures or tools and production. Allows students the opportunity to apply theoretical digital studies knowledge to professional contexts. Course will include biweekly classroom discussion of assigned readings and workplace experiences. Offered every semester. Prerequisite: Director of digital studies permit required. Credits: 3

**EAS 180 - Special Topics in East Asian Studies**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 100-level courses. May be repeated for credit when the content varies. Credits: 1 to 4

**EAS 201 - East Asia in the Contemporary World**

Prepares students for encountering East Asia in various ways. Introduces East Asian cultures, political and economic systems, international relationships, recent developments, traditional customs and behavior patterns, differences between regions, and historical roots of some contemporary situations. Fulfills Foundations - Historical Perspectives. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Credits: 3

**EAS 280 - Special Topics in East Asian Studies**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 200-level courses. May be repeated for credit when the content varies. Credits: 1 to 4

**EAS 301 - Masterpieces of East Asian Literature**

Explores the literary masterpieces of China and Japan. Students will sample representative genres, such as poetry, dramas, novels, and short stories, from various periods that introduce the East Asian ways of thinking and living, namely, Confucian, Taoist, Buddhist, and Shinto. Offered winter semester of even-numbered years. Prerequisite: EAS 201 or junior standing. Credits: 3

**EAS 321 - Pre-modern Japanese Civilization (to 1600)**

This course explores the major trends in Japanese civilization and culture from antiquity to the beginning of the Early Modern period in 1600. Readings will consist primarily of primary sources in English translation, and will include history, religion, philosophy, art, literature, and theatre. Cross-listed with JPN 321. Offered winter semester every third year. Credits: 3

**EAS 323 - Modern Japanese Civilization**

This course explores the major trends in Japanese civilization and culture from the end of the Tokugawa period in 1868 to the present. Readings will consist mainly of primary sources in English translation, and will include history, religion, philosophy, art, literature, and theater. Cross-listed with JPN 323. Offered winter semester, every third year. Credits: 3

**EAS 333 - Study Abroad - East Asian Studies**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits may vary. Offered as needed. Prerequisites: Specific to course and instructor. Credits: 1 to 6

**EAS 380 - Special Topics in East Asian Studies**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 300-level courses. May be repeated for credit when the content varies. Credits: 1 to 4

**EAS 399 - Independent Studies**

Before registering, students must arrange for supervision by an East Asian Studies faculty member and submit a contract (available from the EAS coordinator) specifying the topic and scope of the study. Ordinarily, no more than three credits of EAS 399 may count toward the minor. Instructor approval required prior to registration. Offered every semester. Credits: 1 to 3

**EAS 480 - Special Topics in East Asian Studies**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 400-level courses. May be repeated for credit when the content varies. Credits: 1 to 4

**ECO 100 - Current Economic Issues**

Examination of current social issues from an economic perspective, such as drugs, rent control, environmental pollution, poverty, crime, and the distribution of medical care. Recommended for students interested in current issues. Students with any economics course at ECO 200 and above cannot take this course for credit. Fulfills Foundations - Social and Behavioral Sciences. Offered fall and winter semesters. Credits: 3

## Course Listings and Descriptions

### **ECO 200 - Business Economics**

Analysis of business issues, including: demand and market pricing strategies, supply and production costs, profit maximization of firms in different markets, monetary and fiscal policy, and business cycles. Cannot be taken for credit if credit obtained for ECO 210 or 211. Suitable only for students with strong analytical skills. Offered every semester. Prerequisite: MTH 110 or MTH 122 or MTH 201, sophomore standing recommended. Credits: 3

### **ECO 210 - Introductory Macroeconomics**

Introduction to the study of the national and global economies. Topics include the effects of government taxation and budget deficits on economic growth; ways to alleviate unemployment, inflation and international trade imbalances, and the importance of expectations and decision-making in an uncertain world. Fulfills Foundations - Social and Behavioral Sciences. Offered every semester. Prerequisite: MTH 110 or MTH 122 or MTH 201; sophomore standing recommended. Credits: 3

### **ECO 211 - Introductory Microeconomics**

Focuses on the interactions among households, producers, and governments in market economies. Applies fundamental methods of economic analysis to topics such as household spending and saving patterns; producer pricing, profits, and organization; wages and income distribution; investment decisions; health care and insurance; government taxes, spending, and regulation of markets. Fulfills Foundations - Social and Behavioral Sciences. Offered every semester. Prerequisite: MTH 110 or MTH 122 or MTH 201; sophomore standing recommended. Credits: 3

### **ECO 300 - Applied Economic Analysis**

An introduction to empirical methods in economics and the relevant data sources. Uses spreadsheets and econometric software to apply visual and statistical analyses to social science data. Examines ethical issues involved in research. Offered winter semester of even-numbered years. Prerequisites: ECO 200 or ECO 210 or ECO 211, and STA 215. Credits: 3

### **ECO 312 - Applied Microeconomics**

Applies microeconomic analysis to business, personal, and public decisions. Topics include business cost and output decisions; consumer demand; pricing and allocation of goods, services, labor, and other resources in competitive markets; strategic pricing across markets; impact of government policies, services, taxes, and regulations on market operations. Offered every year. Prerequisite: ECO 211 or ECO 200. Credits: 3

### **ECO 313 - Business Cycles and Growth**

Topics include analysis of economic fluctuations and their impact on corporations and consumers; different explanations for business cycles; monetary and fiscal policy for stabilizing economic fluctuations; effects of public debt, investment, employment, and trade policy on economic growth. Offered every year. Prerequisite: ECO 210 or ECO 200. Credits: 3

### **ECO 330 - Sports Economics**

Examination of economic issues pertaining to professional and collegiate sports, including analysis of industrial organization and antitrust issues, labor relations, discrimination, and the impact of franchises on local economies. Part of the Information, Innovation, and Technology Issue. Offered winter semester. Prerequisites: Junior standing and completion of social science foundation requirement. Credits: 3

### **ECO 336 - Urban and Real Estate Economics**

Applies economic models and methods for understanding urban real estate markets. Topics include urbanization and urban growth; determinants of land rents and urban spatial structure; characteristics and determinants of real estate markets; location choice; transportation, poverty, crime, and education in cities; relationship between real estate markets and business cycles. Offered winter semester. Prerequisite: ECO 211 or ECO 200. Credits: 3

### **ECO 342 - Strategic Games**

The basic principles of game theory are analyzed to provide insight into real-world problems. Ability to construct simple games from actual situations and derive implications about expected behavior. Developing strategic responses for policy analysis and in response to competitor

moves. Offered every winter. Prerequisite: Completion of Foundations - Mathematical Sciences. Credits: 3

### **ECO 343 - Health Economics**

Application of microeconomic tools to health and medical care issues. Topics include demand for health care, economic choices of medical care providers, insurance markets, economic justification for government involvement in the medical care system, various proposals for health care reform in the U.S. and different health care systems in the world. Part of the Health Issue. Offered fall semester. Prerequisites: Junior standing and ECO 211 or ECO 200. Credits: 3

### **ECO 345 - Environmental and Resource Economics**

Develops a systematic economic framework to analyze market and government allocations of natural and environmental resources. Topics include relationships between population growth, land development, and environmental quality; regulatory versus market oriented environmental policies; supplies and prices of mineral and energy resources; harvest and protection of forests and fisheries. Part of the Sustainability Issue. Offered each year. Prerequisites: Junior standing and ECO 200 or ECO 211. Credits: 3

### **ECO 349 - Emerging Markets Issues**

Important problems in emerging markets throughout the world, such as: policies to stimulate growth via international trade; foreign aid and multinational investment in transitional economics; the use of natural resources and agriculture in economic development; and the relationship of economic development to education, health and migration. Fulfills Cultures - World Perspectives. Part of the Globalization Issue. Offered every other year. Prerequisites: Junior standing; ECO 200 or ECO 210. Credits: 3

### **ECO 350 - Economics of Gender**

Analysis of gender differences in employment and earnings. Topics include allocation of time between the household and the labor market, employment and family structure, theories of discrimination, antipoveity programs, comparable worth, parental leave, and affirmative action. Historical trends and cross-cultural comparisons are discussed along with current U.S. conditions. Part of the Identity Issue. Prerequisite: Junior standing. Credits: 3

### **ECO 355 - Business, Antitrust, and Regulation**

In light of the structure, conduct, and performance of American private enterprise as revealed by empirical evidence, this course discusses the intent and actual effects of antitrust policy, regulation, and deregulation. Included will be studies of specific industries. Offered once a year. Prerequisite: ECO 211 or ECO 200. Credits: 3

### **ECO 360 - Employment, Wages, and Productivity**

The study of labor market issues using economic analysis. Topics include composition of the labor force, productivity improvements, effects of international trade and migration on wages and employment. Policy issues include minimum wages, welfare programs, OSHA, education and training, and discrimination. Offered every other year. Prerequisite: ECO 211 or ECO 200. Credits: 3

### **ECO 365 - Comparative Economic Systems**

Relative to such economic goals as economic freedom, full employment, growth, efficiency, consumer welfare, equitable distribution of income and security, how well do alternative economic systems perform? This course studies contemporary, evolving capitalist, socialist, and mixed systems in different countries. Part of the Globalization Issue. Offered every other year. Prerequisites: Junior standing and ECO 210 or ECO 200. Credits: 3

### **ECO 369 - International Economic Issues**

Selected topics in both international trade and international finance. Includes preferential trading arrangements such as NAFTA and the European Union; analysis of barriers to trade and arguments for and against protectionism; the influence of exchange rates on capital flows; and the relationship between international trade and economic growth. Fulfills Cultures - World Perspectives. Offered every year. Prerequisite: ECO 200 or ECO 210. Credits: 3

**ECO 380 - Special Topics in Economics**

Studies of selected authors, concepts, movements, periods, theories or countries. Topics and prerequisites will be listed in the class schedule. Credits: 1 to 3

**ECO 385 - GIS in Urban and Regional Analysis**

Focus on applications of Geographic Information Systems (GIS) techniques in urban and regional analysis. Using a hands-on approach, students will explore how to use GIS techniques and large data sets to analyze economic, demographic and social change in the knowledge-based economy. Part of the Information, Innovation, and Technology Issue. Cross-listed with GPY 385 and PA 385. Offered fall semester. Prerequisite: Junior standing. Credits: 3

**ECO 400 - Econometrics and Forecasting**

Gives students a working knowledge of sources of economic and business data, empirical model building, and economic interpretation of statistical results. Topics include regression analysis, designing models, forecasting and hypothesis testing. Emphasis on business and policy applications. Prerequisites: One of ECO 200, ECO 210 or ECO 211; and STA 215 or STA 312 and one of ECO 300, STA 216, or MTH 201. Credits: 3

**ECO 401 - Honors Seminar in Microeconomics**

This course is for students pursuing an honors minor or honors emphasis in economics. Students will attend departmental seminars and analyze and present current research in the field of microeconomics. Offered fall and winter semesters. Prerequisite: ECO 312 (may be completed as either a corequisite or prerequisite). Credits: 1

**ECO 402 - Honors Seminar in Macroeconomics**

This course is for students pursuing an honors minor or honors emphasis in economics. Students will attend departmental seminars and analyze and present current research in the field of macroeconomics. Offered fall and winter semesters. Prerequisite: ECO 313 (may be completed as either a corequisite or prerequisite). Credits: 1

**ECO 403 - Honors Capstone Seminar**

This course is for students pursuing an honors minor or honors emphasis in economics. Students will attend departmental seminars and conduct and present independent research. Offered fall and winter semesters. Corequisite: ECO 495. Credits: 1

**ECO 412 - Applied Mathematical Economics**

Introduces a wide range of mathematical techniques used in upper level undergraduate and graduate economics courses. Considerable emphasis will be placed on the economic motivation, interpretation, and application of the mathematical models discussed. Offered fall semester of odd-numbered years. Prerequisites: ECO 211; and MTH 125 or MTH 201. Credits: 3

**ECO 414 - Money and Banking**

Contemporary issues related to the role of money in a modern economy, regulation and performance of banks, and the Federal Reserve Bank's policy to control economic fluctuations and promote growth. Offered every year. Prerequisite: ECO 210 or ECO 200. Credits: 3

**ECO 440 - Public Economics and Ethics**

The provision of goods and services in the public sector, government decision-making, and fair and efficient taxation will be analyzed in light of the interaction between ethics and economics. Offered fall semester. Prerequisite: ECO 211 or 200. Credits: 3

**ECO 490 - Economics Internship**

This course will be used to grant economics credit to students who complete internships in the economics field. May not be used to fulfill the upper-division cognate requirement for business majors. Prerequisites: Junior standing; minimum 3.0 GPA. Graded credit/no credit. Credits: 1 to 6

**ECO 495 - Senior Economic Project (Capstone)**

Seminar style course in empirical methods in economics. The nature of empirical methods and their relationship to economic theory is discussed. Presentation and discussion of empirical papers from the literature. Economics faculty may present own research. Students will design, conduct and present an empirical research paper. Offered winter semester.

Prerequisites: ECO 312 and ECO 313, one of which may be taken concurrently. Credits: 3

**ECO 499 - Independent Study and Research**

Independent study in an area of interest to the student, supervised by a member of the economics faculty and culminating in a written and oral report. Offered fall and winter semesters. Credits: 1 to 4

**ECO 542 - Economic Reasoning**

An examination of economic concepts, principles, definitions, and relationships. Designed to provide analytical micro and macroeconomic techniques and concepts necessary to reason from an economic point of view. Offered fall and winter semesters. Prerequisite: MTH 110. Equivalent to ECO 210 and ECO 211. Credits: 3

**ECO 613 - Business and Economic Forecasting**

Econometric applications of data collection, analysis, and forecasting to economic and business problems. Topics include time-series analysis, multiple regression, economic modeling, and research applications. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

**ECO 641 - Business Economics and Strategy**

Develops an analytical framework to identify and evaluate cost-cutting or revenue-enhancing strategies. Topics include economics of production costs and consumer demand, projections using supply/demand analysis, competitive labor markets and employee compensation strategies, cost benefit analysis of investment projects, decision-making under uncertainty, product pricing strategies, make or buy decisions, economics of business organization. Offered fall and winter. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

**ECO 642 - Corporate Strategy for Business Cycles**

Focuses on techniques to deal with seasonal and cyclical economic fluctuations. Topics include using economic indicators to forecast the onset and duration of business cycles, impact on business of government stabilization efforts, estimating the firm's vulnerability to economic fluctuations, and the opportunities to reduce the risk inherent in business cycles. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

**ECO 643 - Health Economics**

This course employs economic tools to understand issues related to health care. Students will learn how to evaluate cost-benefit analysis, assess cost effectiveness, and interpret regression analysis. Microeconomic issues include resource allocation, production efficiencies, market structure, and industry performance. Macroeconomic issues include national policy, equity, and health care reform. Cross-listed with PA 633. Offered fall and winter semesters. Prerequisite: Admission to the M.B.A., M.S.A., or M.S.T. program, or permission of the graduate business programs director. Credits: 3

**ECO 645 - International Economic Issues**

Selection of contemporary topics, including: effects of trade arrangements such as NAFTA and the European Union on business; opportunities for multinational enterprises in emerging markets; impacts on domestic industry of government trade policy; and the effects of interest and exchange rate fluctuations on trade strategy and capital flows. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

**ECO 647 - Environmental and Resource Economics for Managers**

Analysis of market and government influences on environmental problems and natural resource use. Topics include business and government responses to environmental policies; regulatory versus market oriented policies to control pollution; supplies and prices of water, mineral, and energy resources; harvest and protection of biologically renewable resources; and valuation of ecosystem services. Offered once each academic year. Prerequisite: ECO 542 or equivalent. Credits: 3

**ECO 680 - Special Topics in Economics**

Analysis of contemporary and controversial issues in a specific area of economics. Although the course content is applications-oriented, it varies depending on students and faculty interests. Consult the current schedule of classes for details. Prerequisite: Completion of M.B.A. background equivalents. Credits: 1 to 3

## Course Listings and Descriptions

### **ED 600 - Content/Curriculum Workshop**

Advanced-level workshops that provide a breadth and depth of understanding in content and curriculum of educational programs. Topics may vary and prerequisites may be established. Graded credit/no credit. Credits: 1 to 3

### **ED 601 - Content/Curriculum Workshop**

Advanced-level workshops that provide a breadth and depth of understanding in content and curriculum of educational programs. Topics may vary and prerequisites may be established. Credits: 1 to 3

### **ED 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **ED 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **ED 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **EDC 621 - The Profession of School Counseling**

This course provides students with an introduction to the profession of school counseling and is the first course in the program sequence. The philosophy, principles, and theories of school counseling are taught including national standards and related ethical and legal issues. At least 15 supervised practicum hours must be completed in a school counseling setting. Offered at least once a year. Credits: 3

### **EDC 623 - Personal/Social Development**

This course provides students who intend to work as school counselors with knowledge and practice in developmental counseling appropriate for children within elementary, middle, and high schools. The process of consultation with teachers, parents, and support personnel is taught. At least 20 supervised practicum hours must be completed in a school counseling setting. Offered winter semester. Prerequisite: EDC 621. Credits: 3

### **EDC 625 - Academic Development**

This course provides the student with strategies to support academic success of children in schools. It includes the acquisition of skills in decision-making, problem solving, and goal setting, critical thinking, logical reasoning, and interpersonal communication with an emphasis on small group counseling. At least 20 supervised practicum hours must be completed to support academic development. Offered winter semester. Prerequisite: EDC 621. Credits: 3

### **EDC 649 - Career Development**

This course examines the principles and processes involved in supporting career development. Students will explore a variety of theories, philosophies, and programs related to career development and its role in kindergarten through postsecondary educational settings. School counseling candidates must complete at least 20 supervised practicum hours to demonstrating educational development planning. Offered at least once a year. Credits: 3

### **EDC 651 - School Counseling Curriculum and Techniques**

This course is a study of the school counseling process. It includes basic principles related to assessing, interviewing, listening, communicating,

assisting, and referring students. Emphasis is placed on school counseling core curriculum in affecting the positive mental health of students. At least 25 practicum hours are incorporated through counseling skills recordings and reflections. Offered at least once a year. Credits: 3

### **EDC 680 - Special Topics in School Counseling**

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

### **EDC 685 - Internship in School Counseling**

A 600-hour, field-based learning experience in schools designed to provide comprehensive practice for school counseling candidates over one or two semesters. Each internship must be approved by the faculty coordinator/advisor. An internship seminar will meet weekly to provide university supervision. Offered fall and winter semesters. Prerequisites: EDC 621, EDC 623, EDC 649, EDC 651, and EDC 625 (EDC 625 may serve as a corequisite). Credits: 3 to 6

### **EDC 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **EDC 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **EDC 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **EDC 699 - Independent Study in School Counseling**

Individual study of a theoretical or applied problem in education. Offered each semester. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 3

### **EDF 100 - Teaching and Learning in a Diverse Environment**

Designed to acquaint students with teaching and culture of schools through a 25-hour field experience. Students will learn fundamental instructional principles, engage in one-on-one academic support, and write/discuss their experiences. General knowledge of public schools and the foundations of American education will be addressed through readings and discussions. Course offered fall and winter semesters. Credits: 2

### **EDF 310 - Organizing and Managing Classroom Environments**

Current theory and methodology involved in establishing order and facilitating learning is emphasized. Emphasis is on understanding personal/psychological/learning needs, establishing positive relationships, using instructional methods that meet student needs and maximize on-task behavior. Applications to educational settings are required. Offered fall and winter semesters. Prerequisite: Admission to the College of Education (program outlines specify corequisites). Credits: 3

### **EDF 315 - Diverse Perspectives on Education**

This course will introduce the historical, philosophical, and sociological foundations of education in the United States. Emphasis will be placed on the changing purposes of education historically, the legal and procedural expansion of schooling to an increasingly diverse student population, and the cultural competencies needed to teach all students effectively. Fulfills Cultures - U.S. Diversity. Offered every semester. Credits: 3

**EDF 320 - International Teaching Certificate Preparation**

This course will deliver pre departure training and include destination specific exploration of culture, history, geography and health/safety information. Students will define their own cultural and educational beliefs as they are challenged to expand their international and education awareness. Offered fall and winter semesters. Prerequisite: Acceptance into a College of Education sponsored study/teach abroad program. Credits: 1

**EDF 325 - Learning from Detroit: Education and Community Revitalization**

This course studies community revitalization efforts in the city of Detroit. Focusing on community-based initiatives that are strengthening neighborhoods, improving schools and fostering the well-being of children, families and neighborhoods in Detroit, this course invites students with diverse perspectives, from across content areas. The class includes two visits to Detroit. Part of the Identity Issue. Cross-listed with IDS 325. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

**EDF 380 - Special Topics in Foundations**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

**EDF 399 - Independent Study in Foundations**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

**EDF 485 - The Context of Educational Issues**

This culminating education course will explore the context of contemporary educational issues. Students will analyze and critique current educational practices and policies, and draw upon foundational perspectives in addressing such issues. Offered every semester. Prerequisite: EDI 430 or EDI 431. All may be taken concurrently. Credits: 3

**EDF 499 - Independent Study in Foundations**

Independent supervised research and study in special areas of education, prearranged with a faculty sponsor and approved by the director. Offered upon demand. Credits: 1 to 3

**EDF 633 - Race, Class, and Language**

Interdisciplinary course incorporating the views of linguists, psychologists, sociologists, educators, and speech researchers. Exploration of the background literature and practical implications of the problems raised by social class and ethnic differences in language. Offered at least once a year. Credits: 3

**EDF 634 - Teaching the At-Risk Student**

Issues and concerns and programs in implementing effective programs for students from at-risk backgrounds. Offered at least once a year. Credits: 3

**EDF 635 - Survey of Urban Education**

Study of the historical, sociological, and educational bases of urban education. Credits: 3

**EDF 650 - Classroom Management (K-12)**

An examination of the differentiation of the terms "discipline" and "classroom management." Review and study of such interrelated subjects as authority, rules, power, responsibility, types and degrees of control, and the many related attitudes, standards, and prejudices that combine to complicate the problem. Offered at least once a year. Credits: 3

**EDF 653 - School Learning**

Consideration of learning situations in the light of psychological findings and concepts. Development of a theory of learning and its applications to the teaching of attitudes, skills, concept formation, and understanding. Offered at least once a year. Credits: 3

**EDF 660 - Educational Inquiry and Evaluation**

Introduces educational inquiry and explores the impact it can have on educational institutions. Investigates educational evaluation. Provides foundational research knowledge necessary for Capstone courses ED 693 and ED 695. Offered every semester. Credits: 3

**EDF 661 - Educational Testing and Measurement**

Study of school testing, selection, and evaluation of norm-based and criterion-based instruments, informal assessment, norm-based profiles, descriptive statistical analysis, and survey research. Review of ethical and legal issues in testing minority and special needs populations. Offered every semester. Credits: 3

**EDF 671 - Educational Policy and Practice**

Course offers an advanced examination of social foundations theories and perspectives in education in preparation for an analysis and critique of selected policy related issues and practices in U.S. education. Offered every semester. Credits: 3

**EDF 672 - Social/Cultural Foundations of Education**

Examines education as a social and cultural phenomenon. Explores the implications of this perspective on educational experience in general and the processes of teaching and learning in particular. Offered every semester. Credits: 3

**EDF 675 - Cultural and Educational Foundations of Ecological Issues**

The learner will develop an understanding of the intimate connection between social justice, environmental issues, and education through examination of the historical and philosophical foundations of western culture and education and how these may undermine or enhance sustainable and equitable relations between humans and other living systems. Course offered fall and spring/summer semesters. Credits: 3

**EDF 676 - Introduction to Place-Based Education**

Place-based education is the process of using the local community and environment as the basis for curriculum and learning. This course will assist students in understanding the fundamental principles and practices of place-based education that nurture academic skills, strong ties to community, civic engagement, local-global connections, and sustainable practices. Course offered winter and spring/summer semester. Credits: 3

**EDF 677 - Citizenship, Activism, and Community Problem-Solving**

Academic concepts learned in previous courses will be applied to address concrete social and environmental problems in real-world community contexts. Students will collaborate with community organizations, place-based education programs, or other initiatives to utilize their knowledge and skills in working with others to address issues specific to their place. Offered fall and spring/summer semesters. Prerequisites: EDF 675 and EDF 676. Credits: 3

**EDF 680 - Special Topics in Foundations**

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

**EDF 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**EDF 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**EDF 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

## Course Listings and Descriptions

### **EDF 699 - Independent Study in Foundations**

Individual study of a theoretical or applied problem in education. Offered each semester. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 3

### **EDH 181 - Navigating College Success**

Introduction to recommended academic, social and personal skills, highlighting the expectations and needs of successful college students in the context of Grand Valley State University's diverse community. Offered fall and winter semesters. Credits: 1

### **EDH 182 - Strategies for Academic Success**

Examines factors that influence the academic performance of college students. Identifies social, affective, and cognitive barriers negatively impacting learning. Introduces strategic approaches for improving academic performance, which are tailored to individual students, implemented and evaluated. Highlights university resources for supporting academic performance. Offered every semester. Credits: 2

### **EDH 647 - Theories of College Student Development**

This course examines the major student development theories used by college student affairs practitioners in the higher education environment. Offered at least once a year. Credits: 3

### **EDH 648 - The Adult Learner**

Emerging theories and techniques for teaching the adult learner. Focus upon the adult's deliberate efforts at learning, developing, growing, and changing, and learning difficulties. Offered at least once a year. Credits: 3

### **EDH 650 - Materials and Methods for Adult and Continuing Education**

Materials and methods of teaching the adult learner in school and nonschool settings. Offered at least once a year. Credits: 3

### **EDH 651 - Higher Education and Student Affairs Functions**

Provides an overview of the historical development of American higher education and an introduction to the evolution of student affairs functions in the academy. Offered at least once a year. Credits: 3

### **EDH 652 - The American College Student**

Examines the characteristics, values, expectations, and needs of contemporary college students in the context of student development theory. Offered at least once a year. Credits: 3

### **EDH 653 - Administration of Student Affairs Programs**

Examines the philosophy, organization and delivery of support programs, services and co-curricular learning experiences for college students. Offered at least once a year. Prerequisite: EDH 651. Credits: 3

### **EDH 654 - Student Affairs Administrators and the Law**

Provides an overview of the legal issues and challenges that confront student affairs administrators in the higher education environment. Offered at least once a year. Prerequisite: EDH 651. Credits: 3

### **EDH 655 - Intervention Strategies for Student Development**

Examines the interventions used by student affairs practitioners to facilitate students' learning about themselves, about other people, and about ideas. Offered at least once a year. Prerequisite: EDH 647. Credits: 3

### **EDH 656 - Organization and Administration in Higher Education**

Theory and models of organizational structure, administrative behavior, funding, governance and management of higher education; processes and factors influencing institutional decision-making and higher education planning. Offered once per year. Prerequisite: EDH 651. Credits: 3

### **EDH 657 - The Community College**

The community college will explore the organizational behaviors and administrative practices unique to community colleges. Drawing on current and historical research, the course will examine educational philosophy and curricular objectives, student demographics, faculty and staff development, governance and leadership, and financial management of community colleges. Offered once per year. Prerequisite: EDH 651. Credits: 3

### **EDH 658 - Critical Issues in Higher Education**

Critical issues in higher education will provide a study of contemporary higher education and will include an analysis of the changing needs and demands of society and how they impact higher education. Attention is centered on issues emphasizing organization and administration, curriculum, college students, faculty, and retention. Offered once per year. Credits: 3

### **EDH 680 - Special Topics in Higher Education**

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

### **EDH 685 - Practicum/Graduate Field Experience in Higher Education I**

Field-based experience designed to provide clinical experience for graduate students. Each practicum shall be no less than the minimum requirements set forth by state and accrediting agencies and must be with approval by the appropriate program personnel. All practica will require seminars. Offered at least once a year. Prerequisites: Candidates must apply separately to the College of Education by February 15 for spring/summer, May 15 for fall semester and by September 15 for winter semester. Credits: 3

### **EDH 686 - CSAL Practicum/Graduate Field Experience II**

Field-based experience designed to provide clinical experience for graduate students. Each practicum shall be no less than the minimum requirements set forth by state and accrediting agencies and must be approved by the appropriate program personnel. All practica will require seminars. Offered twice per year. Prerequisite: EDH 685. Credits: 3

### **EDH 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **EDH 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **EDH 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **EDH 699 - Independent Study in Higher Education**

Individual study of a theoretical or applied problem in education. Offered each semester. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 3

### **EDI 330 - Teacher Assisting - Elementary**

Half-day field experiences as a teacher assistant in an elementary classroom for a minimum of 12 weeks; additional days provided for professional development and training to total 15 weeks. Includes a two-hour weekly seminar covering content area methodology and instructional strategies. Offered fall and winter semesters. Students must follow the holiday break schedule designated by the K-12 district for their school placement/assignment, not the GVSU holiday break schedule. Prerequisite: Admission to the College of Education. Corequisites: EDF 310 and EDR 320. Credits: 5

**EDI 331 - Methods and Strategies of Secondary Teaching**

Half-day field experiences as teacher assistant in a secondary classroom for a minimum of 13 weeks. Includes two-hour weekly seminars covering content area methodology (with major field advisor) and instructional strategies. Offered fall and winter semesters. Note: Music majors complete Teacher Assisting fall semester only. Students must follow the holiday break schedule designated by the K-12 district for their school placement/assignment, not the GVSU holiday break schedule. Prerequisite: Admission to the College of Education. Corequisites: EDF 310 and EDR 321. Credits: 5

**EDI 337 - Introduction to Learning and Assessment**

An introductory course for preservice educators focusing on P-12 classroom assessment beliefs and practices. Instruction focuses on understanding the learning theories within which the work in classroom assessment occurs, understanding and applying specific assessment methods, and communicating assessment results about P-12 student achievement. Offered every semester. Credits: 3

**EDI 380 - Special Topics in Instruction and Curriculum**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

**EDI 399 - Independent Study in Instruction and Curriculum**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

**EDI 430 - Student Teaching, Elementary**

Full-time student teaching with weekly seminar discussions of classroom issues and personal reflection. Offered fall and winter semesters. Prerequisites: Advancement to student teaching and positive recommendations from prior fieldwork. Students must follow the holiday break schedule designated by the K-12 district for their school placement/assignment, not the GVSU holiday break schedule. Credits: 10

**EDI 431 - Student Teaching, Secondary**

Secondary. Full-time student teaching with a two-hour weekly seminar covering pedagogy, methodology, and instructional best practices. Students must follow the holiday break schedule designated by the K-12 district for their school placement/assignment, not the GVSU holiday break schedule. Corequisite: EDI 432, advancement to student teaching, and positive recommendations from prior fieldwork. Credits: 8

**EDI 432 - Student Teaching, Secondary Content Practicum**

Secondary Content Practicum. Full-time student teaching with three content area seminars covering pedagogy, methodology, and instructional best practices taken simultaneously with EDI 431. Offered fall and winter semesters. Prerequisite: Advancement to student teaching and positive recommendations from prior fieldwork. Corequisite: ED 431. Credits: 2

**EDI 499 - Independent Study in Instruction and Curriculum**

Independent supervised research and study in special areas of education, prearranged with a faculty sponsor and approved by the director. Offered upon demand. Credits: 1 to 3

**EDI 610 - Advanced Studies in Child Development Ages 0-8**

Theories and research methods and findings related to the intellectual, emotional, perceptual, social, and personality development of the young school child. Offered at least once a year. Credits: 3

**EDI 611 - Assessment of the Young School Child**

Instructional assessment procedures and prescriptive techniques for students pre K-6. Offered at least once a year. Credits: 3

**EDI 612 - Curriculum Development for Early Childhood Education**

Theoretical background and content of curricular approaches in early childhood programs. Analysis and evaluation of early childhood curricular materials. Experience in designing and sequencing activities for young children. Offered at least once a year. Credits: 3

**EDI 613 - Administration and Supervision of Early Childhood Education**

A study of the organization, administration, and skills required in the direction of early childhood education programs. Review of the pertinent federal, state, and local regulations and support services. Offered at least once a year. Credits: 3

**EDI 614 - Infant and Toddler Development and Curriculum**

This course will include the history of education and research on the care of infants and toddlers, intervention activities for special needs, instructional strategies, developing and establishing collaborative partnerships with families, and designing and implementing developmentally appropriate environments for infants and toddlers (ages: conception through four-years-old). Offered each semester. Credits: 3

**EDI 630 - Teaching Mathematics: K-8**

Study of content and instruction pedagogies used in teaching elementary and middle school mathematics. Consideration of the principles involved in developing a mathematics program and quality materials for classroom use. Offered at least once a year. Credits: 3

**EDI 631 - Teaching Science: K-8**

Designed to prepare teachers to teach elementary and middle level science to all students. Emphasizes planning and teaching science, including laboratory inquiry and hands-on activities. Integration of process and content objectives, activities, and assessment will be addressed. Offered at least once a year. Credits: 3

**EDI 632 - Teaching Creative and Performing Arts**

Explores theories of creativity and their application in the classroom. It provides students with an opportunity to learn more about developing the creative potential of their students within all disciplines and across all levels of education. Offered spring/summer semester. Credits: 3

**EDI 633 - Teaching Social Studies and Diversity**

Emphasizes instructional methods for teaching and integrating social studies, economics, history, civics, geography, and diversity in elementary and middle schools. Focus is on problem solving, critical thinking, and democratic citizenship with strategies for valuing people with differences in learning styles, race, class, culture, gender, and disability. Offered at least once a year. Credits: 3

**EDI 634 - Middle Level Education**

A study of middle-level organization, curriculum, instruction, staffing, subject matter, and school-parent-community interaction as it supports the education and development of early adolescents (ages 9-14). Offered spring/summer semester. Credits: 3

**EDI 635 - Development and Needs of Students**

This course focuses on theories of development in cognitive, social, physical, and emotional domains as they relate to the education of elementary and secondary students. Offered at least once a year. Credits: 3

**EDI 636 - Instruction in Middle and High Schools**

Multiple instructional strategies appropriate for teaching and assessing middle and high school curriculum; methods for addressing individual differences, incorporating students' ideas, developing thinking and problem solving skills, facilitating groups, promoting student responsibility and planning lessons, units, interdisciplinary activities, and experiences that foster achievement of the curriculum. Offered at least once a year. Credits: 3

**EDI 637 - Assessment: K-12 Models and Practices**

Study of standardized and authentic assessments used in K-12 classrooms. Students will define intended learning outcomes, select and construct assessment instruments, evaluate reliability and validity of varied instruments and understand current theory, problems, trends, and issues of assessment. Offered at least once a year. Credits: 3

**EDI 638 - Facilitating School Environments**

Study of research based methodologies related to the establishment of positive school environments that promote academic achievement for all students within a community of learners. Focus on teachers as change agents, leaders, and collaborators. Offered at least once a year. Credits: 3

## Course Listings and Descriptions

### **EDI 639 - Curriculum Development**

A study of the various approaches of curriculum construction and organization in the schools. Examination of principles of curriculum improvement, change, and evaluation. Offered at least once a year. Credits: 3

### **EDI 640 - Fundamentals of Talent Development**

This course prepares students to develop their rationale for differentiation by studying the history of special provisions for talent development and contemporary approaches. It addresses both the cognitive and affective needs of students. Offered at least once a year. Credits: 3

### **EDI 641 - Teaching for Talent Development**

This course covers the principles and practices of designing curriculum that enhances the talents of students. Special attention is given to the development of instructional materials. Offered at least once a year. Credits: 3

### **EDI 680 - Special Topics in Instruction and Curriculum**

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

### **EDI 685 - Practicum/Graduate Field Experience**

Field-based experience designed to provide clinical experience for graduate students. Each practicum shall be no less than the minimum requirements set forth by state and accrediting agencies, and must be with approval by the appropriate program personnel. All practica will require seminars.

#### **EDI 685A Elementary Education**

#### **EDI 685B Secondary Education**

#### **EDI 685C Early Childhood Education**

#### **EDI 685D Educational Differentiation**

Candidates must apply separately to the College of Education by February 15 for spring/summer, May 15 for fall semester, and by September 15 for winter semester. Offered at least once a year. Credits: 3 or 6

### **EDI 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **EDI 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **EDI 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **EDI 699 - Independent Study in Instruction and Curriculum**

Individual study of a theoretical or applied problem in education. Offered each semester. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 3

### **EDI 710 - Instructional Management and Supervision**

Systematic study of theories, models, research and multiplicity of influences on instructional effectiveness, instructional management, and supervision in school districts. The interrelationships of instructional supervision, curriculum alignment, instructional practices, assessment

analysis, and school effectiveness will be explored with attention to characteristics of effective programs and research findings on effective leadership. Offered at least once a year, fall or spring. Credits: 3

### **EDL 650 - Foundations of Special Education Administration**

Theories of educational leadership will be explored. Federal regulations and state rules pertinent to special education programming will be examined. Students will participate in simulations, presentations, and group discussions designed to provide information about, and insight into, effective leadership and management of special education programs and services. Offered at least once a year. Credits: 3

### **EDL 651 - Administration of Special Education Programs and Services**

Students will use knowledge of laws and rules, leadership/management theory and practices, and problem solving skills to engage in simulations, presentations, and group discussions related to the delivery of special education programming. Students will develop a personal philosophy of leadership statement based on review of scholarly literature and self-examination. Offered at least once a year. Prerequisite: EDL 650. Credits: 3

### **EDL 652 - Curriculum and Instruction Leadership in Special Education Administration**

An examination of the leadership role of the special education administrator in curriculum, instruction, and assessment for students with disabilities. Students will engage in the study of current state curriculum content standards, the delivery of curriculum through effective instruction, and the assessment of student achievement. May be combined with EDL 666. Offered at least once a year. Credits: 3

### **EDL 653 - Special Education Law**

Federal and state laws governing the administration of special education programs and services will be discussed in detail. Students will examine the impact and application of the laws, and strategies for complying with them in the P-12 setting. Credits: 3

### **EDL 654 - Special Education Finance**

Review and analysis of special education funding sources and formulas at the local, state, and national levels. School finance and special education funding will be highlighted. Financial management will be discussed with a focus on budgeting, accounting, auditing, reporting, support services, and personnel. Credits: 3

### **EDL 665 - Educational Leadership**

Students will participate in a variety of self-assessment activities, simulations, and group discussions designed to provide information about and insight into effective leadership in schools. Offered at least once a year. Credits: 3

### **EDL 666 - Curriculum Leadership**

Study of a variety of organizational development approaches used in leading staff through curriculum development. Topics include preplanning, principles of curriculum decision-making, effective schools research, participatory strategies for curriculum problem solving, and the process of change. Emphasis on leadership skill building. May be combined with EDL 652. Offered at least twice a year. Credits: 3

### **EDL 667 - Elementary Supervision and Evaluation**

Emphasis on enabling leaders to generate the tools to improve elementary schools. Topics include organizational development, problem solving, goal setting, organizational change, employee motivation and communication, resolution of conflicts, and clinical supervision and evaluation. Analysis of topics will emphasize effects research and descriptive theory. Offered at least once a year. Credits: 3

### **EDL 668 - Personnel Administration**

Responsibilities in staff supervision, staffing needs, certification, selection, assignment, promotion, salaries, retirement, absences, teachers' organizations, grievances, collective bargaining, and supervision of student teachers. Offered once a year. Credits: 3

### **EDL 669 - School Finance**

The principles and theory underlying finance practice in public schools. Offered at least once a year. Credits: 3

**EDL 670 - School Law**

General legal principles and laws that affect general and special education. Emphasis on sources and scope of school law, legal rights and responsibilities of teachers, pupils, and taxpayers. Procedural, historical, and jurisprudential dimensions of American law are stressed. Offered at least once a year. Credits: 3

**EDL 671 - Secondary Supervision and Evaluation**

Emphasis on giving leaders the tools to make ongoing improvement in secondary schools. Topics include organizational development, problem solving, goal-setting, organizational change, employee motivation, and communication, resolution of conflicts, and clinical supervision and evaluation. Analysis of topics will emphasize effects research and descriptive theory. Offered at least once a year. Credits: 3

**EDL 677 - School and Community Relationships**

This course is designed to assist school leaders in developing an effective school community relations plan. Emphasis will be on creating effective communications formats to address internal and external populations. Candidates will be actively involved in the process of creating positive communication plans that will help gain support for the school's program. Credits: 3

**EDL 680 - Special Topics in Leadership**

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

**EDL 685 - Practicum/Graduate Field Experience**

Field-based experience designed to provide clinical experience for teaching or administration majors. Each practicum shall be no less than the minimum requirements set forth by state and accrediting agencies, and must be with approval by the appropriate program personnel. All practica will require seminars. Not to be used for initial certification.

**EDL 685A K-12 Principal****EDL 685B Special Education Supervisor****EDL 685C Special Education Director**

Candidates must apply separately to the College of Education by February 15 for spring/summer, May 15 for fall semester, and by September 15 for winter semester. Offered at least once a year. Credits: 3 to 6

**EDL 687 - Administrative Internship**

The administrative internship provides significant opportunities for students to synthesize and apply the knowledge and practice gained in the classroom to real situations in authentic school settings, planned and guided cooperatively by the instructor and administrative mentor. Prerequisites: 21 credit hours (three in Foundations and 18 in emphasis area) and EDL 685. Credits: 3

**EDL 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**EDL 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**EDL 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites:

Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

**EDL 699 - Independent Study in Leadership**

Individual study of a theoretical or applied problem in education. Offered each semester. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 3

**EDL 700 - Educational Leadership and Change**

This course is designed to develop understanding and skills associated with generating a school culture that is responsive to change/reform and embodies the philosophical underpinnings of systemic change. Students will research and discuss theories of organizational change and explore various strategies to bring these theories into practice through administrative leadership. Offered at least once a year. Credits: 3

**EDL 705 - Organizational Behavior, Ethics and Decision-Making**

This course discusses multiple approaches to the study of educational organizations including the application of organizational theory to improve decision-making and organizational outcomes. It examines the human behavior in educational organizations. The course also provides students with an understanding of the moral and ethical dimensions of leadership in education. Offered at least once a year. Credits: 3

**EDL 715 - Data-Based Decision-Making and Technology**

Principles of data-based decision-making and their applications in educational settings will be explored through readings and case studies. Technology's use in addressing problems in management and instruction will be included. Offered at least once a year. Credits: 3

**EDL 720 - Organizational and Community Relations**

This course is designed to provide a thorough examination of the school district as an organization and its interaction with the community. Consideration will be given to the internal and external "communities" and the relationship between and among these entities within the school district. Offered at least once a year. Credits: 3

**EDL 725 - Educational Law, Policy, and Practice**

This course will review the legal framework of education and various legal issues that are imperative for educational leaders to be able to identify, understand, and incorporate within their administrative responsibilities. Emphasis is placed on the legal framework with a focus on discipline, equity, and personnel issues. Offered at least once a year. Credits: 3

**EDL 740 - The Superintendency**

This course will provide a broad view of the roles and responsibilities of the Superintendent of Schools. Areas of study include developing a vision; establishing policies; decision-making; establishing relationships with the Board of Education, staff, students, and community; curriculum/instruction; human resources; politics and education in a larger context. Offered at least once a year. Credits: 3

**EDL 742 - School Board Relations**

This course focuses on the major factors that influence the relationship between the Board of Education and the superintendent of schools. Areas examined are the nature of policy development and administration, the influence of external factors on local control, and the discretionary authority boards grant their superintendents. Offered fall semester. Credits: 3

**EDL 744 - Educational Finance and Economic Issues**

This course emphasizes theories of economics, finance, and taxation as applied to educational complexities pervasive in the fiscal management and operations of public schools. It focuses on current political and economic issues affecting public schools and is designed to promote thoughtful decision-making by school administrators with respect to school financial matters. Offered at least once a year. Credits: 3

**EDL 770 - Leadership Theory into Practice**

This course is the culminating experience for the educational specialist in leadership degree. It includes an internship in a school district, practitioner

## Course Listings and Descriptions

research, and development of a professional portfolio. Offered at least once a year. Credits: 3

### **EDL 780 - Special Topics in Educational Leadership**

Advanced topics in educational leadership areas not ordinarily dealt with in other courses will be presented and explored. Offered as needed. Credits: 1 to 3

### **EDL 799 - Independent Study in Educational Leadership**

Student initiated advanced study or research in educational leadership. The student and faculty supervisor agree on the scope of the study, its components, and methods of evaluation. Offered every semester. Prerequisite: Admission to educational specialist in leadership degree. Credits: 1 to 3

### **EDR 317 - Class-conscious: Popular Culture, Schooling, and Identity**

Challenges students to think critically, collaborate, and integrate multiple disciplines as they explore the role that popular culture and schooling play in forming their identities. Students will use critical reading skills to analyze films, television, music, and other aspects of popular culture and compare to prominent theories and their experiences. Part of the Identity Issue. Course offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **EDR 320 - Reading: Assessment and Instruction**

This course includes the study of literacy assessment and instructional practices useful in guiding developmentally appropriate learning for children K-6. Prerequisite: Admission to the College of Education. Credits: 3

### **EDR 321 - Content Area Literacy**

This course will help secondary preservice teachers learn strategies, theory, and research that support literacy in all disciplines. Students will engage in class discussions, prepare demonstrations, and in other ways explore effective methods for helping their students read, write, listen, speak, view, and represent in meaningful ways. Offered fall and winter semesters. Prerequisite: Admission to the College of Education. Corequisites: EDF 310 and EDI 331. Credits: 3

### **EDR 380 - Special Topics in Literacy Studies**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

### **EDR 499 - Independent Study in Literacy Studies**

Independent supervised research and study in special areas of education, prearranged with a faculty sponsor and approved by the director. Offered upon demand. Credits: 1 to 3

### **EDR 602 - Teaching English Language Learners Across Content**

Provides elementary and content area teachers with the skills and knowledge to effectively teach in a classroom setting where there are linguistically diverse learners. Participants will examine and apply strategies and skills for delivering instruction in the subject matter content areas to a variety of learners. Offered fall and spring/summer semesters (at least once a year). Prerequisite: Admission in the College of Education graduate programs. Credits: 3

### **EDR 603 - Bi-literacy Development**

This course provides students with the knowledge and skills to explore and understand aspects of biliteracy development. It also seeks to explore specific biliteracy educational policy issues affecting classroom practice. Methods for providing effective biliteracy instruction will be taught. Offered winter semester at least once a year. Prerequisite: Admitted to a graduate program in education. Credits: 3

### **EDR 612 - Reading Assessment: Elementary Teacher**

This course examines classroom appropriate literacy assessments and differentiated instruction methods useful for meeting the needs of a diverse classroom student population grades K-8. The course content meets the state school code PA 118. Offered fall and winter semesters. Prerequisite: A K-8 teaching certificate is required to take this course. Credits: 3

### **EDR 613 - Reading Assessment: Secondary Teacher**

This course examines classroom appropriate literacy assessments and differentiated instruction methods useful for meeting the needs of a

diverse classroom student population grades 6-12. The course content meets the state school code PA 118. Offered fall and winter semesters. Prerequisite: A 6-12 teaching certificate is required to take this course. Credits: 3

### **EDR 620 - English as a Second Language Methodologies**

This course is designed to provide theory and application of second-language learning and teaching strategies for English learners (ELs). There is a field assignment of 25 hours required for this course. Offered each semester. Credits: 3

### **EDR 621 - Current Issues and Trends in Literacy**

Current Issues and Trends in Literacy is an advanced study of research in language acquisition and cognitive development. The course explores theoretical constructs underlying an interactive, intertextual view of literacy. Historical and multicultural trends regarding beliefs about the reader, the text, and contexts for instruction will be explored. Offered at least once a year. Prerequisite: Acceptance into a graduate certification program. Credits: 3

### **EDR 622 - Developmental Literacy for Children**

Developmental literacy for children is the study of the nature of the reading process and the analysis of factors influencing literacy development. Instruction and assessment appropriate to the developmental levels of children will be addressed. Communication with parents and professional development of teachers will also be explored. Offered at least once a year. Prerequisite: Acceptance into a graduate certification program. Credits: 3

### **EDR 623 - Developmental Literacy for Adolescents**

Course examines the developmental nature of literacy and its integration and application into secondary school curricula. Focus is on the integration among the variables: student prior knowledge, text, teaching methods, and strategies to enhance comprehension and learning. This course is appropriate for middle school and secondary teachers. Offered at least once a year. Prerequisite: Acceptance into a graduate certification program. Credits: 3

### **EDR 624 - Literature for Children**

Course examines the role of the young reader in appreciating literature, the instructional practices involving the integration of a variety of genre across content areas, and the issues associated with using literature in the elementary classroom. Offered at least once a year. Credits: 3

### **EDR 625 - Literature for Adolescents**

Course examines the role of the young adult reader in appreciating literature, the instructional practices involving the integration of a variety of genre across content areas, and the issues associated with using literature in the middle and high school classroom. Offered at least once a year. Credits: 3

### **EDR 626 - Literacy Assessment and Instruction**

Field-based literacy course that examines research and theory, differentiated instruction, and assessment practices appropriate for meeting struggling K-12 student literacy needs. Designed to provide state-required clinical experience. This course meets K-12 teacher certification renewal requirements. Separate application to College of Education required, see application for due dates. Prerequisites: EDR 621, (EDR 622 or EDR 623), permit required. Credits: 3

### **EDR 627 - Literacy Strategies for Content Areas**

Course addresses methods and materials for assisting students' reading, studying, and learning in content area classrooms. Emphasis is placed on approaches that facilitate learning of content and process across the curriculum. This course is appropriate for elementary and middle school teachers. Secondary teachers should take EDR 623. Offered at least once a year. Credits: 3

### **EDR 628 - Curriculum and Materials for Language Arts**

Course examines underlying theories, content standards, and instructional programs for the integration of the language arts. It will explore the relationship between the language arts, assessment and evaluation, and the relationship to professional development. Offered at least once a year. Credits: 3

**EDR 629 - Teaching Reading to Adults**

Analysis of the concept of illiteracy and characteristics of the adult learner. Methods and materials for teaching reading to the adult will be examined and evaluated. Offered every other year. Credits: 3

**EDR 631 - Teaching Writing**

Course involves the study of current writing theory and its implications for teaching writing. It addresses the application of theory in classroom teaching and work on the student's own writing. Offered at least once a year. Prerequisite: Teaching experience or acceptance into a graduate certification program. Credits: 3

**EDR 634 - Linguistics for Teachers**

Focuses on language systems in instructional contexts and deals with U.S. English structure and language sound patterns emphasized in the four language macro-skills (i.e., reading, writing, speaking, and listening), grammar, pragmatics, and semantics as taught to speakers of other languages in the U.S. Course offered winter semester. Prerequisite: Admitted to the TESOL or reading program. Credits: 3

**EDR 635 - Sociolinguistics: Language, Society, and Schooling**

Examines the role that social interactions and cultural traditions play in language, learning, and schooling with a specific focus on issues surrounding diversity, individual and cultural identity and values, and the relationship between home and school language. Course offered winter semester. Prerequisite: Admission to a College of Education graduate program. Credits: 3

**EDR 680 - Special Topics in Literacy Studies**

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

**EDR 685 - Practicum for Reading Teachers**

Practicum experience that provides the candidate with the opportunity to implement into practice all knowledge, theory, and research completed in the M.Ed. literacy studies program with faculty guidance. Completion of emphasis area and separate application to College of Education is required. Offered at least once a year.

**EDR 685A - Practicum for Reading Teachers****EDR 685B - TESOL**

Prerequisites: Not to be used for initial certification. Completion of emphasis area. Permit required. Credits: 3

**EDR 687 - Practicum for Reading Specialists**

Practicum experience for reading specialist candidates to develop reading specialist and literacy coaching techniques important to the work in schools. Practicum will meet/exceed minimum requirements set forth by the university, state, and accrediting agencies. Completion of emphasis area and separate application to College of Education is required. Offered spring/summer semester. Prerequisite: Completion of emphasis area courses. Credits: 3

**EDR 689 - Program Development and Administration**

Advanced practicum for reading specialist endorsement. Practicum includes current views, insights, and theory concerning PK-12 literacy program administration, professional development practices and reading specialist responsibilities. All practica require seminars. Separate application to the College of Education required, see application for due dates. Offered fall and winter semesters. Prerequisite: EDR 687. Permit required. Credits: 3

**EDR 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**EDR 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application

required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**EDR 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

**EDR 699 - Independent Study in Literacy Studies**

Individual study of a theoretical or applied problem in education. Offered each semester. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 3

**EDS 332 - Methods and Strategies of Special Education Teaching**

Half-day field experiences as a teacher assistant in a special education classroom for a minimum of 13 weeks, additional weeks provided for professional development and training to total 15 weeks. Includes a two-hour weekly seminar covering content area methodology and instructional strategies. Offered fall semester. Prerequisite: Admission to College of Education. Corequisites: EDS 361, EDS 495, EDF 310. Students must earn a minimum grade of B- to pass this field experience. In the event that a student is removed from EDS 332, withdrawal from EDS 361 and EDS 495 is required. Credits: 5

**EDS 360 - Language and Reading Development**

Study of materials and curricula for use in assisting the special needs student in development of speech, language, reading, and writing. Offered fall semester. Prerequisite: Admission to the College of Education (program outlines specify corequisites). Credits: 3

**EDS 361 - Principles, Processes, and Methods in Special Education**

Processes and methods involved in identification, assessment, placement, programming, instruction, and evaluation of learning needs. Offered fall and winter semesters. Prerequisite: Admission to the College of Education. Corequisites: EDS 495, EDF 310, EDS 332. Successful completion of field experience (EDS 332) is required. In the event that a student is removed from EDS 332, withdrawal from EDS 361 is required. Credits: 3

**EDS 378 - Universal Design for Learning: Elementary**

Universal design for learning is a means of improving students with special needs access to the general education curriculum. Candidates will learn universal design principles regarding multiple means of: representation, engagement, and expression and instructional practices specifically designed for elementary classrooms. Offered each semester. Prerequisite: Sophomore standing. Credits: 3

**EDS 379 - Universal Design for Learning: Secondary**

Universal design for learning is a means of improving students with special needs access to the general education curriculum. Candidates will learn universal design principles regarding multiple means of: representation, engagement, and expression and instructional practices specifically designed for secondary classrooms. Offered each semester. Prerequisite: Sophomore standing. Credits: 3

**EDS 380 - Special Topics in Special Education**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

**EDS 399 - Independent Study in Special Education**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

**EDS 441 - Curriculum for CI**

Study of the curricula used for the different levels of instruction. Includes prescribing materials appropriate for remedial activities, lesson and unit planning, and instructional techniques. Offered winter semester. Prerequisites: Successful completion of prior coursework and permission of advisor. Corequisite: EDS 471. Successful completion of field

## Course Listings and Descriptions

experience (EDS 471) is required. In the event that a student is removed from EDS 471, withdrawal from EDS 441 is required. Credits: 3

### **EDS 442 - Curriculum for EI**

Study of the curricula used for the different levels of instruction. Includes prescribing materials appropriate for remedial activities, lesson and unit planning, and instructional techniques. Offered winter semester. Prerequisites: Successful completion of prior coursework and permission of advisor. Corequisite: EDS 472. Successful completion of field experience (EDS 472) is required. In the event that a student is removed from EDS 472, withdrawal from EDS 442 is required. Credits: 3

### **EDS 463 - Educational Practices and Procedures: Cognitive Impairment**

In-depth exploration of strategies used throughout the life span for persons with cognitive impairments. Includes: accurate and unbiased assessment, creation of learning environments that foster enhanced life skills, communication skills and academic success, and development of transition services that span school and community settings. Offered winter semester. Prerequisite: Successful completion of prior coursework. Credits: 3

### **EDS 464 - Educational Practices and Procedures: Emotional Impairment**

In-depth exploration of strategies used throughout the life span for persons with emotional/behavior disorders. Includes: accurate and unbiased assessment, creation of learning environments that foster good mental health and academic success, and development of behavior management programs that span school and community settings. Offered winter semester. Prerequisite: Successful completion of prior coursework. Credits: 3

### **EDS 471 - Directed Teaching in Cognitive Impairment**

Student teaching in a classroom with students who have cognitive impairments. Accompanying seminars on methods of teaching and the organization and development of curriculum for students with cognitive impairments. Offered winter semester. Prerequisites: Successful completion of prior coursework and positive recommendations from prior fieldwork. Corequisite: EDS 441. Students must earn a minimum grade of B- to pass this field experience. In the event that a student is removed from EDS 471, withdrawal from EDS 441 is required. Students must follow the holiday break schedule designated by the K-12 district for their school placement/assignment, not the GVSU break schedule. Credits: 9

### **EDS 472 - Directed Teaching in Emotional Impairment**

Student teaching in a special education classroom under professional supervision with accompanying seminar on materials and curriculum for students with emotional impairments. Offered winter semester. Prerequisites: Successful completion of prior coursework and positive recommendations from prior fieldwork. Corequisite: EDS 442. Students must follow the holiday break schedule designated by the K-12 district for their school placement/assignment, not the GVSU break schedule. Students must earn a minimum grade of B- to pass this field experience. In the event that a student is removed from EDS 472, withdrawal from EDS 442 is required. Credits: 9

### **EDS 495 - Diagnostic and Interpretive Procedures**

Study of formal and informal assessment procedures with emphasis on test interpretation as it relates to performance objectives for exceptional students. Offered fall semester. Prerequisite: Admission to the College of Education. Corequisites: EDS 361, EDF 310, EDS 332. Successful completion of field experience (EDS 332) is required. In the event that a student is removed from EDS 332, withdrawal from EDS 495 is required. Credits: 3

### **EDS 497 - Educational Interventions: Cognitive Impairment**

Study of the educational interventions appropriate for students with cognitive impairments. Offered winter semester. (Program outline specifies corequisites.) Credits: 3

### **EDS 498 - Educational Interventions: Emotional Impairment**

Study of the educational interventions appropriate for students with emotional impairments. Offered winter semester. (Program outline specifies corequisites.) Credits: 3

### **EDS 550 - Preteaching and Methods of Teaching Special Education**

A supervised field experience of at least six weeks with exceptional children teaching in the area of C.I., L.D., or E.I. students must apply by February 15 for spring/summer and fall semesters. Credits: 6

### **EDS 609 - Emotional Impairments**

A study of the characteristics associated with emotional impairments in children and adolescents. Emphasis is on identification, intervention, and collaboration with families and service providers. Offered winter semester. Credits: 3

### **EDS 610 - Studies in Emotional Impairment**

Study of several behavior management techniques that are commonly used by professionals dealing with students who have behavior/emotional problems. Techniques include life space interview, reality therapy, various operant strategies, and surface behavior strategies. Offered at least once a year. Credits: 3

### **EDS 611 - Instructional Practices: Emotional Impairment**

In this course students will learn instructional practices for teaching prosocial skills to children and adolescents considered at risk with challenging behaviors and those with high incidence disabilities. Course offered winter semester. Credits: 3

### **EDS 618 - Studies in Cognitive Impairment**

Intermediate studies in the etiology of cognitive impairments and its implications for teaching strategies and materials. Recommended for students who do not have endorsement in cognitive impairment. Offered in fall semester of odd-numbered years. Credits: 3

### **EDS 619 - Programs for Mild Cognitive Impairment**

This course examines the principles and current trends related to the education of students with mild cognitive impairments. Emphasis will be placed on curriculum development, instructional design, appropriate placement, transition, and utilization of environmental resources. Credits: 3

### **EDS 620 - Programs for Severe Cognitive Impairment**

Advanced study in special education. Offered odd-numbered years. Credits: 3

### **EDS 621 - Assistive Technology in Education**

This course provides participants with an overview of assistive and augmentative technology for students with cognitive impairments. Includes individualized educational programming considerations, use of high/low tech assistive and augmentative devices, internet-based solutions, curriculum integration, and inclusion strategies. Offered fall semester of even-numbered years. Credits: 3

### **EDS 622 - Assessment for Placement and Program: CI**

This course provides exposure to assessment techniques and diagnostic procedures specifically used with individuals with cognitive impairments and the development of the Individualized Education Program (IEP). Offered spring/summer semester of even-numbered years. Credits: 3

### **EDS 623 - Collaboration in Special Education**

This course will provide theory, principles, and procedures for fostering collaborative partnerships among families and professionals that lead to mutual empowerment and positive outcomes for individuals with cognitive impairments. Offered winter semester of odd-numbered years. Credits: 3

### **EDS 625 - Inclusive Practices**

Research validated planning and instructional routines designed for and tested in inclusive classrooms will be presented. Further, validated teaching approaches and curriculum designed for students with high incidence disabilities will be taught. Offered at least once a year. Credits: 3

### **EDS 627 - Instructional Practices: Technology**

In this course, students will learn about instructional and assistive technologies researched and developed to enhance the learning of children and adolescents with high incidence disabilities. Offered fall and winter semesters. Credits: 3

**EDS 629 - Transition Practices**

A study of the development of attitudes, skills, and supports that contribute to successful transitions of children and adolescents with disabilities. Offered fall semester. Credits: 3

**EDS 636 - Diagnostic and Interpretative Procedures**

Review of evaluative instruments used for identification and programming for exceptional persons. Offered at least twice a year. Credits: 3

**EDS 637 - Explicit Language Instruction**

Evidence-based practices for assessing and explicitly teaching foundational listening, speaking, reading, and writing skills to English language learners and students with high-incidence disabilities. Offered fall and winter semesters. Credits: 3

**EDS 638 - Instructional Practices: Learning Disabilities II**

In this course, students will learn instructional practices for teaching reading, writing, mathematics, and social skills to children and adolescents with high incidence disabilities. Offered fall and winter semesters. Credits: 3

**EDS 640 - Diagnostic-Teaching Clinic**

In this clinic-based experience, each student will learn to apply diagnostic and interpretive procedures and instructional practices with a child with learning difficulties under the direct supervision of university faculty. Offered fall and winter semesters. Credits: 3

**EDS 646 - Family and Community Collaboration in Early Childhood Education**

Remedial and preventive counseling strategies for parents of young children birth through age 8. Preparation for assisting parents in settings that include parent education, atypical children, developmentally diverse children, and conditions requiring assistance from other professionals. Offered at least once a year. Credits: 3

**EDS 647 - Preschool Special Needs Child**

Research implications, teaching strategies, and curricula for the instruction of special-needs infants and preschool children. Offered at least once a year. Credits: 3

**EDS 652 - Foundations of Special Education**

Study of the characteristics of exceptional students. Research-based effective instructional processes needed to provide the most appropriate education for meeting the needs of exceptional students in the least restrictive environment will be emphasized. Offered at least once a year. Credits: 3

**EDS 680 - Special Topics in Special Education**

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

**EDS 685 - Practicum/Graduate Field Experience**

Field-based experience designed to provide clinical experience for teaching or administration majors. Each practicum shall be no less than the minimum requirements set forth by state and accrediting agencies, and must be with approval by the appropriate program personnel. All practica will require seminars. Not to be used for initial certification. Offered at least once a year.

**EDS 685 A Emotional Impairment****EDS 685 B Cognitive Impairment****EDS 685 C Learning Disabilities****EDS 685 D Early Childhood Developmental Delay****EDS 685 E Autism**

Credits: 3 or 6

**EDS 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**EDS 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**EDS 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

**EDS 699 - Independent Study in Special Education**

Individual study of a theoretical or applied problem in education. Offered each semester. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 3

**EDT 312 - Children and Technology**

Focused on the impact technology in its many forms is having on children, ages 2-12, including pre-school uses of technology, as well as incorporation of technology into instruction and assessment. Explores issues related to children's participation in an increasingly digital society within the context of development, education and society. Offered fall and winter semester. Part of the Information, Innovation, and Technology Issue. Prerequisite: Junior standing. Credits: 3

**EDT 370 - Technology in Education**

Introduction to technologies used in the classroom. Focus on integrating technologies into the curriculum for teaching and learning. Lab-based practical and hands-on learning is emphasized. Offered every semester. Prerequisites: EDI 330, 331, or EDS 332; EDF 310, and EDR 320 or EDR 321. All may be taken concurrently. Credits: 3

**EDT 380 - Special Topics in Technology**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

**EDT 399 - Independent Study in Technology**

Independent supervised study on selected topics that are not dealt with in depth in other courses. Offered upon sufficient demand. Credits: 1 to 3

**EDT 619 - Curricular Integration of Ed Technology**

Focusing on issues related to integrating educational technology into existing curricula, this course provides extensive experiences using the Internet and other resources for subject matter teaching and learning. Students will investigate learning theory and exemplary uses of technology in teaching and learning in educational settings. Credits: 3

**EDT 620 - Evaluating and Applying Instructional Media**

This course focuses on the evaluation, selection, and use of instructional media and online instructional resources in classroom teaching and learning. Exposure to a variety of educational software applications, as well as resources on the Internet, with a focus on the processes and products of design, evaluation, and implementation of technology-based learning environments. Course offered fall semester. Credits: 3

**EDT 621 - Topics in Educational Technologies**

Advanced study of the issues related to school-wide adoption of technology and the impact on teachers, administrators, and others involved in K-12 education. The course covers a broad range of topics, including theories of learning, ethical uses of technology, funding for technology, information literacy and ubiquitous computing. Offered winter semester. Prerequisite: 12 graduate credits. Credits: 3

**EDT 626 - Assessment/Evaluation with Educational Technology**

The use of educational technology provides opportunities for new forms of assessment and evaluation for student learning. This course focuses on models of educational assessment, strategies for assessment of learning in

## Course Listings and Descriptions

technology-based environments, uses of technology to support diversity and assessment, and alternative forms of assessment made possible with technology supporting student needs. Course offered fall semester. Credits: 3

### **EDT 627 - Technology Integration for Secondary Teachers**

Focusing on issues related to integrating educational technology into secondary curricula, this course provides extensive experiences using the Internet and other resources for subject matter teaching and learning. Students will investigate exemplary uses of technology in teaching and learning in educational settings; learn how to develop and teach online courses; and support subject area learning with available technology. Credits: 3

### **EDT 628 - Digital Video for Instruction**

Explores the role of digital video, including video streaming, in teaching and learning. Examines research on educational applications of video, including multimedia, and provides opportunities for students to develop and integrate digital video products into teaching and learning activities. Offered fall semester. Credits: 3

### **EDT 629 - Online Instructional Design/Development**

This course is designed to provide educators with the ability to create instructional content on the Internet, paying attention to issues salient for instruction. These issues include theory and research in the area of Web-based instruction, online pedagogical design and development, Web design, and use of Web-based learning environments (like Blackboard). Offered winter semester. Credits: 3

### **EDT 634 - Planning/Managing Educational Technology**

Students will examine adoption and integration of educational technology from the standpoint of personnel, planning, and administration of equipment, infrastructure, software, and future developments. Drawing on the published literature on adoption and use of educational technology, and adoption of innovation models, the course addresses the issues related to planning for and managing these technologies in education settings. Credits: 3

### **EDT 635 - Instructional Systems Design**

Comprehensive examination of the process of instructional systems design, aimed at designing effective technology-mediated instruction following a systematic process and adopting a systemic perspective. Offered every semester. Credits: 3

### **EDT 636 - Assessment of Online/Blended Learning**

This course focuses on standards and benchmarks for quality online/hybrid instruction, strategies for assessment of learning in Web-based learning environments, uses of digital media to support diversity and assessment, and evaluation of student learning. Offered every semester. Prerequisites: EDT 629, EDT 635, EDT 685. Credits: 3

### **EDT 680 - Special Topics in Technology**

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

### **EDT 684 - Field Experience - Educational Technology**

Field-based experience designed to provide clinical experience for graduate students. Each field-based experience must be completed with approval by the appropriate faculty advisor. All practica will require participation in online seminar sessions. Offered fall and spring/summer semesters. Prerequisite: EDT 635. Credits: 3

### **EDT 685 - Practicum/Graduate Field Experience**

Field-based experience designed to provide supervised experience for teaching or administration majors. Each practicum shall meet the minimum requirements set forth by accrediting agencies and have the approval of appropriate program personnel. All practica will require participation in online seminars. Not to be used for initial certification. Offered all three semesters. Prerequisites: EDT 619, 620, 621, 626, 629, 634, and 635. Credits: 3

### **EDT 693 - Master's Project**

The student identifies a problem, reviews literature, creates a product based on applicable literature, research or theory that addresses the problem, and develops a plan for implementation and evaluation.

Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required (application deadline: fall - 5/15; winter - 9/15; spring/summer - 2/15), and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **EDT 695 - Master's Thesis**

Involves either theoretical research or empirical research that identifies an issue or question, reviews literature, designs a study, gathers and analyzes data or evidence, and presents interpretations or conclusions. Offered every semester. Prerequisites: 27 credit hours; EDF 660; application required, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **EDT 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **EDT 699 - Independent Study in Educational Technology**

Individual study of a theoretical or applied problem in education. Offered each semester. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 3

### **EGR 100 - Introduction to Engineering**

An introduction to engineering as a career. The major fields of engineering and the typical responsibilities of an engineer are introduced through the use of readings, discussions and presentations. Offered fall semester. Credits: 1

### **EGR 106 - Introduction to Engineering Design I**

A first course in the principles and practice of multi-disciplinary engineering analysis, design, construction, and evaluation. Topics include graphical communication, solid modeling, computer-aided manufacturing, computer programming fundamentals, structured programming, and principles of digital and analog electronics. Professional skills such as teamwork, problem solving, and communication (oral and written) are emphasized. Offered fall and winter semesters. Corequisite: MTH 201. Credits: 3

### **EGR 107 - Introduction to Engineering Design II**

A second course in the principles and practice of multi-disciplinary engineering analysis, design, construction, and evaluation. Topics include graphical communication, solid modeling, computer aided manufacturing, computer programming fundamentals, structured programming, and principles of digital and analog electronics. Professional skills such as teamwork, problem solving, and communication (oral and written) are emphasized. Prerequisites: Grade of C or higher in EGR 106 and grade of C or higher in MTH 201. Credits: 3

### **EGR 180 - Special Topics in Engineering**

Readings, lectures, discussions, or laboratories (or any combination) on specific engineering topics appropriate for freshman engineering students. Offered on sufficient demand. Prerequisites: Variable depending on topic. Credits: 1 to 4

### **EGR 209 - Mechanics and Machines**

Forces and moment, equilibrium, Free Body Diagrams. Introduction of machine elements: gears, belts, chains, shafts. Stress/strain: normal and shear stresses due to bending and torsion. Design and analysis of welds, fasteners: bolts and rivets in engineering structures. Principles of mechanical design: synthesis and selection methods of basic off-the-shelf machine components. Offered fall, spring/summer semesters. Prerequisites: Grade of C or better in MTH 202 and PHY 230. Declared as an engineering major. Credits: 4

### **EGR 214 - Circuit Analysis I**

The first of a two-course sequence in linear circuit analysis. Topics include Ohm's Law, Kirchhoff's Laws, node voltage and mesh current analysis, Thevenin's and Norton's Theorems, superposition, basic operation of

diodes, transistors, operational amplifiers and transformers, capacitance, inductance, and time-domain analysis of first order circuits. Laboratory. (3-0-3) Offered fall and winter semesters. Prerequisites: A grade of C or better in MTH 202 and PHY 230. Declared as an engineering major. Credits: 4

#### **EGR 220 - Engineering Measurement and Data Analysis**

Measurement and data analysis lab that complements STA 220. This course uses hands-on engineering tests and experiments to build understanding of applied statistical analysis. The use of various measurement and data-acquisition tools and data analysis techniques are introduced. Technical writing in the form of lab reports is introduced and emphasized. Offered fall and winter semesters. Prerequisites: MTH 201 and WRT 150 (may be taken concurrently). Corequisite: STA 220. Credits: 1

#### **EGR 223 - Probability and Signal Analysis**

An introduction to probability theory and signal analysis with applications. Topics covered include probability theory, random variables, properties of signals and systems, and applications to modeling physical systems and processes. Includes an active learning component to supplement the theory presented in lecture. Offered winter semester. Prerequisites: A grade of C or better in STA 220, EGR 220; EGR 214 (may be taken concurrently) and MTH 302 (may be taken concurrently). Declared as an engineering major. Credits: 3

#### **EGR 226 - Introduction to Digital Systems**

A first course in the analysis and design of digital systems. Provides an introduction to digital systems and microcontroller programming, Boolean algebra, combinational and sequential logic, microprocessor architecture, C programming for microcontrollers. Laboratory. (3-0-3) Offered fall and winter semesters. Prerequisites: Grade of C or better in EGR 107. Declared as an engineering major or permit. Credits: 4

#### **EGR 250 - Materials Science and Engineering**

The internal structure, composition, and processing of metals, polymers, and ceramics are related to their properties, end use, and performance, and application in engineering. Materials selection exercises are included. Laboratory. (3-0-3) Offered winter and spring/summer semesters. Prerequisites: A grade of C or better in CHM 115, and PHY 234 or PHY 231. Declared as an engineering major. Credits: 4

#### **EGR 257 - Electronic Materials and Devices**

An introduction to solid state electronic materials and devices. Topics include basic quantum mechanics, atomic structure, electrical, magnetic and optical properties of electronic materials, and fundamentals of semiconductor devices including diodes and transistors. Laboratory activities. Offered winter semester. Prerequisites: A grade of C or better in CHM 115, and PHY 231 or PHY 234. Declared as an engineering major. Credits: 4

#### **EGR 280 - Special Topics in Engineering**

Readings, lectures, discussions, or laboratories (or any combination) on specific engineering topics appropriate for sophomore engineering students. Offered on sufficient demand. Prerequisites: Variable depending on topic. Credits: 1 to 4

#### **EGR 289 - Engineering Co-op Preparation**

Introduces potential engineering cooperative education students to the industrial environment, the manufacture of quality products, and the basic principles of leadership. Helps students develop a better self-understanding through self-assessment and career development theory and prepares students for the co-op interview process. (1-0-0) Offered fall semester. Prerequisites: A grade of C or better in MTH 202 and PHY 230. Declared as an engineering major. Credits: 1

#### **EGR 290 - Engineering Co-op 1**

The first full-time, four-month cooperative engineering work experience usually in a local industrial/manufacturing firm. Reading, writing assignments required. At least one evening meeting required. Offered spring/summer semester. Prerequisite: EGR 289. Admitted (or pending admission) to an engineering major and hired by an approved co-op employer. Credits: 3

#### **EGR 301 - Analytical Tools for Product Design**

Analytic methods in product design are integrated into a coherent design process that includes: gathering customer requirements, establishing specifications, generating alternative concepts, estimating feasibility, concept selection, embodiment design, design refinement, prototyping, and project planning. Offered fall semester. Prerequisites: EGR 250; EGR 345 (may be taken concurrently). Admitted to interdisciplinary or product design and manufacturing engineering major. Credits: 4

#### **EGR 306 - Urban Sustainability**

Social, environmental, economic points of view engaged to study how successful cities work. Study approached using assigned reading compared to direct observation and immersion into urban environments. Focus: interaction of built environment with social, natural environment. How engineering decisions about materials used in buildings impact structural integrity, energy use, economics. Offered fall and winter semesters. Part of the Sustainability Issue. Prerequisites: Junior standing, MTH 110 (may be taken concurrently). Credits: 3

#### **EGR 309 - Machine Design I**

Topics include shear and bending stresses in beams, beam deflections, statically indeterminate beams, planar combined loading, triaxial stress and strain transformations, static failure theories, fatigue failure theories, surface failures, belt and chain drives, clutches and brakes, finite element analysis for planar loading, and introduction to strain gauges and rosettes. Laboratory. (3-0-3) Offered spring/summer semester. Prerequisites: A grade of C or better in EGR 209. Declared as an engineering major. Credits: 4

#### **EGR 311 - Intermediate Computer Aided Design and Manufacturing**

CAD/CAM topics including the creation of advanced prototype drawings and physical models, the graphic manipulation of symbol libraries, the utilization of advanced dimensioning techniques, rapid prototyping, analysis skills using CAD/CAM, and applications of data sharing techniques. Course offered winter semester. Prerequisite: EGR 209. Credits: 3

#### **EGR 312 - Dynamics**

Study of motion and the relationship between force, mass, and acceleration for particles and rigid bodies. Work-energy and impulse-momentum concepts. (3-0-0) Offered fall semester. Prerequisites: A grade of C or better in EGR 209. Declared as an engineering major. Credits: 3

#### **EGR 314 - Circuit Analysis II**

Continuation of EGR 214. Topics include first and second order system transient analysis, Laplace transform analysis, sinusoidal steady state analysis, Bode plots, resonance, first and second order filters, Fourier series, and use of computer aided design software. (3-0-3) Offered fall semester. Prerequisites: EGR 214 and MTH 302. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 4

#### **EGR 315 - Electronic Circuits I**

The design of discrete and integrated electronic circuits. Topics include large and small signal modeling of diodes, bipolar junction transistors, and MOS transistors. Biasing, small and large signal amplifier design, feedback, oscillators, and the use of computer-aided design software. Laboratory. (3-0-3) Offered fall semester. Prerequisites: EGR 314 (may be taken concurrently). Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 4

#### **EGR 323 - Signals and Systems Analysis**

A course in the engineering applications of transform methods. The processing of analog and digital signals is discussed, as well as the analysis and design of linear time invariant systems. Topics include signal and system classification, vector space representations, convolution, impulse response, Fourier Transform, DTFT, DFT, FFT, windowing, and time frequency tradeoff. (3-0-0) Course offered spring/summer semester. Prerequisites: A grade of C or better in EGR 314. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 3

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### **EGR 326 - Embedded System Design**

A course in the design and implementation of embedded electronic systems. Topics include digital logic building blocks, programmable logic, microcontrollers, analog interface and support components, timing margin analysis, serial interfacing, signal integrity, heat sinks, and thermal resistance. A significant term project is required. Laboratory. (3-0-3) Offered fall semester. Prerequisites: EGR 214, EGR 226. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 4

### **EGR 329 - Introduction to Finite Element Analysis**

Main Topics: Modeling techniques, element technology, materials, loading, constraints, and results postprocessing using commercial software. Emphasis: Element behavior, planning of analyses, errors, critique of FE results. Course project is design oriented. Applications: Mainly structural analyses and elementary treatment of heat transfer, fluid mechanics, and dynamics. Offered winter and spring/summer semesters. Prerequisites: EGR 309. Admitted to interdisciplinary or mechanical engineering major. Credits: 3

### **EGR 330 - Power Systems Analysis**

An introductory course on single-phase and poly-phase power systems. Topics include single-phase and poly-phase circuits, balanced and unbalanced systems, DC and AC power transmission and distribution systems, fault analysis, and contemporary safety, and social and environmental issues. (3-0-3) Laboratory. Offered spring/summer semester. Prerequisite: EGR 314. Credits: 4

### **EGR 343 - Applied Electromagnetics**

Electromagnetic field equations and waves, signal spectra, transmission lines. Electromagnetic compatibility (EMC) issues, signal integrity, crosstalk, nonideal frequency dependent behavior of components, EMC requirements for electronic systems. Computer simulations, laboratory. Prerequisites: PHY 231 or PHY 234; A grade of C or better in EGR 314. Admitted to electrical or interdisciplinary engineering major. Credits: 4

### **EGR 345 - Dynamic System Modeling and Control**

An introduction to mathematical modeling of mechanical, thermal, fluid, and electrical systems. Topics include equation formulation, Laplace transform methods, transfer functions, system response and stability, Fourier methods, frequency response, feedback control, control actions, block diagrams, state variable formulation, and computer simulation. Emphasis on mechanical systems. Laboratory. (3-0-3) Offered fall semester. Prerequisites: EGR 214 and MTH 302. Admitted to interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 4

### **EGR 346 - Mechatronic Systems Dynamics and Control**

This course includes dynamics modeling, analyzing, and control of mechanical and electrical systems. Modeling and analysis are carried out using differential equations, numerical methods, and Laplace transforms. Software tools are also employed to perform these tasks. Course offered fall and winter semesters. Prerequisites: EGR 214, EGR 226, EGR 309, EGR 312, MTH 302, and admitted to upper division mechanical engineering (ME) major. Credits: 4

### **EGR 350 - Vibration**

Study of mechanical vibration of structures and engineering components. Free and forced vibration of single, two, and multi-degree of freedom systems. Modal analysis and mode summation. Elements of analytical dynamics. Approximate numerical methods. Random vibration. Vibration measurement, isolation, and control. (4-0-0) Offered spring/summer semester. Prerequisites: EGR 346. Admitted to interdisciplinary or mechanical engineering major. Credits: 4

### **EGR 352 - Kinematics and Dynamics of Machinery**

The kinematics of machines are analyzed explicitly and approximately using computer-based mathematical techniques. Topics covered include planar mechanisms, positions, velocities, accelerations, spatial mechanisms, cams, gears, planar dynamics, and spatial dynamics. (4-0-0) Offered winter semester. Prerequisites: EGR 312, MTH 302. Admitted to interdisciplinary or mechanical engineering major. Credits: 4

### **EGR 360 - Thermodynamics**

Basic concepts of thermodynamics and an introduction to heat transfer. Properties of pure substances, equation of state, work, heat, first and second laws of thermodynamics, closed systems and control volume analysis, irreversibility and availability, refrigeration and power cycles, thermodynamic relations, introduction to conduction, convection, radiation, heat transfer, and heat exchanger design. (4-0-0) Offered fall and winter semesters. Prerequisites: PHY 231 or PHY 234. MTH 302. Admitted to electrical, interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 4

### **EGR 362 - Thermal and Fluid Systems**

Thermal system engineering is primarily a study of energy: its forms, transformations, the transfer of it, and efficiencies related to its transfer and use. This course includes the thermodynamic, fluid mechanics, and heat transfer principles required to understand the design of thermal systems found in product designs and manufacturing. Course offered spring/summer semester. Prerequisite: Admission to the product design and manufacturing engineering major. Credits: 4

### **EGR 365 - Fluid Mechanics**

Topics include fluid statics, control volume analysis, continuity, momentum, energy, Bernoulli equation, dimensional analysis and similitude, laminar and turbulent flows, boundary layers, differential analysis, external flow, lift and drag, internal flow, pump selection, introduction to turbomachinery, and open channel flow. Laboratory. (3-0-3) Offered spring/summer semester of even-numbered years. Prerequisites: EGR 312, EGR 360, and admitted to interdisciplinary or mechanical engineering major. Credits: 4

### **EGR 367 - Manufacturing Processes**

The fundamentals of manufacturing processes and the machinery of production. The forming of metals, plastics, ceramics, and composites with an emphasis on the economics of engineering designs and designs that can be practically manufactured. Computer aided manufacturing and quality control processes. Metrology. Laboratory. (3-0-3) Offered fall and winter semesters. Prerequisites: A grade of C or better in EGR 250. Admitted to interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 4

### **EGR 380 - Special Topics in Engineering**

Lecture, discussion, and/or laboratory in specific areas of engineering. Topics will reflect the special interests of the students and/or the instructor. Offered upon demand. Prerequisites: Depends on the nature of the topic. Admitted to an engineering major. Credits: 1 to 4

### **EGR 390 - Engineering Co-op 2**

The second full-time, four-month cooperative engineering work experience usually in a local industrial/manufacturing firm. Reading, writing assignments required. At least one evening meeting required. Offered each semester. Prerequisites: EGR 290. Admitted to an engineering major and hired by an approved co-op employer. Credits: 3

### **EGR 399 - Readings in Engineering**

Independent supervised readings on selected topics. Offered fall, winter, and spring/summer semesters. Prerequisites: Permission of instructor. Admitted to an engineering major. Credits: 1 to 4

### **EGR 401 - Advanced Product Design**

Advanced topics in product design are integrated to prepare students to develop a prototype into a manufacturable design. The course will cover topics such as analysis of competitive product, protection of intellectual property, product architecture, material and process selection, experimental design, advanced tolerance analysis, rapid prototyping, and risk amelioration. Course material will be reinforced with design project work. Prerequisites: A grade of C or better in EGR 301. Admitted to interdisciplinary or product design and manufacturing engineering major. Credits: 4

### **EGR 403 - Medical Device Design**

Students will learn to design equipment, products, and processes for the medical device industry. The course will cover topics such as standards and regulations, determining and documenting device requirements,

hazard and risk analysis, liability, verification and validation testing, and manufacturing quality systems. Cross-listed with EGR 503. Prerequisites: EGR 345. Admitted to interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 3

#### **EGR 405 - Materials Failure Analysis and Selection**

A study of the causes and modes of failure of engineering materials in service. The general procedures and analytical techniques employed in the investigation and analysis of material failures are discussed. Case studies are used to reinforce understanding of failure mechanisms and to develop appropriate materials and process selection methodologies. Offered spring/summer semester. Prerequisite: EGR 250. Credits: 3

#### **EGR 406 - Renewable Energy Systems: Structure, Policy, and Analysis**

A survey of the technological as well as economic, societal, and public policy issues associated with renewable energy systems. Topics include generation using renewable resources such as solar, wind, hydropower, and biomass, as well as advanced energy storage systems and distribution. Energy research and analysis techniques are introduced. Part of the Sustainability Issue. Offered winter semester. Prerequisites: Junior standing and (STA 215 or STA 220 or STA 312). Credits: 3

#### **EGR 409 - Machine Design II**

Topics include design of screws, clutches, brakes, belts, gears, journal bearings, roller bearings, and planetary gear trains. (4-0-0) Offered winter semester. Prerequisites: EGR 309. Admitted to interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 4

#### **EGR 413 - Materials for Energy Storage**

Study of the materials for advanced energy storage. Topics include electrochemical reactions, anode and cathode materials, electrolyte materials, electrochemical testing of materials, typical responses of common materials, and life testing. In addition, tradeoffs in material performance are discussed. Cross-listed with EGR 513. Offered fall semester. Prerequisites: EGR 250 or EGR 257. Admitted to interdisciplinary or product design and manufacturing engineering major. Credits: 3

#### **EGR 415 - Communication Systems**

Study of the techniques and performance of analog and digital communication systems. Block diagram study of the transmitter and receiver, performance analysis for noisy channels, and the multiplexing of multiple channels. Topics include noise characterization, AM, FM, PCM, FSK and PSK. Applications include radio, TV, telephony, wireless and modems. Laboratory. (3-0-3) Cross-listed with EGR 515. Offered alternating fall and winter semesters. Prerequisites: A grade of C or better in EGR 323. Admitted to electrical or interdisciplinary engineering major. Credits: 4

#### **EGR 418 - Radio Frequency Systems**

Study of the limitations used in lumped element analysis and how to use distributive models and network theory to design common communication components found in wireless and wired systems. Topics include signal propagation, telegraph equation, scattering parameters, Smith charts, loading conditions, matching techniques, microstrip filters, and microwave active devices. Cross-listed with EGR 518. Offered winter semester. Prerequisites: EGR 314 and EGR 315. Credits: 4

#### **EGR 423 - Digital Signal Processing Systems**

The techniques and tools used for signal/system analysis and design in the digital domain. Filter design and frequency analysis are presented in the context of implementation on modern digital hardware. Hands-on experiments and design projects are a central component of the course. (3-0-3) Cross-listed with EGR 523. Offered alternating fall and winter semesters. Prerequisites: A grade of C or better in EGR 323. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 4

#### **EGR 424 - Design of Microcontroller Applications**

The architecture and capabilities of single chip microcontrollers and the design of microcontroller applications. A/D and D/A conversion, I/O,

timing, programming, expansion methods, and development systems. Design projects will be an integral part of both lecture and laboratory. Laboratory. (3-0-3) Cross-listed with EGR 524. Offered spring/summer semester. Prerequisites: A grade of C or better in EGR 326. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 4

#### **EGR 426 - Integrated Circuit Systems Design**

The design of digital circuits using behavioral modeling with VHDL. Topics include CPLD and FPGA architectures, the VHDL language, modeling of combinational logic, sequential logic, microcontrollers, state machines, and algorithms for numeric computation on integer and fixed-point numbers. Hands-on projects are a significant part of the course. Laboratory. (3-0-3) Cross-listed with EGR 526. Offered winter semester. Prerequisites: A grade of C or better in EGR 326 or graduate standing. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 4

#### **EGR 430 - Electromechanics**

A course covering the engineering science and design of electrical to mechanical transducers. Topics include magnetic circuit design, solenoids, transformers, DC machines, induction machines, synchronous generators and motors, stepper motors, and an introduction to dynamic systems analysis. Laboratory. (3-0-3) Cross-listed with EGR 530. Offered winter semester. Prerequisites: A grade of C or better in EGR 330. Admitted to electrical or interdisciplinary engineering major. Credits: 4

#### **EGR 432 - Biomedical Imaging and Image Processing**

Study of biomedical imaging modalities used in diagnostic imaging with an emphasis on physical principles and algorithms underlying X-ray imaging, computed X-ray tomography, magnetic resonance imaging, fluoroscopy, and ultrasound imaging. Topics also include multidimensional signal processing, image acquisition and filtering, reconstruction, qualification, segmentation, and pattern analysis. Cross-listed with EGR 532. EE/CE Elective. Offered winter semester. Prerequisites: EGR 323. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 3

#### **EGR 433 - Electronic Instrumentation for Biomedical Applications**

Study of the operating principles of transducer devices and design of modern electronic instrumentation systems with emphasis on biomedical applications. Topics include electronic sensors and measurement principles, design of instrumentation amplifiers for sensors that transduce measured quantities into low level signals in noisy environments, and signal conditioning and display. Offered winter semester. Prerequisites: EGR 315 and EGR 326; or permission of instructor (knowledge of basic electronics and microcontroller applications). Credits: 3

#### **EGR 434 - Bioelectric Potentials**

Study of mechanisms governing the generation of bioelectrical signals focusing on measurement and analysis techniques in nerve and muscle electrophysiology. Topics include excitable membranes, plasma membrane characteristics, origin of electrical membrane potentials, action potentials, voltage clamp experiments, impulse propagation, membrane biophysics, and cardiac arrhythmias. Cross-listed with EGR 534. EE elective. Offered fall semester. Prerequisites: EGR 323. Admitted to electrical or interdisciplinary engineering major. Credits: 3

#### **EGR 435 - Mathematical Modeling of Physiologic Systems**

This course provides an introduction to mathematical modeling, numerical methods, model simulations, and regression analysis, as applied to biomedical systems at the cellular, tissue, and organ levels. Offered spring/summer semester. Prerequisites: MTH 302 or (MTH 227 and MTH 304). Credits: 3

#### **EGR 436 - Embedded Systems Interface**

Study of the interface between microcontrollers and sensors and actuators that enable programmed control of monitoring and interaction with the environment. Use of wired and wireless communications to link users to modern electronic systems either directly or through the Internet. Cross-listed with EGR 536. Offered winter semester. Prerequisites: A grade of C or better in EGR 315, EGR 326, or permission of instructor. Credits: 4

## Course Listings and Descriptions

### **EGR 440 - Production Models**

An introduction to analytic and simulation models, as well as their application to current production strategies, particularly lean manufacturing. Emphasis on workstations, inventories, flow lines, Kanban and CONWIP, and cellular manufacturing. Computer-based solution techniques, case studies, and case problems are employed. Offered spring/summer semester. Prerequisite: Admitted to interdisciplinary or product design and manufacturing engineering major. Credits: 3

### **EGR 441 - Engineering Economics, Quality Control, and Manufacturing Operations**

This course explores selected topics from the fields of engineering economics, strategic decision making based on principles of operations management, quality control issues, method engineering and process improvement. The course examines complex interrelationships of the topics and introduces problem solving tools that are fundamentals to the manufacturing support system. Cross-listed with EGR 541. Offered spring/summer semester. Prerequisites: MTH 302 or Equivalent; and admitted to any engineering major or graduate program. Credits: 4

### **EGR 443 - Electromagnetic Compatibility**

This course explores various Electromagnetic Compatibility (EMC) techniques required to design an electronic product to meet EMC compliance regulations. Topics include radiated emissions and susceptibility, conducted emissions and susceptibility, and electromagnetic shielding. Students will design a switched-mode power supply (SMPS) and evaluate its performance against the current EMC regulations. Offered fall semester. Prerequisites: A grade of C or better in EGR 343. Admitted to electrical or interdisciplinary engineering major. Credits: 3

### **EGR 445 - Robotic Systems Engineering**

Introduction to the field of robotics and its scientific background from a practical perspective. Topics include robotic systems fundamentals, terminology, spatial description and manipulation, stationary manipulator kinematics, mobile robots, trajectory planning, and applications. Offered spring/summer semester. Prerequisites: EGR 346. Admitted to interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 4

### **EGR 447 - Engineering Mechanics of Human Motion**

This course focuses on the applications of the principles of mechanics to the study of human movement. Students will learn to acquire and analyze human motion data using self-developed computer programs. Topics include biomechanics terminology, anthropometric measurement, joint kinematics and kinetics, electromyography, and hands-on clinical application of movement biomechanics. Cross-listed with EGR 547. Course offered winter semester. Prerequisites: EGR 346. Admitted to interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 3

### **EGR 450 - Manufacturing Control Systems**

An introduction to the control of machines and processes widely used in manufacturing. Topics include programmable logic controllers, actuators and sensors for discrete and continuous systems, structured design techniques, memory structures, data handling functions, A/D and D/A converters, data communications, and hierarchical control. The technical issues involved in implementing control schemes are discussed. Laboratory. (0-3-3) Cross-listed with EGR 550. Offered spring/summer semester. Prerequisites: A grade of C or better in EGR 346. Admitted to interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 4

### **EGR 453 - Biomedical Materials**

Study of the characteristics of materials used in medicine and dentistry and their interactions with living tissues. Topics may include biocompatibility, host responses, degradation of biomaterials in biological environments and their applications in artificial organs, implants, soft and hard tissue replacements, dentistry, drug delivery systems, medical equipment, etc. Cross-listed with EGR 553. Offered fall semester. Prerequisite: EGR 250. Admitted to interdisciplinary, mechanical, or product design and manufacturing engineering major. Credits: 3

### **EGR 455 - Automatic Control**

An introduction to automatic control of physical systems. Topics include mathematical modeling of physical systems, analysis of control system characteristics, and compensator design and implementation. Laboratory. (3-0-3) Cross-listed with EGR 555. Offered alternating fall and winter semesters. Prerequisites: A grade of C or better in EGR 323. Admitted to electrical or interdisciplinary engineering major. Credits: 4

### **EGR 457 - Fundamentals of Nanotechnology**

The course introduces students to the field of nanotechnology. Topics include sizes and scaling laws, characteristics of nanomaterials, growth, fabrication, and measurement techniques for nanostructures, applications in electronics, photonics, mechanics, chemistry, and medicine. In addition, the societal impact and ethical dimensions of nanotechnology are covered. Lecture and in-class lab activities. Cross-listed with EGR 557. Offered spring/summer semester. Prerequisite: EGR 315 or EGR 345 or equivalent. Credits: 4

### **EGR 458 - Introduction to Fiber Optics**

An introduction to Fiber Optics and optical fiber communications. Topics include fundamentals of Fiber Optics, properties of optical fibers, optical fiber testing, optical fiber cables, fiber-optic connectors, fiber-optic splices, transmitters, receivers, applications of Fiber Optics, and communication systems design. In-class activities. Cross-listed with EGR 558. Offered spring/summer semester. Prerequisites: EGR 315 and EGR 323. Admitted to electrical or interdisciplinary engineering major. Credits: 4

### **EGR 459 - Micro/Nanosystem Engineering**

This is a second course in the nanotechnology sequence. Topics include micro/nano systems and micro/nano devices, essential electrical and mechanical concepts, sensing and actuation concepts, applications like piezoresistivity, micro/nanosystems design, and micro/nano fabrication processes including assembly, packaging, and testing. Laboratory includes hands-on projects. Cross-listed with EGR 559. Course offered fall semester. Prerequisite: EGR 315 or equivalent, or instructor permission. Credits: 4

### **EGR 463 - Alternative Energy Systems and Applications**

Introduction to the current issues of energy for sustainability. Principles of alternative and renewable energy sources including solar thermal, solar photovoltaic, wind, hydropower, biomass, geothermal, hydrogen, and nuclear energy. Fundamentals of combustion of hydrocarbon fuels and alternative fuels such as biofuels. Fuel cells and electrochemical energy storage units. Offered fall semester. Prerequisite: EGR 360 or PHY 360 or permission of instructor. Credits: 4

### **EGR 465 - Computational Fluid Dynamics (CFD)**

The fundamentals and applications of Computational Fluid Dynamics (CFD) using a commercially available software, featuring mesh generation, solver settings, numerical accuracy, and postprocessing. Fundamental topics such as governing equations, boundary conditions, and numerical solving schemes are also covered. Cross-listed with EGR 565. Offered winter semester. Prerequisites: EGR 365. Admitted to interdisciplinary or mechanical engineering major. Credits: 4

### **EGR 468 - Heat Transfer**

Study of the mechanisms by which heat is transferred in different media: conduction, convection, and radiation. One and two dimensional steady state conduction, transient conduction, finite differences, methods in conduction, forced and free convections, heat exchangers, radiation processing and properties, radiation exchange between surfaces. Laboratory. (3-0-3) Offered winter semester. Prerequisites: EGR 365. Admitted to interdisciplinary or mechanical engineering major. Credits: 4

### **EGR 475 - Design of HVAC Systems**

Application of thermodynamics and fluid mechanics to the design of heating, ventilation, and air conditioning systems. Topics include heat load calculations, hot water and forced air systems, comfort/health factors, applicable codes, regulations, controls, equipment choice, and plant layout. Laboratory. (0-3-3) Offered spring/summer semester. Prerequisites: EGR 468. Admitted to interdisciplinary or mechanical engineering major. Credits: 4

**EGR 477 - Hybrid Electric Battery Systems**

Students will learn to model and control hybrid electric battery systems, and will design a complete battery management system. The course will cover topics such as battery chemistry, vehicle power electronics and communication interfaces, cell balancing, thermal, mechanical, and small signal measurements in a noisy battery environment. Course offered winter semester of even numbered years. Prerequisite: EGR 330 Credits: 3

**EGR 480 - Special Topics in Engineering**

Readings, lectures, discussions, or laboratories (or any combination) on specific engineering topics appropriate for senior engineering students. Offered on sufficient demand. Prerequisites: Variable depending on topic. Admitted to an engineering major. Credits: 1 to 4

**EGR 485 - Senior Engineering Project I (Capstone)**

An independent investigation of theoretical or experimental design problems in engineering. The nature and scope of the project are determined by the student in consultation with the instructor and depend upon the facilities available. Normally this project is carried out during the entire senior year, with one-hour of credit during the first semester and two hours of credit during the second semester. A written technical report is required. All seniors meet together each week to discuss their projects with each other and their supervisor. Laboratory. (1-0-4) Offered winter semester. Prerequisites: Acceptance into the B.S.E. degree program and completion of the prerequisite courses listed under the student's engineering major. Credits: 1

**EGR 486 - Senior Engineering Project II (Capstone)**

Continuation of student's work in EGR 485. Both an oral report and a final written technical report are required. (1-0-8) Offered spring/summer semester. Prerequisite: EGR 485. Credits: 2

**EGR 490 - Engineering Co-op 3**

The third full-time, four-month cooperative engineering work experience usually in a local industrial/manufacturing firm. Reading, writing assignments required. At least one evening meeting required. Offered each semester. Prerequisites: EGR 390. Admitted to an engineering major and hired by an approved co-op employer. Credits: 3

**EGR 499 - Research in Engineering**

Investigation of current ideas and techniques in engineering for upper class students majoring in engineering. Content determined by the student in conference with professor. Completion of work includes a technical report and usually an oral presentation. Offered on demand. Prerequisites: Permission of the director of the School of Engineering. Admitted to an engineering major. Credits: 1 to 4

**EGR 503 - Medical Device Design**

Students will learn to design equipment, products, and processes for the medical device industry. The course will cover topics such as standards and regulations, determining and documenting device requirements, hazard and risk analysis, liability, verification and validation testing, and manufacturing quality systems. Cross-listed with EGR 403. Offered winter semester. Prerequisite: EGR 604. Credits: 3

**EGR 513 - Materials for Energy Storage**

Study of the materials for advanced energy storage. Topics include electrochemical reactions, anode and cathode materials, electrolyte materials, electrochemical testing of materials, typical responses of common materials, and life testing. In addition, tradeoffs in material performance are discussed. Cross-listed with EGR 413. Offered fall semester. Prerequisite: EGR 250 or EGR 257 or by permit. Credits: 3

**EGR 515 - Communication Systems**

Study of the techniques and performance of analog and digital communication systems. Block diagram study of the transmitter and receiver, performance analysis for noisy channels, and the multiplexing of multiple channels. Topics include noise characterization, AM, FM, PCM, FSK and PSK. Applications include radio, TV, telephony, wireless and modems. Laboratory. (3-0-3) Cross-listed with EGR 415. Offered alternating fall and winter semesters. Prerequisites: A grade of C or better in EGR 323. Admitted to electrical or interdisciplinary engineering major. Credits: 4

**EGR 518 - Radio Frequency Systems**

Study of the limitations used in lumped element analysis and how to use distributive models and network theory to design common communication components found in wireless and wired systems. Topics include signal propagation, telegraph equation, scattering parameters, Smith charts, loading conditions, matching techniques, microstrip filters, and microwave active devices. Cross-listed with EGR 518. Offered winter semester. Prerequisites: EGR 314 and EGR 315. Credits: 4

**EGR 523 - Digital Signal Processing Systems**

The techniques and tools used for signal/system analysis and design in the digital domain. Filter design and frequency analysis are presented in the context of implementation on modern digital hardware. Hands-on experiments and design projects are a central component of the course. (3-0-3) Cross-listed with EGR 423. Offered alternating fall and winter semesters. Prerequisites: A grade of C or better in EGR 323. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 4

**EGR 524 - Design of Microcontroller Applications**

In this course, students will explore a complex microcontroller architecture and develop the necessary firmware for implementing a rudimentary real-time operating system that effectively uses the microcontroller resources. Laboratory. (3-0-3) Cross-listed with EGR 424. Offered spring/summer semester. Prerequisites: A grade of C or better in EGR 326, programming proficiency (CIS 263 and CIS 241 are recommended) and/or Graduate standing. Credits: 4

**EGR 526 - Integrated Circuit System Design**

The design of digital circuits using behavioral modeling with VHDL. Topics include CPLD and FPGA architectures, the VHDL language, modeling of combinational logic, sequential logic, microcontrollers, state machines, and algorithms for numeric computation on integer and fixed-point numbers. Hands-on projects are a significant part of the course. Laboratory. (3-0-3) Cross-listed with EGR 426. Offered winter semester. Prerequisites: A grade of C or better in EGR 326 or graduate standing. Admitted to computer, electrical, or interdisciplinary engineering major. Credits: 4

**EGR 530 - Electromechanics**

A course covering the engineering science and design of electrical to mechanical transducers. Topics include magnetic circuit design, solenoids, transformers, DC machines, induction machines, synchronous generators and motors, stepper motors, and an introduction to dynamic systems analysis. Laboratory. (3-0-3) Cross-listed with EGR 430. Offered winter semester. Credits: 4

**EGR 532 - Biomedical Imaging and Image Processing**

Study of biomedical imaging modalities used in diagnostic imaging with an emphasis on physical principles and algorithms underlying X-ray imaging, computed X-ray tomography, magnetic resonance imaging, fluoroscopy, and ultrasound imaging. Topics also include multidimensional signal processing, image acquisition and filtering, reconstruction, quantification, segmentation, and pattern analysis. Cross-listed with EGR 432. Offered winter semester. Prerequisites: Admission to M.S.E. program and permission of instructor. Credits: 3

**EGR 533 - Electronic Instrumentation for Biomedical Applications**

Study of the operating principles of transducer devices and design of modern electronic instrumentation systems with emphasis on biomedical applications. Topics include electronic sensors and measurement principles, design of instrumentation amplifiers for sensors that transduce measured quantities into low level signals in noisy environments, and signal conditioning and display. Offered winter semester. Prerequisites: EGR 315, EGR 326, or permission of instructor (knowledge of basic electronics and microcontroller applications). Credits: 3

**EGR 534 - Bioelectric Potentials**

Study of mechanisms governing the generation of bioelectrical signals focusing on measurement and analysis techniques in nerve and muscle electrophysiology. Topics include excitable membranes, plasma membrane characteristics, origin of electrical membrane potentials, action potentials, voltage clamp experiments, impulse propagation, membrane

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biophysics, and cardiac arrhythmias. Cross-listed with EGR 434. Offered fall semester. Prerequisite: Admission to M.S.E. program and permission of instructor. Credits: 3

### **EGR 536 - Embedded Systems Interface**

Study of the interface between microcontrollers and sensors and actuators that enable programmed control of monitoring and interaction with the environment. Use of wired and wireless communications to link users to modern electronic systems either directly or through the Internet. Cross-listed with EGR 436. Offered winter semester. Prerequisites: A grade of C or better in EGR 315, EGR 326, or permission of instructor. Credits: 4

### **EGR 541 - Engineering Economics, Quality Control, and Manufacturing Operations**

This course explores selected topics from the fields of engineering economics, strategic decision making based on principles of operations management, quality control issues, method engineering and process improvement. The course examines complex interrelationships of the topics and introduces problem solving tools that are fundamentals to the manufacturing support system. Cross-listed with EGR 441. Offered spring/summer semester. Prerequisites: MTH 302 or equivalent; and admitted to any engineering major or graduate program. Credits: 4

### **EGR 543 - Electromagnetic Compatibility**

This course explores various Electromagnetic Compatibility (EMC) techniques required to design an electronic product to meet EMC compliance regulations. Topics include radiated emissions and susceptibility, conducted emissions and susceptibility, and electromagnetic shielding. Students will design a switched-mode power supply (SMPS) and evaluate its performance against the current EMC regulations. Offered fall semester. Prerequisites: EGR 343 or admission to M.S.E. program and permission of instructor. Credits: 3

### **EGR 547 - Engineering Mechanics of Human Motion**

Applications of the principles of mechanics to the study of human movement. Students will learn to acquire and analyze human motion data using self-developed computer program. Topics include biomechanics terminology, anthropometric measurement, joint kinematics and kinetics, electromyography, and hands-on clinical application of movement biomechanics. Cross-listed with EGR 447. Offered winter semester. Prerequisites: Admission to M.S.E. program and permission of instructor. Credits: 3

### **EGR 550 - Manufacturing Control Systems**

An introduction to the control of machines and processes widely used in manufacturing. Topics include programmable logic controllers, actuators and sensors for discrete and continuous systems, structured design techniques, memory structures, data handling functions, A/D and D/A converters, data communications, and hierarchical control. The technical issues involved in implementing control schemes are discussed. Laboratory. (0-3-3) Cross-listed with EGR 450. Offered spring/summer semester. Prerequisite: A grade of C or better in EGR 345 or admission to the graduate program. Credits: 4

### **EGR 553 - Biomedical Materials**

Study of the characteristics of materials used in medicine and dentistry and their interactions with living tissues. Topics may include biocompatibility, host responses, degradation of biomaterials in biological environments and their applications in artificial organs, implants, soft and hard tissue replacements, dentistry, drug-delivery systems, and medical equipment. Cross-listed with EGR453. Offered fall semester. Prerequisites: Admission to the M.S.E. program and permission of the instructor. Credits: 3

### **EGR 555 - Automatic Control**

An introduction to automatic control of physical systems. Topics include mathematical modeling of physical systems, analysis of control system characteristics, and compensator design and implementation. Laboratory. (3-0-3) Cross-listed with EGR 455. Offered alternating fall and winter semesters. Prerequisite: Admitted to the M.S.E. program. Credits: 4

### **EGR 557 - Fundamentals of Nanotechnology**

The course introduces students to the field of nanotechnology. Topics include sizes and scaling laws, characteristics of nanomaterials, growth, fabrication, and measurement techniques for nanostructures, applications in electronics, photonics, mechanics, chemistry, and medicine. In addition, the societal impact and ethical dimensions of nanotechnology are covered. Lecture and in-class lab activities. Cross-listed with EGR 457. Offered spring/summer semester. Prerequisite: EGR 315 or EGR 345 or equivalent. Credits: 4

### **EGR 558 - Introduction to Fiber Optics**

An introduction to Fiber Optics and optical fiber communications. Topics include fundamentals of Fiber Optics, properties of optical fibers, optical fiber testing, optical fiber cables, fiber-optic connectors, fiber-optic splices, transmitters, receivers, applications of Fiber Optics, and communication systems design. In-class activities. Cross-listed with EGR 458. Offered spring/summer semester. Prerequisites: EGR 315 and EGR 323. Credits: 4

### **EGR 559 - Micro/Nanosystem Engineering**

This is a second course in the nanotechnology sequence. Topics include micro/nano systems and micro/nano devices, essential electrical and mechanical concepts, sensing and actuation concepts, applications like piezoresistivity, micro/nanosystems design, and micro/nano fabrication processes, including assembly, packaging, and testing. Laboratory includes hands-on projects. Cross-listed with EGR 459. Course offered fall semester. Credits: 4

### **EGR 565 - Computational Fluid Dynamics (CFD)**

The fundamentals and applications of Computational Fluid Dynamics (CFD) using a commercially available software, featuring mesh generation, solver settings, numerical accuracy, and postprocessing. Fundamental topics such as governing equations, boundary conditions, and numerical solving schemes are also covered. Cross-listed with EGR 465. Offered winter semester. Credits: 4

### **EGR 577 - Hybrid Electric Battery Systems**

Students will learn to model and control hybrid electric battery systems, and will design a complete battery management system. The course will cover topics such as battery chemistry, vehicle power electronics and communication interfaces, cell balancing, thermal, mechanical, and small signal measurements in a noisy battery environment. Course offered winter semester of even-numbered years. Credits: 3

### **EGR 580 - Special Topics in Engineering**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 500-level courses. May be repeated for credit when the content varies. Offered fall, winter, and spring/summer semesters. Prerequisite: Admitted to the M.S.E. program or permission. Credits: 1 to 4

### **EGR 600 - Advanced Engineering Analysis**

Mathematics, statistics, and other quantitative topics significant to the solution of advanced engineering problems using quantitative analytic thinking. Focus on project analysis, economic justification, risk analysis, and the behavior of engineering systems. Emphasis on computer-based solution techniques. Computers will be used extensively in an active learning environment. Offered fall semester. Prerequisite: Admission to the M.S.E. program. Credits: 3

### **EGR 602 - Professional Aspects of Engineering**

This course will expose the students to a thorough examination of the qualitative issues and elements that are critical to advanced engineering practice and research. The course focuses on communication skills and techniques, especially writing, as well as research methods and techniques. Both elements are applied throughout the course in a context of engineering ethics and professional issues. These issues include contemporary topics such as law, ethics, globalization, societal impacts, environmental issues, and project management. Offered winter semester. Prerequisite: Admission to graduate school. Credits: 3

### **EGR 604 - Implementation and Measurement**

Emphasis on the ties between engineering theory and analysis, and the implementation of devices and mechanisms. Use of design and build procedures, designed experiments, data analysis, data modeling, reporting,

and fabrication. Weekly activities and a major design project. Offered fall semester. Prerequisite: Admission to the M.S.E. program. Credits: 3

#### **EGR 610 - Engineering Design**

Application of various methods and approaches to engineering design using modern design tools. Design experiences are used throughout to develop designs. Mini design projects are assigned in interdisciplinary areas, machine design, heat transfer, and controls. Offered winter semester. Prerequisites: EGR 604; EGR 520 (may be taken concurrently). Credits: 3

#### **EGR 611 - Computer-Aided Design and Engineering**

Use of computer-aided methods for generating 3D parametric, feature-based geometric models. Use of the associated database for calculating design parameters. Topics include solid and surface modeling, fundamentals of geometric elements, and design related issues. Design projects are emphasized using industry-standard computer applications. Offered fall semester. Prerequisites: EGR 600, EGR 604. Credits: 3

#### **EGR 612 - Analytical Dynamics**

Study of kinematics and kinetics of rigid, multi-body systems using momentum and energy conservation methods and analytical dynamics techniques such as D'Alembert's principle, virtual work, and Lagrange's equations. Course offered fall semester. Credits: 3

#### **EGR 614 - Opportunity Identification for Medical Devices**

Students will learn to seek out opportunities for new medical products and how to evaluate the technical and business potential of an opportunity. Students will produce a venture plan and a concept feasibility prototype suitable to attract investment. Offered fall and winter semester. Prerequisite: EGR 503. Credits: 3

#### **EGR 615 - Applied Finite Element Analysis**

Fundamentals of structural finite element modeling. Geometry creation, element types, material specification, and problem solution and results postprocessing. A focus is placed on modeling techniques and guidelines using commercially available software. Offered winter semester. Credits: 3

#### **EGR 620 - Material and Process Selection**

A study of current topics in materials and manufacturing processes for engineering design. Topics selected from advanced metallic, polymeric, ceramic, and composite materials, surface treatment, and electrical materials. Offered fall semester. Prerequisite: Admission to the M.S.E. program. Credits: 3

#### **EGR 627 - Advanced FPGA Implementation**

This course introduces the modern approach of designing and testing advanced digital systems using Field Programmable Gate Arrays (FPGAs). This approach emphasizes describing the circuit's intended behavior and verification using hardware description language. This course also discusses various FPGA architectures and design flow using FPGAs. Offered spring/summer semester. Prerequisites: EGR 426 and graduate standing or permission of instructor. Credits: 3

#### **EGR 635 - Biomedical Signal Modeling**

This course introduces engineering graduate students to advanced signal processing techniques for analyzing complex physiological systems and processes. It provides a modeling-based approach for biomedical signal processing. Topics include auto-regressive moving average (ARMA) modeling, nonlinear modeling, stochastic modeling, time-frequency analysis, adaptive filtering, and wavelets. Offered fall semester. Prerequisite: Admission to M.S.E. program. Credits: 3

#### **EGR 640 - Production Operation Models**

An emphasis on the design and control of production systems using models. Paced and unpaced assembly lines, unreliable serial lines, job shops, flexible manufacturing systems, group technology, facility layout, setup, sequencing, material handling, and storage and retrieval. Deterministic and stochastic models. Heuristic, analytic, and simulation techniques. Offered fall semester. Prerequisite: EGR 600. Credits: 3

#### **EGR 641 - Applied Optimization**

An introduction to the application of optimization models in product design and manufacturing. Topics include modeling, formulation, and

computer-based solution methodologies. Emphasis on applications in manufacturing options, product management, and design. Cost-effective implementations including linear programming, nonlinear programming, and genetic algorithms are employed. Offered fall semester. Prerequisite: EGR 600. Credits: 3

#### **EGR 642 - Materials Handling and Plant Layout**

Exploration of the techniques and methods used for plant layout. Topics include organization of processes, work-flow, material handling techniques, analysis techniques, cost estimation, equipment selection, advanced material handling concepts, and computer-aided layout. Offered winter semester. Prerequisite: EGR 640. Credits: 3

#### **EGR 643 - PCB Design and EMC**

A study of PCB design techniques for EMC compliance. Topics include digital circuit power distribution, effectiveness of decoupling capacitors and embedded capacitance, digital circuit grounding, ground plane current distribution and impedance, return current path, and PCB layout and stackup. Students will design a PCB and evaluate its EMC performance. Prerequisite: Instructor's permission. Credits: 3

#### **EGR 653 - Digital and Adaptive Systems**

An advanced course in topics encompassing signal processing, communication, and control. Material from previous courses is extended to model digital and adaptive behavior. Topics include digital control, adaptive filtering, adaptive control, and digital communications. Offered fall semester. Prerequisites: EGR 415, EGR 423, EGR 455. Credits: 3

#### **EGR 655 - Power Electronics**

The construction, characterization, and system realization of power switching devices. Specific topics include single-phase and three-phase rectifying circuits, DC chopper circuits, AC voltage controllers, frequency converters, and harmonic analysis. A significant course project is required. Offered fall semester. Prerequisites: EGR 315, EGR 340. Credits: 3

#### **EGR 656 - Electrical Drive Systems**

A second course in DC and AC machines and their industrial applications. Topics include adjustable speed drives, speed control of DC and AC machines, slip energy recovery, synchronous machine drives. A significant course project is required. Offered winter semester. Prerequisite: EGR 655. Credits: 3

#### **EGR 657 - Photovoltaic Systems**

This course introduces students to the fundamentals of photovoltaic (PV) systems. The topics include solar energy resources, PV system components, physics of PV cells, grid-connected PV systems, stand-alone PV systems, and economic/technical considerations in the design of PV systems. Offered winter semester of even-numbered years. Prerequisite: Admission to the M.S.E. program or instructor's permission. Credits: 3

#### **EGR 670 - Systems Physiology for Engineers**

The course provides an introduction to human anatomy and functional physiology, from the cellular to organ systems level, and from an engineering viewpoint. Topics covered include cellular and molecular physiology, nervous system, cardiovascular, renal, respiratory, endocrine, and gastrointestinal physiology. Offered fall semester. Prerequisite: Admission to the M.S.E. program or permission of instructor. Credits: 3

#### **EGR 680 - Special Topics in Engineering**

Lecture, discussion, and/or laboratory in specific areas of engineering. Topics will reflect the special interests of the students and/or the instructor. Offered upon demand. Prerequisites: Depends on the nature of the topic. Admitted EGR or permit. Credits: 1 to 4

#### **EGR 685 - Graduate Practicum**

A full-time cooperative education engineering work experience usually with a local industrial/manufacturing firm. Practical aspects of modern engineering and problem-solving culminating in a written report and formal presentation. Weekly reports and faculty supervisory meetings as required. Offered every semester. Prerequisites: Completion of 12 credit hours of EGR 600-level courses, permission of program administrator. Credits: 3

## Course Listings and Descriptions

### **EGR 690 - Capstone Design Project**

Emphasis on team-based engineering design and realization procedures with application to an industrial or entrepreneurial design problem. Students will synthesize the knowledge and skills acquired in prior master's level engineering courses. The nature and scope of the problem is determined by the student teams in consultation with the instructor. Prerequisites: Successful completion of professional practice and emphasis courses. Credits: 3

### **EGR 692 - Master's Project Planning**

Planning of an individualized project having an industrial focus. The nature and scope of the project are determined by the student in consultation with and approval of the instructor. Offered fall semester. Prerequisites: Completion of 12 credit hours of EGR 600-level courses. Admitted EGR or permit. Credits: 3

### **EGR 693 - Master's Project**

Planning and execution of an individualized project involving the development of an engineered product or system which is proprietary to a company. The nature and scope of the project are determined by the student in consultation with an approval of the instructor. May be repeated. Offered every semester. Prerequisites: Permission of graduate program director and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 6

### **EGR 694 - Continuation of Master's Project**

Continuation of work related to the project phase of the graduate student's program. Registration is required following completion of all coursework required for the degree and only work to complete the project remains. Work will be performed under the supervision of the project committee chair. It may be repeated. Offered every semester. Prerequisite: Completion of all the required engineering master's project credits. Credits: 1

### **EGR 695 - Master's Thesis**

Student plans and performs research, under the guidance of an advisor that will involve work with a thesis committee and lead to a formally defended and publicly disseminated thesis. The thesis topic is determined by the student in consultation with the advisor. The topic must be approved by a thesis committee. The course may be repeated. Offered every semester. Prerequisites: Permission of the graduate program director and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 6

### **EGR 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **EGR 699 - Independent Study in Engineering**

Independent supervised study on selected topics. Offered upon demand. Prerequisite: Permission of instructor. Credits: 1 to 3

### **EMBA 601 - Financial Accounting for Executives**

Focuses on the interpretation and analysis of corporate financial statements as a source of information for executives. Emphasis will be placed on the evaluation of information in the financial statements - balance sheet, income statement, and statement of cash flows - for improved critical thinking and decision-making. Course offered fall semester. Prerequisite: Admission to the EMBA program. Credits: 1.5

### **EMBA 610 - Strategic Information Systems for Executives**

Examines the role of data and information in the management and integration of systems processes. Students will explore strategic and sustainability related implications and the significance of effective management and analysis of internal and external information resources. Course offered fall semester. Prerequisite: Admission to the EMBA program. Credits: 3

### **EMBA 611 - Managerial Accounting for Executives**

Emphasizes the use of accounting information for internal planning and control purposes. It is intended for individuals who will make business decisions and evaluate the performance of business units using accounting and managerial techniques. Course offered winter semester. Prerequisite: EMBA 601 (may be taken concurrently). Credits: 1.5

### **EMBA 621 - Finance for Executives**

Focuses on the application of financial principles to optimize the value of the firm. Emphasis is placed on integrating academic and practitioner perspectives in the practice of financial management. Topics include financial statement analysis, risk and return, capital budgeting, capital structure, and distribution policy. Course offered winter semester. Prerequisite: Admission to EMBA program. Credits: 3

### **EMBA 626 - Financial Policy for Executives**

Analyzes the evaluation and application of financial decision-making to optimize the value of the firm. Course focuses on advanced principles, including forecasting and valuation applied to mergers, acquisitions, divestitures, bankruptcy, reorganization, and multinational financial markets. Course offered fall semester. Prerequisite: EMBA 621. Credits: 3

### **EMBA 635 - Organizational Change Management**

Analyzes the forces that drive organizations to change, evaluates the impediments to change, and examines the approaches or models of making change most effective. Special attention is given to managing the individual and organizational disruptions inherent in the change process. Prerequisite: Admission to the EMBA program. Credits: 1

### **EMBA 641 - Business Economics for Executives**

Students will use economic tools to understand issues related to business including resource allocation, production and market structure, industry performance, and government policy. Students will learn how to analyze and evaluate empirical research related to an industry. Course offered fall semester. Prerequisite: Admission to EMBA program. Credits: 3

### **EMBA 651 - Marketing Management for Executives**

Focuses on developing an understanding of the role of markets and marketing in the macroeconomic environment, providing the knowledge and tools needed to successfully analyze product or service markets and develop marketing strategies that will provide sustainable competitive advantages. Course offered winter semester. Prerequisite: Admitted to the EMBA program. Credits: 3

### **EMBA 652 - Negotiations for Executives**

Focuses on business negotiations environments and the development of related tactics to achieve value-added resolution. Students will explore models of negotiations and apply them to case studies and simulations. Course offered fall semester. Prerequisite: Admission to the EMBA program. Credits: 2

### **EMBA 667 - Service and Value Chain Management**

Examines approaches for achieving operational competitiveness in a service business and provides students with the conceptual foundations and analytic tools to improve service delivery and value chain. The focus of this course is on the application of analytical tools to evaluate and improve the efficiency of service processes. Course offered winter semester. Prerequisite: Admission to the EMBA program. Credits: 3

### **EMBA 675 - Law for Executives**

Focuses on the laws and regulations that affect business decisions. Students will develop an understanding of the legal and regulatory environment, compliance, and the assessment of risk. They will acquire sufficient fluency to determine when legal counsel is needed. Course offered winter semester. Prerequisite: Admission to the EMBA program. Credits: 3

### **EMBA 678 - Executive Leadership and Ethics**

The indivisible interrelationship between leadership and ethics will be explored in the context of the leadership life cycle. Students will explore the intersections of their value structures, propensities, and experiences related to the world of work, regulations, and competing demands. Course offered winter semester. Prerequisite: Admitted to the EMBA program. Credits: 3

**EMBA 679 - Public Policy and Corporate Governance**

Focuses on the set of policies, processes, and customs by which an institution is directed. Students will explore how a company's governance influences the rights and relationships among organizational stakeholders (the board of directors, senior management, consumers, regulators, and other stakeholders). Course offered fall semester. Prerequisite: Admission to the EMBA program. Credits: 2

**EMBA 681 - Developing the Strategic Mindset**

Provides students with the framework to develop an executive-level strategic and systemic perspective for evaluating business options and decision-making. Course offered fall semester. Prerequisite: Admitted to the EMBA program. Credits: 1

**EMBA 682 - Systems Thinking and Advanced Tactics**

Deepens student's capacity to simultaneously analyze and consider multiple strategic initiatives. Students learn to frame problems holistically, using judgment to make decisions on multiple (potentially conflicting) perspectives and develop a rigorous and resilient approach to solving complex business issues. Course offered fall semester. Prerequisite: Admission to the EMBA program. Credits: 2

**EMBA 683 - Corporate Strategy for Executives**

Examines strategic decision-making with an emphasis on the processes to improve competitiveness and sustainability in complex and uncertain corporate environments. The focus is on exploration of strategic management process models and applications to the unit and organization. Course offered winter semester. Prerequisite: Admission to the EMBA program. Credits: 3

**ENG 099 - College Efficiency and Reading Training**

For students whose standardized test scores indicate proficiency with minimum college level material, but who want to learn to make the most efficient use of their reading and thinking skills. Emphasis on reading efficiency, vocabulary development, and critical reading. Three (nongraduation) credits. Offered fall semester. Credits: 3

**ENG 105 - Literatures in English**

An introduction to literatures written in English, organized around a theme, period, author, genre, or topic. All sections emphasize close reading, careful writing, and cultural understanding. Besides enhancing these foundational skills, the course will highlight the pleasures and excitements a lifetime of reading offers. Fulfills Foundations - Philosophy and Literature. Offered fall and winter semesters. Credits: 3

**ENG 115 - Introduction to Science Fiction**

An introduction to science fiction literature, focusing primarily on texts from the late nineteenth, twentieth, and twenty-first centuries. Examines the interaction between scientific change and the resulting ethical questions as depicted in fictional texts. Emphasis will be on short stories written by authors from diverse cultural backgrounds and contexts. Fulfills Foundations - Philosophy and Literature. Offered fall and winter semesters. Credits: 3

**ENG 180 - Special Topics in English**

Studies of selected authors, concepts, movements, periods, theories, or genres. Topics will be announced in the class schedule and prerequisites may be listed. May be repeated for credit. Credits: 1 to 9

**ENG 203 - World Literature**

Readings of major drama, poetry, and novels from medieval times to the present, translated from major European and world languages. Authors such as Dante, Voltaire, Mann, Tolstoy, Kafka, Narayan, and Borges offer varied literary glimpses of foreign worlds. Fulfills Foundations - Philosophy and Literature. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 204 - World Mythology**

A comparative look at myths, folk tales, and fairy tales and how they derive from, and work on, the mind of a culture, both socially and aesthetically. Examines these tales as works of art in their own right and also as metaphors expressing a society's major values, themes, and preoccupations. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 212 - Introduction to Shakespeare**

An introduction to the foremost dramatist and poet in the English language. To complement the students' reading, film versions of several plays will ordinarily be presented. Fulfills Foundations - Philosophy and Literature. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 215 - Foundations of Literary Study: Genre**

The course examines a variety of literary genres (including fiction, poetry, drama, and nonfiction) within and across a range of historical periods and cultural and national contexts. In addition to learning about genres, students will develop skills of close reading, textual support, inter-textual analysis, and critical thinking. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 216 - Foundations of Literary Study: Critical Approaches**

This course will examine literary texts through the prism of different literary theories and other critical approaches and prepare students to undertake advanced literary interpretation and to produce literary critical writing. This course will enable students to connect literary texts and critical approaches to their historical and social contexts. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 220 - British Literature I**

A survey of early British literature from Beowulf in the old English period through Chaucer in the middle English period, and such authors as Spenser, Marlowe, Shakespeare, Jonson, Donne, and Milton in the Renaissance. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 221 - British Literature II**

A survey of later British literature from the Restoration and the Eighteenth century, the Romantic and Victorian periods, modernism, and contemporary Anglophone literature. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 225 - American Literature I: to 1860**

A survey of American literature from its beginnings to 1860. Significant attention will be given to the writings of women and minorities. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 226 - American Literature II: from 1860**

A survey of American literature from the Realist period to the present. Significant attention will be given to the writings of women and minorities. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 231 - Early African American Literature**

Analysis and discussion of discourse written by and about African Americans during the formative years of this nation. Emphasis will be placed on literary discourse as one means of defining African American consciousness and community, and understanding how African Americans' communities of origin shaped African-American discursive expression. Students may not receive credit for both. Fulfills Foundations - Philosophy and Literature. Fulfills Cultures - World Perspectives. Cross-listed with AAA 231. Prerequisite: WRT 150. Credits: 3

**ENG 232 - Modern African American Literature**

Analysis and discussion of discourse by and about African Americans primarily written during the twentieth century. Emphasizes literary discourse as a means of defining African American consciousness and community and understanding how the communities African Americans inhabit shaped their discursive expression. Cross-listed with AAA 232. Students may not receive credit for both. Offered winter semester. Prerequisite: WRT 150. Credits: 3

**ENG 261 - Foundations of Language Study**

An introduction to the principles of linguistics and linguistic analysis, with a focus on the structure and use of English. Coverage includes phonology, morphology, syntax, descriptive and prescriptive grammar, language history, and language variation. Prerequisite for 300/400-level English courses in applied linguistics. Offered fall and winter semesters. Credits: 3

## Course Listings and Descriptions

### ENG 280 - Special Topics in English

Studies of selected authors, concepts, movements, periods, theories, or genres. Topics will be announced in the class schedule and prerequisites may be listed. May be repeated for credit. Credits: 1 to 9

### ENG 302 - Introduction to Language Arts: Teaching Writing and Children's Literature

Introduces important research and theory, teaching strategies, issues, and materials related to both children's literature and the teaching of writing, particularly the connection between the two. Students will learn to use literature to foster children's reading and writing development. Does not fulfill requirement or elective in English major or minor. Offered every semester. Prerequisites: WRT 150, and one of: EDI 337, PED 265, PED 266. Credits: 3

### ENG 303 - Studies in World Literature

An in-depth comparative study of texts, themes, genres, and authors from literatures of the world in translation, including one or more from the following areas: Africa, Middle East, Asia, India, Latin America, the Caribbean, and Europe. Offered fall and winter semesters. Prerequisites: WRT 150 and one literature course. Credits: 3

### ENG 304 - International Literature for Children and Young Adults

A comparative study of texts, themes, and authors from children's and young adults' international literature in translation, including one or more texts from the following: Africa, Middle East, Asia, Latin America, Oceania, Canada, the Caribbean, and Eastern and Western Europe. Offered fall and winter semesters. Prerequisites: WRT 150 and one literature course. Credits: 3

### ENG 307 - Teaching Writing: Elementary

A study of the writing process and of current theories of rhetoric, discourse analysis, language acquisition, and reading, all applied to teaching writing on the elementary level. A tutoring practicum may be required, and students will also work on their own writing. Required for the Language Arts emphasis. Should be taken prior to College of Education admission. Offered fall and winter semesters. Prerequisites: WRT 150 and sophomore status. Credits: 3

### ENG 308 - Teaching Reading: The Necessary Skills

Application of linguistic principles to decoding and comprehension skills and to theories underlying the developmental and the language-experience approaches to teaching reading. Each student is required to tutor a pupil, administer an informal diagnostic test, and report on outside readings. Offered fall and winter semesters. Prerequisites: WRT 150 and junior status. Credits: 4

### ENG 309 - Teaching Literature to Children

Introduces to students the important materials (classic and contemporary), teaching strategies, issues, and research related to children's literature, as well as guiding the reading of children. Required for language arts majors. Should be taken prior to student teaching. Offered fall and winter semesters. Prerequisites: WRT 150 and sophomore status. Credits: 3

### ENG 310 - Teaching Writing: Secondary

A study of the writing process and of current theories of rhetoric, discourse analysis, language acquisition, and reading at the secondary level. A tutoring practicum may be required, and students will also work on their own writing. Required for the secondary teacher certification English major. Should be taken prior to College of Education admission. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

### ENG 311 - Teaching Literature to Adolescents

Introduces to students the important classic and contemporary materials (including works by women and writers of color and/or ethnic diversity), teaching strategies, issues, and research related to adolescent literature, as well as the criteria for guiding the reading of adolescents. Should be taken prior to student teaching. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

### ENG 313 - British Literature: Shakespeare

An in-depth study of the range of Shakespeare's work in its historical and critical context, including selections from comedy, tragedy, history,

romance, and poetry. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

### ENG 320 - Studies in Poetry

Focuses upon the formal properties of poetry and studies the conventions of the genre as it develops within or across historical periods and/or cultures. Offered fall semester. Prerequisites: Two foundation courses or declared writing major or minor. Credits: 3

### ENG 321 - British Literature: Medieval

An in-depth study of selected texts, themes, and authors representative of British literature up to 1500. Topics vary by semester. May be repeated for credit if content varies. Offered odd-numbered years, fall semester. Prerequisites: ENG 215, ENG 216, and ENG 220. Credits: 3

### ENG 322 - British Literature: Renaissance

An in-depth study of selected texts, themes, and authors representative of British literature in the Renaissance. Topics vary by semester. May be repeated for credit if content varies. Offered even-numbered years, winter semester. Prerequisites: ENG 215, ENG 216, and ENG 220. Credits: 3

### ENG 323 - British Literature: 18th-Romantic

An in-depth study of selected texts, themes, and authors of British literature from the Restoration through the Romantic period. Topics vary by semester. May be repeated for credit if content varies. Offered even-numbered years, fall semester. Prerequisites: ENG 215, ENG 216, and ENG 221. Credits: 3

### ENG 324 - British Literature: Victorian-Present

An in-depth study of texts, themes, and authors representative of British literature and postcolonial Anglophone literature from the Victorian period through the present. Topics vary by semester. May be repeated for credit if content varies. Offered odd-numbered years, winter semester. Prerequisites: ENG 215, ENG 216, and ENG 221. Credits: 3

### ENG 325 - American Literature to 1800

Intensive study of major authors, literary movements, and themes from America's precolonial beginnings through the Revolution. Topics may include Native American myth and poetry; literature of discovery and conquest; Puritan writings; autobiography; captivity and slave narratives; literature of Revolution and the new Republic; and early American poetry, drama, and fiction. May be repeated for credit if content varies. Offered odd-numbered years, fall semester. Prerequisites: ENG 215, ENG 216, and ENG 225. Credits: 3

### ENG 326 - Nineteenth-Century American Literature

Intensive study of major authors, literary movements, and themes from the postRevolutionary War Period to 1900. Topics may include the American Renaissance; Transcendentalism; Realism; Local Color Writers; African American slave narratives and autobiographies; the Civil War; Naturalism; and developments in nineteenth-century literary genres. May be repeated for credit if the content varies. Offered even-numbered years, winter semester. Prerequisites: ENG 215, ENG 216, and ENG 225. Credits: 3

### ENG 327 - Modern American Literature

Intensive study of major authors, literary movements, and themes from 1900 to 1945. Topics may include Modernism, the Harlem Renaissance, the Wasteland Generation; Literature of American Expatriates; New York City; the South; the West; the Depression; World Wars I and II; and developments in modern literary genres. Offered even-numbered years, fall semester. Prerequisites: ENG 215, ENG 216, and ENG 226. Credits: 3

### ENG 328 - Contemporary American Literature

Intensive study of major authors, literary movements, and themes since 1945. Topics may include Postmodernism; metafiction; the beat generation; minimalism; ethnic autobiography; the 1960s and the absurd; new journalism; African, Latino/a and Native-American writings; language and confessional poetry; the nonfiction novel; travel narratives, and developments in contemporary genres. Offered odd-numbered years, winter semester. Prerequisites: ENG 215, ENG 216, and ENG 226. Credits: 3

**ENG 330 - Studies in Fiction**

Focuses on the formal properties of fiction and studies the conventions of the genre as it develops within or across historical periods and/or cultures. May be repeated for credit if the content varies. Offered fall and winter semesters. Prerequisites: Any two foundation courses or declared writing major or minor. Credits: 3

**ENG 334 - American Multicultural Literature for Children and Young Adults**

An examination of American multicultural literature for children and young adults, such as African-American, Asian-American, Latino, and Native-American literatures. This service-learning course requires service-reading, dramatic presentations, or other creative ways of engaging the community with literature. Offered fall and winter semesters. Prerequisites: WRT 150 and junior standing. Credits: 3

**ENG 335 - Literature of American Minorities**

Studies the importance and variety of literature by American minorities, such as African American, Native American, Asian American, Hispanic American, and other minority or marginalized authors. Emphasis will be on multiplicity of literary voices, social-historical contexts, and themes of negotiating identity between/among majority and minority cultures. Fulfills Cultures - U.S. Diversity. Part of the Identity Issue. Offered fall and winter semesters. Prerequisites: WRT 150 and junior standing. Credits: 3

**ENG 336 - Lesbian, Gay and Queer Literature**

This interdisciplinary course makes use of literary, historical, and social scientific theories and methods in an in-depth study of lesbian, gay, and queer literature with attention to historical and cultural context. Literature may include literary classics, pulp fiction, postcolonial literature, feminist fiction and postmodern narratives. Cross-listed with WGS 336. Offered winter semester of even-numbered years. Credits: 3

**ENG 337 - Contemporary Black Literature**

Studies the importance and variety of literature by Black authors from Africa, the Americas, and/or Afro Europe since 1975. Texts written earlier than 1975 are used to consider influential historical and/or social events, trends and themes, literary styles, innovative uses of popular culture, and/or expression of the experience of marginality. Fulfills Cultures - World Perspectives. Part of the Identity Issue. Cross-listed with AAA 337. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**ENG 340 - Studies in Drama**

Focuses on the formal properties of drama and studies the conventions of the genre as it develops within or across historical periods and/or cultures. May be repeated for credit if the content varies. Offered winter semester. Prerequisites: Two foundation courses or declared writing major or minor. Credits: 3

**ENG 360 - Studies in Nonfiction**

Focuses on the formal properties of one or more nonfictional genre as the genre develops within or across historical periods and/or cultures. May be repeated for credit if the content varies. Offered winter semester. Prerequisites: Two foundation courses or declared writing major or minor. Credits: 3

**ENG 362 - History of the English Language**

Examination of the external and internal history of the English language from Old English to present day English. Investigation of regional and social varieties of English and the question of usage in the context of cultural change. Offered fall semester. Prerequisite: ENG 261. Credits: 3

**ENG 363 - Applied Linguistics**

Application of contemporary linguistic theory and research to issues in language, literacy, and learning. Consideration of first and second language acquisition, literacy, bilingualism, ESL, language variation including gender and nonstandard dialects, language pedagogy, and language attitudes and their relevance to classroom practices. Offered fall and winter semesters. Prerequisite: ENG 261. Credits: 3

**ENG 364 - Sociolinguistics**

Study of sociolinguistic theories investigating the interaction of language and society. An examination of the social and cultural aspects of language and language use: social stratification, power, gender, race, ethnicity, class, geographic origins, and networks. Offered fall semester. Prerequisite: ENG 261. Credits: 3

**ENG 365 - Teaching English as a Second Language**

Examination of the relevant issues of language, culture, and methodology for teachers of ESL students. Consideration of first and second language acquisition theory, language politics, second language teaching methodologies, and the classroom application of these issues. Offered fall and winter semesters. Prerequisite: ENG 261. Credits: 3

**ENG 366 - English Grammar and Usage**

A survey of the grammatical structure of English. The course helps students develop the ability to identify, understand, and analyze various syntactic properties of English, examines the historical and current contexts of teaching English in K-12/ESL settings, and explores the relationship between grammar and other areas of English study. Offered winter semester. Prerequisite: ENG 261 or permission of instructor. Credits: 3

**ENG 378 - Contemporary Latin American Literature**

A survey of Latin American literature of the past three decades, in English translation, taking in a variety of nations, regions, and cultures, including Afro-Latin and indigenous voices. Genres include the novel, the short story, poetry, drama, testimonial narrative, speeches, folklore, and film. Cross-listed with SPA 378 and LAS 378. Students may not receive credit for more than one. Prerequisites: WRT 150 and one literature course. Credits: 3

**ENG 380 - Special Topics in English**

Studies of selected authors, concepts, movements, periods, theories, or genres. Topics will be announced in the class schedule and prerequisites may be listed. May be repeated for credit. Prerequisite: One literature foundation course. Credits: 1 to 3

**ENG 381 - Regional Discourses in US Civil Rights**

Regional differences in U.S. Civil Rights' discourse. Offered even-numbered years, fall semester. Prerequisite: WRT 150. Credits: 3

**ENG 382 - Literature and the Environment**

Focuses on literature that engages with the relationship between human beings and the natural world. Includes literary nonfiction, nature poetry, environmental fiction, and other forms of literature that illuminate both human and nonhuman nature. Attention is also given to the effects and consequences of human and nonhuman interaction. Part of the Sustainability Issue. Offered fall and winter semesters. Prerequisites: WRT 150 and junior standing. Credits: 3

**ENG 383 - "Make It New": Literary Modernism**

From the cafes and "little magazines" of Paris emerged writers forging a new way to express the new realities of the twentieth century. Exploration of the literature in its cultural context. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**ENG 384 - Literature of War**

This course uses literary texts to explore the representations of war and conflict from a variety of perspectives. Works may include short stories, novels, poetry, nonfiction essays, or memoir. Ultimately, this course will examine how we write about war and ask how or if violence can become art. Part of the Human Rights Issue. Offered fall and winter semesters. Prerequisites: Junior standing and WRT 150. Credits: 3

**ENG 386 - Literary Responses to Death and Dying**

Study of literary texts that examine attitudes, practices, and beliefs surrounding death and dying, from multiple perspectives, including personal experience, across cultures, and historically. Studies associated issues such as illness, grief, mourning, memorials, and responses to national tragedies. Works may include poetry, memoir, drama, fiction, nonfiction, myth, and other arts. Part of the Health Issue. Offered fall and winter semesters. Prerequisites: WRT 150 and junior standing. Credits: 3

## Course Listings and Descriptions

### **ENG 388 - Emigration and Immigration in Contemporary World Literature**

This course examines how different kinds of emigration and immigration, from formerly colonized regions to the developed countries of the West and between formerly colonized countries, are depicted in 20th and 21st century World Literature. Part of the Identity Issue. Course offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **ENG 390 - Topics in Language and Rhetoric**

Variable content. Course will focus on a problem (or problems) in the history or structure of English, or on a specific problem in the practice or theory of rhetoric. Among such topics are the following: dialects, Black English, artificial languages (Esperanto-Newspeak), semantics, and language and politics. May be repeated for credit. Prerequisite: WRT 150. Credits: 3

### **ENG 392 - Language and Power**

Examines language as a means of achieving personal and cultural freedom and as a tool for controlling and oppressing others. Students study various theories of language use and explore the tension between our right to use language freely and our need to protect ourselves from the way others use language. Offered winter semester. Prerequisite: WRT 150. Credits: 3

### **ENG 399 - Independent Studies**

Before registration, the student must arrange for supervision by a faculty member and submit a contract (available in the English office) specifying the scope of the proposed study. No more than three credits in ENG 399 may be applied to the major or minor. Offered fall and winter semesters. Prerequisites: WRT 150. Prior approval of instructor. Credits: 1 to 4

### **ENG 400 - Critical Issues in K-12 Literacy**

Integrates theories of teaching reading, writing, speaking, and listening for K-12 English Language Learners, African American Vernacular English or other dialect speakers, students of color, and students who live in poverty. Offered fall and winter semesters. Prerequisites: ENG 307 and 308 for ELA; ENG 302 and 308 for CSAT; ENG 310 for Secondary. Credits: 3

### **ENG 436 - Women and Literature**

An in-depth study of major women writers and their historical, cultural, and artistic contributions. Significant attention will be given to the writings of minorities. Offered in winter semester of even-numbered years. Prerequisites: Completion of foundation courses and one 300-level literature course. Credits: 3

### **ENG 440 - Studies in Major Author(s)**

An in-depth study of one or two major literary figures, with an emphasis on biography, major works, and influence. Offered even-numbered years, fall semester. Prerequisites: Completion of foundation courses and one 300-level literature course. May be repeated for credit if content varies. Credits: 3

### **ENG 445 - Studies in Literary Criticism and Theory**

An in-depth study of critical and theoretical approaches to literature, with an emphasis on the development of theories of literature from classicism to postmodernism. Offered odd-numbered years, winter semester. Prerequisites: Completion of foundation courses and one 300-level literature course. Credits: 3

### **ENG 461 - Language and Gender**

Examination of theoretical approaches to the dynamics of language and gender. Investigation of the relationship of language and gender with social categories such as age, ethnicity, class, and sexuality. Application of social and linguistic theories to analyses of data with particular attention to contexts of the classroom, workplace, and media. Cross-listed with WGS 461. Offered winter semester. Prerequisite: ENG 261. Credits: 3

### **ENG 465 - Teaching Second Language Reading and Writing**

Examination of current theory, research, and practice in second language literacy development. Students will gain an understanding of the cognitive, linguistic, and sociocultural factors involved in learning to read and write in a second language, and develop informed practices for teaching second language readers and writers at different levels. Offered winter semester. Prerequisite: ENG 261. Credits: 3

### **ENG 467 - Language Disorders and English Literacy**

An examination of common speech/language disorders in the school-aged population having an impact on English literacy acquisition. Investigation of interface between ESL and language disorders, compounded by language attrition. Application to classroom communication skills, acquisition of literacy, and working with other school professionals. Offered fall semester. Prerequisite: ENG 261. Credits: 3

### **ENG 469 - ESL Teaching Practicum**

Practicum experience for those interested in teaching second language learners of English. Focus on integrating ESL theory with practice and implementing instructional approaches that support literacy and academic development of ESL learners. Emphasis on reflective practices and development of critical perspectives. Does not lead to State of Michigan teaching certification. Offered fall semester of odd-numbered years. Prerequisite: ENG 465. Credits: 3

### **ENG 490 - Internship**

A supervised work experience in an area of a student's potential career interest. Initiated by the student, who plans the work experience with the advisor, the faculty sponsor chosen to supervise the internship, and the supervisor at the worksite. As a rough guide, the student should expect to spend 45 hours per semester in the internship and supporting academic work for each credit awarded. Credit is awarded only when the student, the faculty sponsor, and the work supervisor have completed evaluations of the internship. Offered every semester. Credits: 1 to 3

### **ENG 495 - Language and Literature**

This course will be a culminating experience for all English majors. Students will reflect on their experience as English majors, create a senior project, and present their findings at a departmental conference. Prerequisites: English foundation courses and senior standing. Credits: 3

### **ENG 499 - Writing Project**

Advanced, supervised work on a substantial piece of writing, such as a novel or play, or a series of articles, short stories, or poems. Students register for this course upon recommendation of a faculty member. Offered fall and winter semesters. Credits: 3

### **ENG 600 - Graduate Literary Studies Seminar**

This course will introduce graduate students to current literary studies by explicating historical changes in the field of English in both literary content and critical discourse. Students will explore these changes by studying key concepts in the discipline and by completing a research project. Offered every year. Credits: 3

### **ENG 603 - Seminar in British Literature**

Aims at a synthesis of the development of British literature through a study of important literary themes, examining them closely in major works representative of the periods of British literature. Seminar presentation and research paper are required of each student. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

### **ENG 605 - Seminar in American Literature**

Aims at a synthesis of the development of American literature through a study of important literary themes, examining them closely in major works representative of the periods of American literature. Seminar presentation and research paper are required of each student. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

### **ENG 612 - Women Writers**

An in-depth study of selected works of women writers with attention to the literary and social contexts in which they wrote. Issues concerning the development of literature written by women and its status with regard to the canon will be addressed. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

### **ENG 614 - Literature of American Ethnic Minorities**

An in-depth study of selected pieces of African American, Hispanic, Asian American, Native American or immigrant American literature. Issues concerning the development of minority literature and its status with regard to the canon will be addressed. Offered every other year.

Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

#### **ENG 616 - World Literature in English**

A varied and dynamic body of literary writing in English has emerged from formerly British territories in Africa, Asia, and the Americas. This course will explore the emergence and characteristics of world literature in English. It will also examine the latter's relationship to the canons of British and American literature. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

#### **ENG 624 - Genre Studies**

Intensive study of the historical development of a selected genre (poetry, drama, fiction, literary nonfiction) and of the nature of the genre, focusing on selected works. May be repeated for credit when content varies. Offered every year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

#### **ENG 631 - Teaching Writing**

A study of current writing theory and its implication for teaching writing. Includes application of theory in classroom teaching and work on the student's own writing. Offered at least once a year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

#### **ENG 632 - Summer Invitational Writing Institute**

The Summer Invitational Institute gathers teachers, grades K-16, to develop presentations based on their best practices in teaching writing, to facilitate analysis of current research in the teaching of writing and to help teachers to better link their work as writers to work as teachers of writing. Offered spring/summer semester. Prerequisites: Application and interview. Credits: 3

#### **ENG 633 - Advanced Writing**

An intensive writing course designed to help teachers develop their own writing using various forms of creative and expository writing. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

#### **ENG 651 - Literary Period Seminar**

Intensive study of a period of British, American, or world literature. May be repeated for credit when content varies. Offered every year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

#### **ENG 655 - History of Literary Criticism and Theory**

A study of literary criticism and theory from all major historical periods (Greek, Roman, medieval, Renaissance, Eighteenth Century, Romantic, Late Nineteenth Century), and of the various modern and contemporary schools. Emphasis on philosophical assumptions underlying literary theories and on application of critical approaches to literary works. Offered every other year (odd-numbered years). Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

#### **ENG 660 - Principles of Educational Linguistics**

An introduction to contemporary linguistics and how linguistic concepts are used in educational contexts. Major component areas of phonetics, phonology, morphology, semantics, syntax, pragmatics, language variation, and language acquisition will be examined. Pedagogical relevance and implications for teaching are an integral part of linguistic analysis. Offered fall semester. Prerequisite: Admission to M.A.-AL program. Credits: 3

#### **ENG 661 - Author or Topic Seminar**

Intensive study of a work (or works) of a single author or focused literary topic. Offered every year. Prerequisites: Completion of English major or minor or consent of instructor. May be repeated for credit when content varies. Credits: 3

#### **ENG 662 - Pedagogical Grammar**

An advanced course in contemporary grammatical analysis of English. The course focuses on both descriptive and prescriptive properties of English, primarily in the generative-transformational framework, and addresses pedagogical issues in the teaching of grammar to English learners in various contexts. Offered winter semester. Prerequisite: ENG 660 or permission of instructor. Credits: 3

#### **ENG 663 - Shakespeare**

An in-depth study of selected plays, focusing on historical context, interpretive methods, and the development of Shakespeare's genius. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Credits: 3

#### **ENG 664 - Sociolinguistics and Language Teaching**

Introduction to major concepts, theories, findings, and research methods in sociolinguistics as they relate to second and foreign language teaching. Topics include language variation and change; standards, attitudes, and ideologies; world Englishes; language policy and planning; identity; and socialization. Focus on implications for teaching English in domestic and international contexts. Offered winter semester. Prerequisite: ENG 667. Credits: 3

#### **ENG 665 - Second Language Acquisition**

An examination of the major theories of second language acquisition and various factors that influence the learning process among different age groups of learners from different first language backgrounds. The relationship between SLA research and its pedagogical implications for teachers is also addressed. Offered winter semester. Prerequisite: ENG 667. Credits: 3

#### **ENG 667 - Introduction to Applied Linguistics Research**

An introduction to empirical research in applied linguistics. Critical reading of published research in the field, study of qualitative and quantitative research design, methodology and analysis, and writing of research reports are essential components of the course. Course offered fall semester. Prerequisite: ENG 660 (may be taken concurrently). Credits: 3

#### **ENG 668 - Second Language Assessment**

An examination of the basic concepts in language testing, with special focus on K-12 and adult learners of English as a second language. Areas of coverage include test selection, evaluation, development, and application. Both qualitative and quantitative methods will be addressed, though the latter are the primary concern. Required of those seeking Michigan ESL endorsement. Offered fall semester. Prerequisite: Completion of ENG 660 or equivalent. Credits: 3

#### **ENG 669 - Teaching English as an Additional Language (EAL)**

Exploration of second language learning theories and pedagogy of teaching English as an additional language in domestic and international contexts. The course addresses theoretical foundations of language learning and the implications for instructional practice and considers critical issues in English language teaching. Course offered fall semester. Prerequisite: ENG 660 (may be taken concurrently). Credits: 3

#### **ENG 670 - World Englishes: History and Variation**

Examination of the external and internal history of the English language from Old English to present day English with emphasis on the development, change, and variation of regional and social varieties of World Englishes. Includes linguistic and textual analyses of corpora, social media, dictionaries, grammars, and other resources. Offered every other year. Prerequisite: ENG 667. Credits: 3

#### **ENG 675 - Second Language Reading and Writing**

Exploration of major issues in the teaching of second language (L2) reading and writing in a variety of instructional contexts. Students will gain insight into the characteristics and needs of diverse second language learners and develop informed practices for teaching second language reading and writing at different levels. Course offered fall semester. Prerequisite: ENG 669. Credits: 3

#### **ENG 679 - Practicum**

Practicum experience in teaching or administrative contexts, domestic or international, where students serve as English language specialists. Focus on integrating theory and practice and the implementation of informed approaches to instruction, assessment, curriculum development, or program design. Emphasis on reflection and development of critical perspectives. Course offered fall semester. Prerequisites: ENG 669 and ENG 675 (ENG 675 may be taken concurrently). Credits: 3

## Course Listings and Descriptions

### ENG 680 - Special Topics in English

Study of selected topics. Topics will be announced in the course schedule. May be repeated for credit. Offered upon sufficient demand. Credits: 1 to 4

### ENG 693 - Master's Project

The culminating experience for MA-AL candidates who choose the Capstone (nonthesis) option. Students will design and develop a project in applied linguistics, which they will present publicly at a departmental conference. Course offered winter semester. Prerequisites: Students must complete 27 credits of MA-AL coursework prior to taking ENG 693 and complete the Responsible Conduct of Research Training within last three years. Credits: 3

### ENG 695 - Master's Thesis

Preparation of thesis for M.A. degree, Track 2. Carried out under supervision of thesis director. A student preparing a thesis must register for at least one credit per semester (including spring/summer) and must have registered for a total of at least 6 credits before scheduling thesis defense. Offered every semester. Prerequisites: Completion of 27 credits, approval of thesis proposal, and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 3

### ENG 696 - Continuation of Master's Project or Thesis Research

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### ENG 699 - Independent Study

Independent supervised study of selected topics not usually covered in available courses. Offered upon demand. Prior to registration, the student must arrange for supervision by a faculty member and submit a contract (available in the English Department) specifying the scope of the proposed study. No more than three credits of ENG 699 may be applied toward the M.A. degree. Prerequisite: Permission of the instructor. Credits: 1 to 3

### ENS 180 - Special Topics in Environmental Studies

Readings, lectures, and/or discussions in specific topics not normally covered by other courses in the program. Credits: 1 to 9

### ENS 201 - Introduction to Environmental Studies and Sustainability

ENS 201 is an interdisciplinary exploration of the multiple ways by which human society influences, and is influenced by, its natural environment. Economic, political, and socio-cultural dimensions of environmental studies are presented through an interdisciplinary approach. Principles of sustainability are examined. Prerequisite: Sophomore standing. Credits: 3

### ENS 280 - Special Topics in Environmental Studies

Readings, lectures, and/or discussions in specific topics not normally covered by other courses in the program. Credits: 1 to 9

### ENS 303 - Introduction to U.S. Environmental Policy

This course examines the decision-making processes to cope with modern environmental problems. The course focuses on both domestic and international environmental issues with special attention to interests, ideas, and institutions. Part of the Sustainability Issue. Cross-listed with PLS 303. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### ENS 361 - People, Environment, and Development in the Amazon

This course explores natural resource use and human settlement over time in the Amazon Basin, from early tribal societies to the present. Topics include extractive economies, trade in animal and forest products, conservation and development initiatives, and the changing demands for resources in urban centers of Amazonia today. Part of the Sustainability Issue. Cross-listed with ENS 361. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

### ENS 362 - Farmers, Crops, and Our Challenging Agricultural World

A geography of the world's agricultural practices and development at different scales, from traditional methods to industrial agriculture with an emphasis on farming societies. Topics include indigenous agriculture and crop domestication, agroforestry and plantation systems, land use and rural societies, export crops, aquaculture and livestock, and drug cultivation. Fulfills World Perspectives. Part of the Globalization Issue. Cross-listed with GPY 362. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### ENS 363 - World Forests and Their Use

A geography of the world's forests and their use, from traditional to industrial practices over space and time. Topics include the local, national, and international exploitation of forests, forest societies, foods, fuel and medicines, timber, protected areas, and the challenge of sustainable forest use in different regions and environments. Part of the Sustainability Issue. Cross-listed with GPY 363. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

### ENS 401 - Environmental Problem Solving

A problem-solving seminar in environmental studies. Attention will be given to vulnerabilities to environmental change, sustainable development, impact and risk assessment, and adaptations to and mitigation of environmental problems at various scales. Multidisciplinary student teams will conduct original research and design sustainable practices and solutions for real-life environmental problems. Prerequisites: ENS 201 and junior standing. Credits: 3

### ENS 410 - Landscape Analysis

Landscape analysis is a broadly interdisciplinary study that includes concepts and methods of sustainable physical/human geography, ecology, planning, and architecture. It includes the biophysical and societal causes and consequences of landscape heterogeneity, processes, and evolution. Conceptual and theoretical core of this course links natural sciences with related human disciplines. Part of the Sustainability Issue. Cross-listed with GPY and PA 410. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### ENS 412 - Global Environmental Change

The main theme of this course is the changing nature of our environment and human-environmental interactions. Topics include climatic fluctuations, environmental reconstructions, the interaction between humankind and the environment since the prehistoric times, and human-induced environmental change of the last century at the global, continental, and regional scales. Part of the Sustainability Issue. Cross-listed with GPY 412. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### ENS 490 - Internship in Environmental Studies

Supervised work experience in an area related to environmental studies. Offered each semester. Prerequisite: Permission of the program director. Credits: 1 to 5

### ENS 492 - Sustainable Agriculture Practicum: Ideas and Techniques

Students will study agricultural systems while being exposed to applied research at the sustainable agriculture project site. Students will investigate models of sustainable food systems that link production to economics, consumption, and nutrition. Course offered fall semester. Prerequisite: ENS 201 or permission of instructor. Credits: 3

### ENT 150 - Entrepreneurial Quest

Students will explore the entrepreneurial quest beginning with the myths and realities of entrepreneurs, student self-analysis through creativity and idea generation, and the concept of the business plan. Key motivators and the drivers for success will be analyzed. Students will be required to conceptualize a new venture idea. Offered fall and winter semester. Credits: 3

### ENT 151 - New Venture Feasibility

This course focuses on the process of developing an idea from a product concept into a product design that has a market and commercial feasibility. Students will have "hands-on" and applied opportunities to develop their concepts within different environments including, graphics, design, and

prototyping. Offered fall and winter semester. Prerequisite: ENT 150. Credits: 3

#### **ENT 251 - Entrepreneurial Management and Marketing**

This course completes the process of business plan development by incorporating market research, the competitive environment, legal formation, intellectual property protection, and management development. Offered every semester. Prerequisite: ENT 151. Credits: 3

#### **ENT 350 - Entrepreneurial Business Plan**

Student teams will work with an entrepreneurial client in developing a business plan for client implementation. Each student will individually refine their own comprehensive business plan and submit it for competitive evaluation at a business plan competition to be judged by local entrepreneurs, investors, and faculty. Requires significant time commitment outside the classroom. Offered fall and winter semesters. Credits: 3

#### **ENT 351 - Entrepreneurial Project**

In this course students will extend principles to real-world entrepreneurial projects. The course involves individual project work such as the launching and/or growing of the student business, conducting in-depth research on current entrepreneurial issues, or assisting area entrepreneurs. This course requires significant time commitment outside the classroom. Offered fall and winter semesters. Prerequisite: ENT 350. Credits: 3

#### **ESL 098 - English as a Second Language (ESL): Composition**

Provides nonnative speakers of English with a practical review of English grammar and instruction in paragraph and essay organization and writing. As part of the course, students work one hour per week with a peer consultant in the Writing Center. Four (nongraduation) credits. Offered fall semester. Credits: 4

#### **FIN 221 - Personal Finance**

Designed for the nonfinance major who wants to improve the management of personal finances. Aspects of finance that individuals are likely to face will be discussed. Specific topics include credit buying and borrowing, insurance, home ownership, stock and bond investment, mutual funds, income taxes, and estate planning. Offered fall and winter semesters. Credits: 3

#### **FIN 320 - Managerial Finance**

Financial policies and practices that lead to the maximization of the value of a firm. Major topics include risk and return, management of current assets, capital budgeting, sources of financing, and optimum capital structure. International financial implications are considered. Offered every semester. Prerequisites: ACC 212 and (MTH 110 or MTH 122 or MTH 201). Credits: 3

#### **FIN 321 - Investments**

Fundamental principles of investment, characteristics of investment and speculative assets, analysis of risk and return, operation and regulation of markets, analysis of investment requirements, types of investment trading, and timing strategies. Offered each semester. Prerequisites: FIN 320 and STA 215. Not to be taken concurrently with FIN 320. Credits: 3

#### **FIN 322 - Intermediate Managerial Finance**

A second course in financial management required for all finance majors. Goes into more depth than FIN 320 and covers many additional topics. Coverage includes capital structure decisions, working capital policy, current liability management, optimal capital budgets, dividend policy, and lease financing. Offered each semester. Prerequisites: FIN 320, ACC 213, and STA 215. Credits: 3

#### **FIN 330 - Ethics in Finance**

This course relates ethical principles to issues faced by financial professionals in fields such as investment analysis, investment sales, corporate finance, and financial institutions. A general background in moral philosophies will be provided. Offered fall and winter semesters. Prerequisite: FIN 320. Credits: 3

#### **FIN 331 - Risk and Insurance**

Risk analysis and insurance. Planning personal and business insurance. Business insurance as it relates to business risks and decision-making. Emphasis on business exposures, coverages, and problems of the risk

manager. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

#### **FIN 350 - Real Estate Principles**

An introduction to the basic principles of real estate administration. The legal and economic characteristics of real estate, real estate markets, appraising methods, government and political trends, and regional and local economic influences. Junior standing or permission of instructor. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

#### **FIN 380 - Special Topics in Finance**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Offered on demand. Credits: 3

#### **FIN 420 - Bank Management**

Financial management of commercial banks and other financial intermediaries. Examination of banking structure and current regulatory environment. Specific techniques of evaluating risks, liability management, and determining asset composition. Concepts of capital adequacy and liquidity management. Offered fall and winter semesters. Prerequisite: FIN 320. Credits: 3

#### **FIN 422 - Advanced Managerial Finance**

Application of principles of finance to solving selected business case problems and analyzing current financial topics. Offered fall and winter semesters. Prerequisite: FIN 322. Credits: 3

#### **FIN 424 - Financial Modeling**

This course focuses on the development of spreadsheet and computer-based skills to analyze complex decisions facing financial managers today. Topics include time value of money, capital budgeting, cost of capital, basic financial statements, financial forecasting, valuation, and risk evaluation and return. Offered fall and winter semesters. Prerequisite: FIN 320. Credits: 3

#### **FIN 427 - Derivative Assets and Markets**

Valuation of options, futures, forward contracts, and swaps; institutional and regulatory attributes of derivatives markets; trading and hedging strategies; risk management. Offered every winter. Prerequisite: FIN 321. Credits: 3

#### **FIN 428 - Security Analysis and Portfolio Management**

A sophisticated analysis of investment securities from the viewpoint of establishing meaningful evaluation techniques. Develops practical strategies for constructing efficient portfolios by the study of risk analysis, random walk, and other theoretical concepts. Offered winter semester. Prerequisite: FIN 321. Credits: 3

#### **FIN 429 - International Financial Management**

Covers the application of the tools, techniques, and the underlying theory essential for financial management in an international setting, including those required for financing and control. Topics covered also include international accounting, effects of fluctuating exchange rates, overseas investments, and the structure and function of international financial institutions and markets. Offered winter semester. Credits: 3

#### **FIN 480 - Special Topics in Finance**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Offered on demand. Credits: 1 to 9

#### **FIN 490 - Finance Internship**

This course will be used to grant finance credit to students who complete internships in the finance field. Prerequisites: Junior standing; minimum 2.5 GPA. Graded credit/no credit. Credits: 1 to 6

#### **FIN 499 - Independent Research**

Students propose an independent study culminating in a written and oral report. The proposal must include learning outcomes and a readings list. Proposals involving primary research should include a detailed description of objectives and methodology. Students must find an interested faculty member to help them prepare the proposal and to supervise the independent research. Offered each semester. Prerequisite: Written permission of the instructor required. Credits: 1 to 3

## Course Listings and Descriptions

### **FIN 520 - Statistics and Mathematics of Finance**

Examines probability distributions, confidence intervals, hypothesis testing, analysis of variance, and linear regressions, as well as time value of money valuation models, including present and future cash flows, bond valuation, dividend discount models, NPV, IRR, discount rates, WACC, and the Capital Asset Pricing Model. Offered every semester. Prerequisites: Admission to graduate business program or permit. Credits: 3

### **FIN 621 - Financial Policy for Managers**

Course presumes a thorough understanding of the principles of managerial finance. Emphasis on problem-solving, decision-making, and actions leading to optimizing the value of business firms. Methods of incorporating risk analysis into decisions concerning management of working capital, capital budgeting, and capital structure. Analysis of alternative theories and procedures regarding financial goals, portfolio concepts, cost of capital, and dividend policy. Selected aspects of international finance are discussed. Offered each semester. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

### **FIN 624 - Investment and Portfolio Management**

This course examines investment opportunities including equities, derivatives, and debt instruments. Topics include asset markets, asset pricing models, portfolio management, valuation models, market efficiency, and investment strategies. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

### **FIN 626 - Advanced Managerial Finance**

Application of principles of finance to solving selected business case problems and analyzing current financial events. Prerequisite: FIN 621. Credits: 3

### **FIN 627 - Derivative Assets and Markets**

The course examines options and futures markets and instruments. Options topics include options markets, properties of options, option trading strategies, and derivation and application of various valuation models, including the binomial model and the Black-Scholes model. Other topics include valuation in the forwards, futures, and swaps markets. Offered winter, even-numbered years. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

### **FIN 629 - International Finance**

Consideration of the problems of a world monetary order, including fixed versus floating exchange rates, the role of gold, key currencies, SDRs, balance of payments, etc. Subjects cover the current monetary system and its evolution, including international monetary agencies and the pivotal role of the U.S. dollar. Investigation of the sources of financing for trade and foreign direct investment such as national capital markets, government programs, foreign capital markets, Eurocurrencies, and Eurobonds. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

### **FIN 680 - Special Topics in Finance**

Course content varies. Refer to schedule of classes to determine description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 3

### **FIN 699 - Independent Study**

Independent research in the student's area of interest, supervised by a member of the Seidman faculty, and culminating in a written and oral report. Written permission of supervising faculty required. Credits: 1 to 3

### **FIT 100 - Self Defense for Women**

An introduction to women's basic self-defense to develop and enhance the options of self-defense so they may become viable considerations to the woman who is attacked. Course is graded credit/no credit. Credits: 1

### **FIT 101 - Pilates**

An introduction to basic Pilates techniques and exercises. Pilates is designed to strengthen the body in a way that helps the body move freely in its natural state. This program focuses on the torso, which is central to Pilates. Course is graded credit/no credit. Credits: 1

### **FIT 103 - Tae Kwon Do**

An introduction to the traditional Chung Do Kwan style. Students will practice the correct breathing, focus, power, balance, rhythm, and timing necessary to perform 22 basic (poom) movements; comprised of blocks, punches, strikes, stretches, kicks, and turns that have evolved for over a thousand years. Course is graded credit/no credit. Credits: 1

### **FIT 104 - Recreational Gymnastics**

This course provides students with an opportunity to learn beginning gymnastic skills through the use of safe progressions. Students learn skills on mats, balance beam, vault and rings. This activity course enhances students' physique, self-discipline and self-confidence. Course is graded credit/no credit. Credits: 1

### **FIT 107 - Tai Chi I**

As an introduction to Tai Chi, this course offers a brief overview of the key terms, concepts, and philosophy of Tai Chi. Students learn a short form in Traditional Yang style. Course is graded credit/no credit. Credits: 1

### **FIT 109 - Yoga I**

This course introduces the basic yoga posture and breathing techniques that will facilitate the development of union. The purpose of yoga is to bring about the union of different aspects of self, such as: unity of body, breath and mind, and to awaken a renewed sense of balance and harmony. Course is graded credit/no credit. Credits: 1

### **FIT 110 - Yoga II**

This advanced course builds upon previously learned basic yoga postures that will strengthen the body, relax and balance the nervous system, and increase concentration of the mind. Postures, breathing techniques, and meditations will be applied to daily lives to improve health and reduce stress. Course is graded credit/no credit. Credits: 1

### **FIT 112 - Core Strength**

Core strength focuses on the abdominal, back, and pelvic muscle groups. This course provides students with the opportunity to enhance muscular endurance, strength, and flexibility using weight techniques, Pilates, and yoga activities. Offered fall and winter semesters. Credits: 1

### **FIT 118 - Archery**

An introduction to the basic skills and techniques of target archery. Emphasis is on shooting range safety, equipment care, and the proper shooting form necessary to competently participate in the sport of target archery outside of this class. Course is graded credit/no credit. Credits: 1

### **FIT 119 - Outdoor Skills/Snowshoeing**

An introduction to traditional skills for winter outdoor activity and snowshoeing. Topics receiving emphasis are: hypothermia, leave no trace, clothing and equipment, the 12 essentials, navigation/triangulation, fire building, trip planning, and snowshoeing. Course is graded credit/no credit. Credits: 1

### **FIT 120 - Bowling**

Course is graded credit/no credit. (0-1-0) Credits: 1

### **FIT 121 - Golf**

Course is graded credit/no credit. Credits: 1

### **FIT 122 - Weight Training**

Course is graded credit/no credit. Credits: 1

### **FIT 123 - Golf II**

This advanced course builds upon previously learned basic golf. Advanced shot-making and course strategy will be emphasized. Course is graded credit/no credit. Credits: 1

### **FIT 126 - Conditioning and Flexibility-Beginning**

Course is graded credit/no credit. Credits: 1

### **FIT 128 - Rock Climbing**

Course is graded credit/no credit. Credits: 1

### **FIT 129 - Weight Training for Women**

Provides women the opportunity to learn beginning weight training skills in a noncompetitive environment. Students will develop strength, stamina

and develop a personal program while using Nautilus machines and free weights. Offered fall and winter semesters. Credits: 1

**FIT 130 - Volleyball**

Course is graded credit/no credit. Credits: 1

**FIT 131 - Basketball**

Course is graded credit/no credit. Credits: 1

**FIT 133 - Softball**

Course is graded credit/no credit. Credits: 1

**FIT 134 - Soccer**

This course offers beginning techniques and tactics of the game of soccer. Areas of emphasis will include rules of the game, and technical, tactical, and physical conditioning for the game. Course is graded credit/no credit. Credits: 1

**FIT 142 - Beginning Tennis**

Course is graded credit/no credit. Credits: 1

**FIT 144 - Badminton**

Course is graded credit/no credit. Credits: 1

**FIT 145 - Body Sculpting**

Body sculpting involves strengthening various muscle groups utilizing weights, bands, balls, and personal body weight. This course provides students with the opportunity to enhance muscular endurance and strength through training techniques, body awareness, and consistency in practice. Credits: 1

**FIT 147 - Power Lifting for Sport**

This course is designed to develop the strength and power related fitness levels necessary to participate in any sport. Course is graded credit/no credit. Credits: 1

**FIT 148 - SPINNING®**

This course encompasses the background of SPINNING® and how to implement the SPINNING® program to develop personal fitness. Credits: 1

**FIT 149 - Stretch and Tone for Dancers**

This course is an introduction to the fitness components that underlie dance performance. Conditioning, nutrition, and injury prevention are taught within a framework that emphasizes the physical fitness components for dancers. Course is graded credit/no credit. Credits: 1

**FIT 150 - Beginning Swimming**

Course is graded credit/no credit. Credits: 1

**FIT 151 - Intermediate Advanced Swimming**

Course is graded credit/no credit. Credits: 1

**FIT 152 - Rowing I**

This course develops the basic knowledge and skills of rowing technique, the rules of racing, and proper equipment maintenance for beginning rowers. Course is graded credit/no credit. Credits: 1

**FIT 153 - Sailing-Large Boat**

This course introduces students to the basics of sail handling, docking, tacking, and directing a crew on a large sailboat. Course is graded credit/no credit. Credits: 1

**FIT 156 - Zumba**

Zumba is a fusion of body sculpting movements focusing on Latin music. The routine features aerobic/fitness interval training with a combination of fast and slow rhythms. This course provides students with the opportunity to learn Zumba skills incorporating interval and resistance training to improve muscle tone. Offered fall and winter semesters. Credits: 1

**FIT 157 - Belly Dancing for Fitness**

Provides students with the opportunity to learn belly dancing skills as an artistic, traditional dance method that will improve fitness. Students will gain physical skills, valuable knowledge, and effective personal-social behaviors to successfully adopt belly dancing into their fitness routine. Offered fall semesters. Credits: 1

**FIT 160 - Beginning Jazz Dance**

Course is graded credit/no credit. Credits: 1

**FIT 161 - Intermediate Advanced Jazz Dance**

Course is graded credit/no credit. Credits: 1

**FIT 164 - Beginning Modern Dance**

Course is graded credit/no credit. Credits: 1

**FIT 165 - Intermediate Advanced Modern Dance**

Course is graded credit/no credit. Credits: 1

**FIT 166 - Beginning Ballet**

Course is graded credit/no credit. Credits: 1

**FIT 167 - Intermediate Advanced Ballet**

Course is graded credit/no credit. Credits: 1

**FIT 168 - Dance for Fitness (Dance Genre)**

Uses contemporary dance techniques and genres to develop and improve individual health and fitness. The specific dance genre appears in the parentheses of each course section offered. May be repeated for credit only when a different dance for fitness genre is selected. Credits: 1

**FIT 178 - Ballroom Dance for Women**

This course will introduce students to the theory, practice and performance of ballroom dance. Dances covered will include the Swing, Tango, Cha Cha, Waltz, Fox Trot, and Hustle. Course is graded credit/no credit. Credits: 1

**FIT 179 - Ballroom Dance for Men**

This course will introduce students to the theory, practice and performance of ballroom dance. Dances covered will include the Swing, Tango, Cha Cha, Waltz, Fox Trot, and Hustle. Course is graded credit/no credit. Credits: 1

**FRE 101 - Beginning French I: Language and Culture**

An introduction to the French language and to the cultures of the French-speaking world. Practice in speaking, listening, reading, writing at the Novice level. Supplemented by multimedia and the Language Resource Center. No more than two years of high school French, or permission of instructor. Students are strongly encouraged to take the free Placement Exam in the Language Resource Center prior to registering. Offered each semester. Credits: 4

**FRE 102 - Beginning French II: Language and Culture**

Continuation of FRE 101. Practice in speaking, listening, reading, and writing at Novice and Intermediate levels. French and Francophone culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Students who did not complete FRE 101 at GVSU are strongly encouraged to take the free Placement Test in the Language Resource Center prior to registering. Students may not receive credit for both FRE 150 and FRE 102. Offered each semester. Prerequisite: C (not C-) or better in FRE 101, or credit, or appropriate placement test score. Credits: 4

**FRE 150 - Accelerated Beginning French I and II: Language and Culture**

One semester accelerated review of beginning French for students with prior study. Covers the same material as FRE 101 and FRE 102. Not open to students with credit in FRE 101, FRE 102 or their equivalent. Offered fall and winter semesters. Prerequisites: Minimum of two years of high school French and appropriate Placement Test score (free in Language Resource Center). Credits: 4

**FRE 180 - Special Topics in French**

Course content varies. Expectations of students approximate those in other 100-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

**FRE 201 - Intermediate French I: Language and Culture**

Continuation of FRE 102 or FRE 150. Practice in speaking, listening, reading, writing at the Intermediate level. French and Francophone Cultures integrated throughout. Supplemented by multimedia and the Language Resource Center. Offered each semester. Prerequisite: C (not C-) or better in FRE 102 or FRE 150, or credit, or appropriate placement test score (free in the Language Resource Center). Credits: 4

## Course Listings and Descriptions

### **FRE 202 - Intermediate French II: Language and Culture**

Continued practice in speaking, listening, reading, writing at the Intermediate level. Review of grammar and expansion of vocabulary. Focus on French and Francophone culture through authentic texts and multimedia materials. Counts toward the French Minor (noneducation). Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Prerequisite: C (not C-) or better in FRE 201, or credit, or appropriate placement test score (free in the Language Resource Center). Credits: 4

### **FRE 280 - Special Topics in French**

Course content varies. Expectations of students approximate those in other 200-level courses. May be repeated for credit when content differs. No more than four credits can be applied to the minor or major. Offered on sufficient demand. Prerequisite: FRE 201. Credits: 1 to 6

### **FRE 315 - French Conversation**

Extensive practice in oral communication through exposure to French and Francophone cultures. Introduction to the Proficiency Guidelines of ACTFL (American Council on the Teaching of Foreign Languages). Course may be taken concurrently with FRE 316 Advanced Grammar. Offered every semester. Prerequisite: C (not C-) or better in FRE 202 or permission of instructor. Credits: 3

### **FRE 316 - Advanced French Grammar**

Detailed study of French grammar with a focus on areas of difficulty for speakers of English. Extensive written and in-class oral practice. Course may be taken concurrently with FRE 315 French Conversation. Prerequisite: C (not C-) or better in FRE 202, or permission of instructor. Credits: 3

### **FRE 317 - Writing in French**

Extensive practice in writing. Study of various stylistic techniques using texts from multiple sources. Review of the finer points of grammar and usage. Offered for SWS credit. Course offered fall and winter. Prerequisite: C (not C-) or better in FRE 202; Recommended after FRE 315 and FRE 316. Credits: 3

### **FRE 318 - Introduction to French Literature**

An introduction to French and Francophone literature. Emphasis on development of reading strategies and learning to analyze literary texts and poetry. A French core curriculum course required for advanced study. Offered fall and winter semesters. Prerequisite: C (not C-) or better in FRE 202; Recommended after FRE 315, FRE 316 and FRE 317. Credits: 3

### **FRE 321 - Survey of French Literature I**

A survey of French literature of the Middle Ages and the Renaissance. Offered winter semester in even-numbered years. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317, FRE 318) or permission of instructor. Credits: 3

### **FRE 322 - Survey of French Literature II**

A survey of French literature of the seventeenth and eighteenth centuries. Offered winter semester in odd-numbered years. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317 and FRE 318) or permission of instructor. Credits: 3

### **FRE 323 - Survey of French Literature III**

A survey of French literature of the 19th, 20th, and 21st centuries. Offered fall semester in even-numbered years. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317 and FRE 318) or permission of instructor. Credits: 3

### **FRE 331 - French Phonetics**

Study of the basic principles of French phonetics with emphasis on improving pronunciation and aural comprehension. Introduction to the International Phonetic Alphabet and phonetic transcription. Intensive exposure to spoken French through a variety of media, including the Language Resource Center, and practice with each major phoneme. Offered fall semester. Prerequisites: FRE 202 and one other course at the 300-level with C (not C-) or permission of instructor. Credits: 3

### **FRE 332 - Introduction to French Linguistics**

Analysis of the evolution of the French language, phonology, sociolinguistics and dialectology, applied linguistics, bilingualism and language contact. Prerequisites: C (not C-) or better in FRE 315, FRE 316, and FRE 317, or permission of instructor. Credits: 3

### **FRE 333 - Theory and Practice of Translation**

Theory and practice of translation with an emphasis on French to English. Course highlights theoretical concepts, specific translation problems, and development of techniques for dealing with certain structures. Topics may also include profession related issues such as reader's reports, queries, publishing, and strategies to establish and manage a translation business. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, 316, 317, 318), or permission of instructor. Credits: 3

### **FRE 334 - Foreign Language Acquisition and Pedagogy**

Provides prospective French and German high school teachers with an introduction to foreign language acquisition theory and practical applications of language teaching pedagogy. Students will also observe language teachers in local high schools. Cross-listed with GER 314. Course offered winter semester. Prerequisite: Instructor permission. Credits: 3

### **FRE 341 - French History and Civilization**

A study of the main themes of French civilization and culture with their implications for contemporary France and their literary manifestations. Taught in French. Offered fall semester even numbered years. Prerequisite: C (not C-) or better in FRE 315 or permission of instructor. Credits: 3

### **FRE 342 - Contemporary French Culture and Society**

Analysis of French contemporary civilization and culture using a variety of multimedia sources. Discussion of current events. Offered winter semester odd-numbered years. Prerequisite: C (not C-) or better in FRE 315 or permission of instructor. Credits: 3

### **FRE 343 - Francophone Civilization**

The study of Francophone culture, including topics such as: language and communication, marriage, the family and gender roles, immigration and colonization, sociopolitical institutions, and the arts. Materials are drawn from novels, short stories, plays, music, cinema, and multimedia. Course offered fall semester odd numbered years. Prerequisites: C (not C-) or better in all French Core Curriculum courses (FRE 315, 316, 317, and 318) or permission of instructor. Credits: 3

### **FRE 351 - Business French**

Study of the French economy and business practices. Focus on French business vocabulary, cultural differences, and new technologies. Preparation for the Chambre de Commerce et d'Industrie de Paris examination (French Business Proficiency-optional upon completion of course). Recommended for international business majors with a minor in French. Taught in French. Offered fall semester in odd-numbered years. Prerequisites: C (not C-) or better in all Core Curriculum courses (FRE 315, 316, 317 and 318), or permission of instructor. Credits: 3

### **FRE 380 - Special Topics in French**

Course content varies. Expectations of students approximate those in other 300 level courses. May be repeated for credit. Course offered on sufficient demand. Prerequisites: C (not C-) or better in core curriculum courses (FRE 315, 316, 317, and 318) or permission of instructor. Credits: 1 to 6

### **FRE 385 - French Language**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### **FRE 386 - French Culture Abroad**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. Takes place in France (or another French-speaking country) as part of an approved study abroad program. Course is conducted in French. By permit only. Credit may vary. Credits: 3

**FRE 387 - EUSA Paris-Language**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits: 3

**FRE 388 - EUSA Paris-Internship**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits: 3 to 6

**FRE 395 - Advanced Speaking Strategies and Skills**

Development and assessment of speaking skills in French at the Advanced level as defined by the American Council on the Teaching of Foreign Languages (ACTFL). Extensive practice in both interpersonal and presentational speaking. Course offered winter semester of odd-numbered years. Prerequisites: C (not C-) or better in all French core curriculum courses (FRE 315, 316, 317, 318) or permission of the instructor. Credits: 3

**FRE 399 - Independent Study**

Content decided jointly by instructor and student. Student must arrange for supervision by a faculty member before registration. Credits: 1 to 4

**FRE 416 - French Literature of the 20th Century**

Study of contemporary literature with representative works in prose, poetry, drama, and scenarios. Offered winter semester in odd-numbered years. Prerequisites: C (not C-) or better in core curriculum courses, FRE 301, FRE 304, FRE 306, and FRE 307; and C (not C-) or better in FRE 303; or permission of instructor. Credits: 3

**FRE 421 - Medieval French Literature**

Study of representative French medieval works. Readings include poetry, courtly literature, fables, farces, and theater. Offered fall semester even-numbered years. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317 and FRE 318) and completion of one 300-level literature elective, or permission of instructor. Credits: 3

**FRE 422 - Renaissance French Literature**

Study of representative literary authors and texts of the French Renaissance period. This course also explores historical and cultural topics and their impact on the development of 16th century French literature. Offered fall semester. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317 and FRE 318) and completion of one 300-level literature elective, or permission of instructor. Credits: 3

**FRE 423 - 17th Century French Literature**

Study of representative literary authors and texts from the 17th century. This course also explores historical and cultural topics and their impact on the development of 17th century French literature. Offered winter semester. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317 and FRE 318) and completion of one 300-level literature elective, or permission of instructor. Credits: 3

**FRE 424 - 18th Century French Literature**

Survey of French literature of the 18th century. Focus on writers whose ideas and militant prose provoked the intellectual and social ferment leading to the French Revolution. Criticism of the monarchy, the social order, education and civilization. May not be repeated for credit. Offered fall semester in odd numbered years. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317 and FRE 318) and completion of one 300 level literature elective, or permission of instructor. Credits: 3

**FRE 425 - French Literature of the 19th Century**

Study of the literature of the 19th century with special emphasis on the novel. Offered winter semester in even-numbered years. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317 and FRE 318) and completion of one 300-level literature elective, or permission of instructor. Credits: 3

**FRE 427 - Francophone Literatures and Cultures**

Readings of novels, plays, and poetry from the Francophone world. Regions chosen vary according to instructor's field of specialization. Close readings emphasizing the distinctive cultures of the Francophone world and discussion of the important issues raised by these texts, in particular: racism, the colonial past, present corruption, and memory. Offered fall semester in even-numbered years. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, FRE 316, FRE 317 and FRE 318) and completion of one 300-level literature elective, or permission of instructor. Credits: 3

**FRE 480 - Special Topics in French**

Course content varies. Expectations of students approximate those in other 400-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, 316, 317, 318), and completion of one 300-level literature elective, or permission of instructor. Credits: 1 to 4

**FRE 495 - Advanced Topics in French (Capstone)**

Capstone course for the French major. Content varies according to the instructor: An in-depth exploration of French literature, linguistics, and civilization. Offered winter semester. Prerequisites: C (not C-) or better in all core curriculum courses (FRE 315, 316, 317, 318), and senior standing or permission of instructor. Credits: 3

**FRE 499 - Independent Research**

Content of the Independent Research is decided jointly by instructor and student upon special circumstances. FRE 499 involves in depth research and/or extensive analysis on a specific linguistic, cultural or literary topic. Course offered every semester. Credits: 1 to 4

**GEO 100 - Environmental Geology**

The relationship between people and their physical geological environment. Topics include geologic hazards, hydrology and human health, mineral and energy resources, and land use planning. Primarily for nonscience majors; not for geology or earth science majors. Lectures and field trips. Fulfills Foundations - Physical Sciences. (3-0-0) Offered each semester and in summer. Credits: 3

**GEO 103 - Oceans**

Scientific investigation of the oceans and interactions among ocean, atmosphere, and lithosphere. Introduction to the chemistry of seawater, physics of water movement, coastal processes, geological oceanography, changes in the oceanic system through geologic time, and the role of oceans in earth's geologic evolution. Lectures and field trips. Fulfills Foundations - Physical Sciences. (3-0-0) Offered fall semester and in summer. Credits: 3

**GEO 105 - Living with the Great Lakes**

Introduction to earth science using the Great Lakes as a theme and Lake Michigan as a natural laboratory. Review of the lakes' geologic setting, origin, and history; climatology and lake levels; physical processes including erosion; water chemistry as a function of geology; human interactions with the lakes. Lectures and field trips. Fulfills Foundations - Physical Sciences. (3-0-0) Offered in fall semester and in summer. Credits: 3

**GEO 111 - Exploring the Earth**

Introduction to the study of earth materials and processes, including minerals, rocks, mineral deposits, weathering, erosion, volcanism, and mountain building. Lectures, laboratories, and field trips. Fulfills Foundations - Physical Sciences with a lab. (3-0-2) Offered each semester and in summer. Credits: 4

**GEO 112 - Earth History**

Introduction to major principles of geologic time, inferring the evolution of the solid and liquid Earth through the rock record using conceptual frameworks of sedimentation, stratigraphy, paleontology, and tectonics and developing spatial comprehension through 2D and 3D visualization of rock geometries. Lectures, laboratory, and required field trip. Prerequisite: GEO 111 (preferred) or GEO 100 or GEO 103 or GEO 105. Credits: 4

## Course Listings and Descriptions

### **GEO 175 - Research Tools for Geosciences**

An introduction to the research tools and skills essential to a successful geoscientist. Emphasis on hands-on activities to develop information, numerical, and spatial literacy. Intended for first or second year students in geosciences-related disciplines. Projects and computer laboratories. Offered fall and winter semesters. Prerequisites: GEO 111 and GEO 112 (can be taken concurrently). Credits: 1

### **GEO 180 - Special Topics in the Geological Sciences**

Topics covered will reflect special interests of students and the instructor. Offered on sufficient demand. Prerequisites: Variable depending on topic. Credits: 1 to 4

### **GEO 201 - The Geosphere for K-8 Pre-Service Teachers**

A study of those aspects of earth science that are related to the earth's lithosphere. Topics covered include geologic materials, geologic time, volcanoes, earthquakes, and plate tectonics. Hands-on investigation of the natural world is emphasized. Course is intended for integrated science majors. Does not count toward a geology major. (3-0-3) Offered fall and winter semesters. Credits: 4

### **GEO 202 - Hydrosphere for Teachers**

Introduction to how the hydrosphere works emphasizing a descriptive approach. Includes river, groundwater, glacial, ocean, and shoreline systems and human interaction with those systems. Course is intended for integrated science majors. Does not fulfill requirements for other majors or minors. Content reflects national and Michigan science standards. Lectures and laboratory. (3-0-3) Offered fall and winter semesters. Credits: 4

### **GEO 203 - Weather and Climate for Pre-Service Teachers**

Introduction to weather and climate. Includes daily, seasonal, and long-term changes, weather patterns, mechanisms and evidence for climate change, and impact of human activities. Course is for integrated science and secondary science education majors and does not fulfill requirements for other majors or minors. Content reflects national and state standards. Lecture and laboratory (1-0-2). Course offered fall and winter semesters. Lecture and laboratory. (1-0-2) Offered fall and winter semesters. Credits: 3

### **GEO 214 - Solid Earth Materials and Systems**

Exploration of common rock-forming/economic minerals, igneous/metamorphic rocks comprising the solid earth in the context of evolving earth chemical and plate tectonic systems. Course develops skills and tools for observation, classification, interpretation of minerals and rocks. Lectures, laboratory and required field trip. Offered fall and winter semesters. Prerequisites: GEO 111, CHM 115, GEO 112, and GEO 175 (GEO 112 and GEO 175 may be taken concurrently). Credits: 4

### **GEO 220 - Earth Surface Materials and Systems**

A comprehensive analysis of biogeochemical, pedological, hydrologic and geological systems that produce, maintain, and change the Earth's surface. Lecture, lab and fieldwork. Offered fall and winter semesters. Prerequisites: GEO 111, CHM 115, GEO 112, and GEO 175 (GEO 112 and GEO 175 may be taken concurrently). Credits: 4

### **GEO 280 - Special Topics in the Geological Sciences**

Topics covered will reflect special interests of students and the instructor. Offered on sufficient demand. Prerequisites: Variable depending on topic. Credits: 1 to 4

### **GEO 300 - Geology and the Environment**

Detailed examination of interactions and connections between people and their geologic environment from an earth systems' perspective. Using case studies and current events, students investigate complex environmental processes and issues related to the lithosphere, hydrosphere, atmosphere, and biosphere. Students will reach and defend decisions concerning personal, corporate, and governmental actions. Not included in the geology/earth science major or minor. (3-0-0) Offered winter semester. Prerequisites: Junior standing and completion of Natural Sciences Foundation. Credits: 3

### **GEO 311 - Structural Geology**

Fundamentals of deformation theory; description and origin of rock micro-, meso-, and macro-structures; and selected techniques of structural

analysis. Lectures, laboratory, and three-day required field exercise. Offered fall semester. Prerequisites: GEO 214 and MTH 123. Credits: 4

### **GEO 312 - Sedimentation-Stratigraphy**

Principles and processes of sedimentation. Petrologic interpretation and basic laboratory techniques in the analysis of sediments. Study of layered rocks in terms of description of the local section, correlation of sections using petrology and paleontology, and reconstruction of paleoenvironments. Lectures, laboratory, and field trips. (3-1-2) Offered winter semester. Prerequisite: GEO 112. Credits: 4

### **GEO 314 - Petrography: Mineral and Rock Analysis**

This course develops skills in mineral and rock description, identification and interpretation using polarizing light microscopy and X-ray diffraction as tools for mineral identification, textural descriptions and interpretation of igneous and metamorphic rocks, drawing on concepts of crystallography, crystal chemistry and optical mineralogy. Laboratory and lecture/discussion. Course offered winter semester. Prerequisite: GEO 214 or permission of instructor. Credits: 2

### **GEO 315 - Geological Field Methods**

This course provides students repeated practice in field mapping methods. Students will use common tools for field location, effectively making and recording field observations and creating and compiling accurate products (maps, cross sections, stratigraphic sections) and reports. Course offered fall semester of even-numbered years. Prerequisites: GEO 112; GEO 214 or GEO 220, or permission of instructor. Credits: 3

### **GEO 319 - Earth Science in Secondary Education**

Designed to expand the perspectives of the teaching of earth science and prepare the student for professional life. Emphasis is on teaching techniques, lecture demonstrations, laboratory activities, utilizing Web resources, and professional standards. Topics include plate tectonics, landforms, earth materials, geologic time, hydrosphere, weather, and astronomy. (3-0-2) Offered winter semester of even-numbered years. Prerequisites: Earth science major or minor, teacher certification candidate, and 18 credits of earth science. Credits: 4

### **GEO 320 - Geomorphology**

The patterns and genesis of landforms with emphasis on fluvial processes, climatic factors, and environmental implications. Independent study project or research paper required. Lectures, laboratory, and field trips. (3-1-2) Course offered winter semester of even-numbered years. Prerequisite: GEO 112. Credits: 4

### **GEO 360 - Earth Resources in Transition: Conventional to Sustainable**

Exploration of transition from conventional to sustainable earth resource issues, technologies, and science. Focuses on one, or a combination, of earth resources: water, energy, or earth materials (minerals and metals). Topics may include water resources, treatment and usage; oil and gas origins, exploration, recovery, and refining; and mining and metals recovery. Part of the Sustainability Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **GEO 380 - Special Topics in the Geological Sciences**

Topics covered will reflect special interests of students and the instructor. A maximum of 3 GEO 380 credits may be applied toward either the geology or earth science major or minor. Offered on sufficient demand. Prerequisites: Variable depending on topic. Credits: 1 to 4

### **GEO 399 - Readings in Geology**

Independent study of geological literature. Topics to be prearranged with appropriate staff members. Discussion and seminar. Term paper required. Must be prearranged with supervising faculty. Offered all semesters. Credits: 1 to 4

### **GEO 411 - Global Tectonics**

Principles and processes of continental drift, sea floor spreading, and plate tectonics, including paleomagnetic, geodetic, sedimentologic, paleontologic, seismic, petrologic, and structural approaches to the study of moving lithospheric plates. The relationships between plate tectonics and the evolution of selected mountain systems. (3-0-0) Course offered winter semester. Prerequisites: GEO 214 and GEO 220. Credits: 3

**GEO 414 - Advanced Petrology**

This course explores solid earth dynamics as the context for understanding petrologic systems, using principles of geochemistry and thermodynamics to understand and solve petrologic problems, with a focus on magmatic, volcanic, and metamorphic systems. Lecture/Discussion, laboratory, field trip. Course offered winter semester. Prerequisites: CHM 116 and GEO 314 (may be taken concurrently). Credits: 2

**GEO 415 - Invertebrate Paleontology**

A study of the invertebrate fossil record, including a systematic review of important phyla, types of fossilization, and specimen description. Lectures and laboratory. (2-1-2) Offered winter semester of even-numbered years. Prerequisite: GEO 112; GEO 312 strongly recommended. Credits: 3

**GEO 420 - Glacial and Quaternary Geology**

A study of the physical characteristics of glaciers, their deposits, and their history. Lectures, laboratory, and field trips. (3-1-2) Offered winter semester of odd-numbered years. Prerequisite: GEO 112; GEO 312 strongly recommended. Credits: 4

**GEO 425 - GIS Applications in Geology**

Applied geographic information systems (GIS) in geology. Students already familiar with GIS will learn advanced skills and apply GIS skills to specific geology problems in hydrology, field mapping, mineral and land resources, water quality, and other topics based on student interest and background. Offered winter semester of even-numbered years. Prerequisite: GPY 307 or NRM 395, or equivalent course. Credits: 3

**GEO 430 - Oceanography**

A comprehensive analysis of oceanographic processes, systems and the interaction of the ocean with the atmosphere and lithosphere in the modern world as well as over geological time (paleoceanography). Emphasis on chemical, physical and geological oceanography (3-0-0). Offered fall semester of even-numbered years. Prerequisite: GEO 112. Credits: 3

**GEO 440 - Geohydrology**

A study of the geologic principles that govern the occurrence, movement, and quality of groundwater. Lectures, laboratory, and field trip. (3-0-0) Offered fall semester of odd-numbered years. Prerequisite: GEO 220. Credits: 3

**GEO 445 - Introduction to Geochemistry**

Topics include crystal chemistry (nuclear/solid-state chemistry), water geochemistry (kinetics) and mineral stability (thermodynamics). Lectures and laboratory (2-0-3). Offered fall semester of even-numbered years. Prerequisites: GEO 220; MTH 122 and CHM 116 (may be taken concurrently); MTH 201 strongly recommended. Credits: 3

**GEO 470 - Geophysics**

Concepts of earth physics are introduced. The principles of physics are applied to explore the subsurface. Modern geophysical methods, including gravity, magnetism, seismics, magnetotellurics, radar, electrical, well-logging, and remote sensing are discussed in lecture and applied in laboratory experiments and field measurements. (3-0-3) Offered winter semester of even-numbered years. Prerequisite: MTH 201 or permission of instructor; PHY 220 or PHY 230 recommended. Credits: 4

**GEO 480 - Special Topics in the Geological Sciences**

Topics covered will reflect special interests of students and the instructor. Offered on sufficient demand. Prerequisites: Variable depending on topic. Credits: 1 to 4

**GEO 485 - Geology Research and Writing Seminar**

Students master research skills and written and oral communication of a research problem that they define and explore with a faculty mentor. Problems are based on original investigation or literature review. Students must secure a mentor and define a research question before enrolling in the course. Permit required. Seminar and discussion. (0-1-0) Offered fall and winter semesters. Prerequisites: (GEO 214, GEO 220, (geology, geology-chemistry, or earth science major or geology minor), and junior standing in the major) or permission of instructor. Credits: 1

**GEO 486 - Geology Reading Seminar**

Students master critical evaluation of the geologic literature through reading, writing, dialogue and presentation. Thematic elements during the semester may include exploration of paradigms, regional geology, classic/discovery papers, or hot topics/big ideas. The course will feature outside speakers and development of professional skills. Course offered fall and winter semesters. Prerequisites: GEO 214, GEO 220, and junior standing. Geology, geology-chemistry, or earth science major or geology minor. Or permission of instructor. Credits: 1

**GEO 490 - Geology Internship**

Practical and applied geology carried out as independent study in specialized areas of geology or earth science. Work will be carried out under the supervision of a faculty advisor and/or a supervisor at the institution where the work is done. Course structure must be arranged with faculty supervisor before registration. (GEO 490 may be substituted on approval for the field camp requirement of the major.) Offered on request. Prerequisites: Major in geology or earth science, GEO 112, and permission of supervisor. Credits: 1 to 10

**GEO 493 - Applied Field Geology**

This course offers students hands on geological field experience to fulfill the field camp requirement for the Geology major. This can be satisfied by participation in an external field camp or a field course offered through GVSU. May be repeated for credit. Course offered spring/summer semester. Prerequisites: Major in geology (geology B.S. or geology B.S. - environmental emphasis); Registration by permit. Credits: 1 to 8

**GEO 499 - Independent Study or Research in Geology**

Supervised experiments, discussions, and report writing. Topics and hours by arrangement. Recommended for geology and earth science majors. Offered each semester. Prerequisite: Permission of supervisor. Credits: 1 to 4

**GEO 580 - Special Topics in the Geological Sciences**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

**GER 101 - Beginning German I: Language and Culture**

An introduction to German language and culture. Practice in speaking, listening, reading, writing at the Novice level. Supplemented by multimedia and the Language Resource Center. Offered fall and winter semesters. Credits: 4

**GER 102 - Beginning German II: Language and Culture**

Continuation of GER 101. Practice in speaking, listening, reading, and writing at novice and intermediate levels. German culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Students may not receive credit for both GER 150 and GER 102. Prerequisite: C (not C-) or better in GER 101, credit, or appropriate placement test score. Credits: 4

**GER 150 - Accelerated Beginning German I and II: Language and Culture**

One semester accelerated review of beginning German for students with prior study. Covers the same material as GER 101 and GER 102. Not open to students with credit in GER 101, GER 102 or their equivalent. Offered fall and winter semesters. Prerequisite: Appropriate high school background or placement-test score. Credits: 4

**GER 180 - Special Topics in German**

Course content varies. Expectations of students approximate those in other 100-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

**GER 201 - Intermediate German I: Language and Culture**

Continuation of GER 102 or GER 150. Practice in speaking, listening, reading, writing at the Intermediate Level. German culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Offered fall and winter semesters. Prerequisites: C (not C-) or better in GER 102 or GER 150, credit, or appropriate placement test score. Credits: 4

## Course Listings and Descriptions

### **GER 202 - Intermediate German II: Language and Culture**

Continuation of GER 201. Continued practice in speaking, listening, reading, writing at the Intermediate Level. Review of grammar and expansion of vocabulary. Focus on German culture through authentic texts and multimedia materials. Students who did not complete GER 201 at GVSU are strongly encouraged to take the free Placement Test in the Language Resource Center prior to registering. Counts toward the German minor (noneducation). Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Prerequisite: C (not C-) or better in GER 201, credit, or appropriate placement test score. Credits: 4

### **GER 280 - Special Topics in German**

Course content varies. Expectations of students approximate those in other 200-level courses. May be repeated for credit when content differs. No more than four credits may be applied to the major or minor. Offered on sufficient demand. Prerequisite: GER 201. Credits: 1 to 4

### **GER 301 - German Composition**

This course provides extensive practice in written composition. Students review the finer points of German grammar and write texts in different genres. Students spend much of their time in class writing, peer editing, and revising their own work. Extensive reading assignments and work on reading strategies will expand reading skills. Offered fall and winter semesters. Prerequisite: GER 202 with a C (not C-) or better, or by appropriate placement. Credits: 3

### **GER 302 - German Conversation**

This course provides extensive practice in speaking and listening to German. Students will learn to negotiate a variety of social situations and make effective presentations. Vocabulary building and development of communicative strategies are also incorporated. Listening skills will also be expanded through regular exercises featuring a variety of media. Offered fall and winter semesters. Prerequisite: GER 202 with a grade of C (not C-) or better, or appropriate placement. Credits: 3

### **GER 303 - Introduction to German Literature I**

A brief survey of German literature from the Germanic period to the end of the seventeenth century. Offered winter semester in odd-numbered years. Prerequisites: GER 301 and/or GER 302. Corequisite: GER 301 or GER 302 should be taken concurrently if not already completed. Credits: 3

### **GER 304 - Introduction to German Literature II**

A survey of German literature from the eighteenth century to 1945. Offered winter semester in even-numbered years. Prerequisites: GER 301 and/or GER 302. Corequisite: GER 301 or GER 302 should be taken concurrently if not already completed. Credits: 3

### **GER 311 - The Long Nineteenth Century**

Examines Germany during the "long nineteenth century", from the French Revolution to the onset of World War I. Considers the "German Question" and the development of Germany from an agrarian-based economy and a fragmented conglomeration of small states into a technologically advanced, modern national state. Offered fall semester in odd-numbered years. Prerequisites: GER 301 and GER 302; one may be taken concurrently. Credits: 3

### **GER 312 - Contemporary German Culture**

The study of aspects of the culture of German-speaking countries from the postwar period to the present day. Topics include the separate development and subsequent reunification of two German states, coming to terms with the past, changing family and gender roles, and the arts. Offered winter semester in even-numbered years. Prerequisites: GER 301 and/or GER 302. Corequisite: GER 301 or GER 302 should be taken concurrently if not already completed. Credits: 3

### **GER 314 - Foreign Language Acquisition and Pedagogy**

Provides prospective French and German high school teachers with an introduction to foreign language acquisition theory and practical applications of language teaching pedagogy. Students will also observe language teachers in local high schools. Cross-listed with FRE 334. Course offered winter semester. Prerequisite: Instructor permission. Credits: 3

### **GER 315 - German Cinema**

Examines major developments of German cinema, focusing primarily on postwar issues such as the separate West and East German states, reunified Germany, and coming to terms with the past. The course provides an overview of important movements, directors, and studios, and introduces the tools of film analysis. Offered fall semester in even-numbered years. Prerequisites: GER 301 and/or GER 302. Corequisite: GER 301 or GER 302 should be taken concurrently if not already completed. Credits: 3

### **GER 321 - Improving German Pronunciation**

This course is designed to help students sound more native like in their pronunciation of German. We will begin with difficult sounds and progress to word stress and sentence intonation. Listening comprehension will also be improved through targeted exercises. Offered fall semester. Prerequisite: GER 202 with a C (not C-) or better. Credits: 3

### **GER 322 - Introduction to German Linguistics**

An introduction to general linguistics through modern German. Covers phonology, morphology, syntax, applied linguistics, dialectology, sociolinguistics, and language change. Offered winter semester in odd-numbered years. Prerequisites: GER 301 and/or GER 302. Corequisite: GER 301 or GER 302 should be taken concurrently if not already completed. Credits: 3

### **GER 331 - Business German**

Focuses on the language and culture of business in German-speaking countries in their European and global contexts. Topics covered include foreign trade, the European Union, globalization, commerce, banking, trade fairs, geographic aspects of business, and the environment. Practice in writing business documents such as resumes, letters, and company profiles. Offered fall semester of odd-numbered years. Prerequisites: GER 301 and GER 302 (one may be taken concurrently). Credits: 3

### **GER 341 - Advanced German Grammar**

This course focuses primarily on reinforcing command of basic grammar and increasing understanding and mastery of advanced structures. Students will also improve their written and spoken fluency and expression through vocabulary learning, in-class discussions, and extensive reading and writing. Offered winter semester. Prerequisites: GER 301 and GER 302. Credits: 3

### **GER 342 - Advanced Speaking Strategies and Skills**

Development and assessment of speaking skills in German at the advanced level. Students engage in intensive practice of advanced-level functions such as narrating in various time frames, producing extended discourse, stating and defending opinions, as well as advanced communicative strategies. Course offered winter semester of odd-numbered years. Prerequisites: GER 301 and GER 302. Credits: 3

### **GER 380 - Special Topics in German**

Course content varies. Expectations of students approximate those in other 300-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Prerequisites: GER 301 and/or GER 302. Corequisite: GER 301 or GER 302 should be taken concurrently if not already completed. Credits: 1 to 9

### **GER 385 - German Language**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### **GER 386 - German Culture and Society**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### **GER 399 - Independent Reading**

Offered fall and winter semesters. Credits: 1 to 4

**GER 401 - Modern German Literature**

Continuation of GER 304. Covers writings from the latter half of the twentieth century to the present day and places them in their socio-cultural context. Poems, short stories, novellas, and longer novels will be supplemented by clips from movies. Offered fall semester in even-numbered years. Prerequisites: Two 300-level courses beyond GER 301 and GER 302 or permission of the instructor. Credits: 3

**GER 402 - German Authors**

Reading and analysis of selected German authors within their cultural and historical context. The course is conducted in German. Class discussion and written assignments advance the students' language and cultural competency in German. This course may be repeated for credit if the content is different. Prerequisites: Two 300-level courses beyond GER 301 and GER 302 or permission of the instructor. Credits: 3

**GER 421 - History of the German Language**

Presents the historical development of the German language and its dialects within the socio-historical context. Topics covered include the position of German within the Indo-European and Germanic language families, periods in the development of German, with representative literary genres and works, and the development of dialects of German. Offered fall semester in odd-numbered years. Prerequisites: Two 300-level courses beyond GER 301 and GER 302 or permission of the instructor. Credits: 3

**GER 480 - Special Topics in German**

Course content varies. Expectations of students approximate those in other 400-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

**GER 495 - Advanced Topics in German (Capstone)**

Interdisciplinary study of a major literary, cultural, historical, economic, or political period, genre, or movement from a cross-national perspective in an effort to produce a thesis that culminates the study of German as a major. Offered winter semester. Prerequisites: Senior standing with a major in German. Credits: 3

**GER 499 - Independent Study and Research**

Offered fall and winter semesters. Credits: 1 to 4

**GPY 100 - Physical and Environmental Geography**

Explores the spatial patterns of weather and climate, landforms, vegetation, soils, and water resources, and their changes, interactions and impacts on human life and society. Designed to increase awareness of the physical environment, geographic patterns of human environmental interactions, and the interrelationships of natural phenomena. Offered every semester. Credits: 3

**GPY 101 - Sustainability and Place**

The concept of sustainability holds that the social, economic, and environmental factors within human communities must be viewed in the context of their geographic locations. Strategies and decisions for sustainable development require understanding of the spatial patterns of human-environmental interactions, scale, and place. GPY 101 provides important place based perspectives on sustainability. Course offered every semester. Credits: 1

**GPY 200 - Computer Cartography**

This course provides an introduction to the fundamentals of computer cartography. We explore various techniques for the analysis, manipulation, and visualization of spatial data. Topics include earth models, datums, map projection, coordinate systems, map types, spatial and statistical data analysis, cartographic generalization/symbolization, data classification, cartographic design, and thematic mapping. Fulfills Foundations - Mathematical Sciences. Offered fall and winter semester. Prerequisite: MTH 110. Credits: 3

**GPY 209 - Introduction to Urban and Regional Planning**

An introductory course for people interested in careers in planning and public administration. The course explores the relationship between the goals of a community and the techniques needed to implement long-term and sustainable strategies. Cross-listed with PA 209. Course offered fall semester. Credits: 3

**GPY 220 - Cultural Geography**

The distinctive spatial patterns of culture around the world will be investigated. Examines the distributions of population, language, religion, race, agriculture, industry, urbanization, and development and how these distributions change over time. Fulfills Foundations - Social and Behavioral Sciences. Offered every semester. Credits: 3

**GPY 235 - Geography for a Changing World**

Examines a world that is undergoing political, economic, social and environmental changes at many different spatial scales. Using geographic concepts, this course examines national, regional, and global interaction and development, and the diverse and complex processes that both hinder and help forge a global community. Fulfills Foundations - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Offered every semester. Credits: 3

**GPY 307 - Introduction to Geographic Information Systems**

Introduces basic concepts and techniques of Geographic Information Systems (GIS) and their essential role in geographic research. Provides hands on experience in spatial analysis and the use of GIS software. Offered fall and winter semester. Credits: 3

**GPY 308 - Local Politics and Administration**

Comparative study of government systems, rural and urban. Students specialize in their own governments. Cross-listed with PA 307. Offered every semester. Credits: 3

**GPY 310 - Land Use Planning**

This course deals with the fundamental concepts, principles, strategies, and tools of city and regional land use planning. The focus is on the real-world and sustainable land use planning process and implementation. Cross-listed with PA 313. Offered winter semester of odd numbered years. Credits: 3

**GPY 312 - Urban and Regional Environmental Planning**

An introduction to the urban planning strategies that help towns and cities to preserve, restore, and even capitalize on their natural resources. This course investigates threats to clean air, water, and healthy ecosystems in our communities and examines solutions in the form of governmental policies, green designs, and urban inventiveness. Cross-listed with PA 312. Offered winter semester of odd-numbered years. Credits: 3

**GPY 314 - Land Use and Planning Law**

This course surveys federal and Michigan statutes relevant to planning. It provides a background of federal and Michigan statutory land use controls. Awareness and understanding of these statutes is essential when executing existing land use and planning policies or when altering or proposing new land use and planning policies. Cross-listed with PA 314. Offered winter semester of even-numbered years. Credits: 3

**GPY 316 - Introduction to Transportation Planning**

This course is an introduction to transportation planning. It explores the planning, land use, and policy implications of city and regional transportation as it relates it to urbanism, energy use, public health and safety, sustainability, and economic development. Cross-listed with PA 316. Offered winter semester of odd-numbered years. Credits: 3

**GPY 324 - Urbanization**

Examines the process of urbanization, its impact on various cultures, and its long-term sustainability. Considers the rapid urbanization in the developing countries and the dynamic growth of global urban systems, emphasizing the evolution of cities over time, space, and vastly different social, political, and cultural environments. Fulfills Cultures - World Perspectives. Part of the Sustainability Issue. Cross-listed with PA 324. Offered spring/summer semester. Prerequisite: Junior standing. Credits: 3

**GPY 335 - Globalization and Development**

Development involves positive and negative social, political, economic, cultural, and environmental changes for people living in a region or a country. GPY 335 explores the complex geography of the processes associated with development and in particular global development. Part of the Globalization Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

## Course Listings and Descriptions

### **GPY 345 - The Geography and Land Use Management of Michigan and the Great Lakes Area**

A survey of Michigan's physical resources such as, climate, soils, hydrology and flora as related to land use and land use management, exemplified in settlement patterns, demography, economic development, infrastructures, industrialization, urbanization and jurisdictional structures. Offered fall semester. Credits: 3

### **GPY 350 - Geopolitics, Energy and Environment of Russia and Central Eurasia**

This course examines the unique role of Russia and Central Eurasia in the world's energy, water, and food security and many global geopolitical processes of the 21st century. With its complex ethno-cultural composition and vast deposits of oil, gas, coal, and uranium, this region is strategically important for the US. Fulfills Cultures - World Perspectives. Part of the Globalization Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### **GPY 351 - Geography of Africa**

Africa is one of the most fascinating world regions yet paradoxically one of the least known. The focus of this course is on the rich cultural (language, religion, agriculture, cities, health, economy) and physical (climate, vegetation, landforms) geographies of this vast region and how they have changed over time. Fulfills Cultures - World Perspectives. Offered winter semester of odd-numbered years. Credits: 3

### **GPY 352 - Geography of Latin America**

The growth and development of Latin America has a significant impact on most activities in North America. Examines those effects and studies the cultural and physical development of Latin America. Fulfills Cultures - World Perspectives. Offered winter semester. Credits: 3

### **GPY 353 - Geography of the United States and Canada**

A comparative study of the cultural and physical geographies of primarily the United States' population, cultural diversity, migration, resources, and economy, with those of Canada. Fulfills Cultures - U.S. Diversity. Offered winter semester. Credits: 3

### **GPY 354 - Geography and Globalization of Asia**

Introduction and survey of the physical and cultural geographies of Asia, their influence on the globalization of Asian economies, and the migration of Asian peoples. Part of the Globalization Issue. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **GPY 355 - Geography of Southwest Asia (The Middle East).**

Introduction to physical and cultural geography of Southwest Asia and North Africa. Fulfills Cultures - World Perspectives. Offered winter semester of even-numbered years. Credits: 3

### **GPY 356 - The Geography, Culture and Land Use Management of Europe**

A survey of Europe's distribution and regional interactions of physical and human resources such as climate, soils, hydrology, and coastal geomorphology, along with cultural elements such as settlement patterns, language, ideology, economic development, infrastructure evolution, industrialization, urbanization, human capital, and jurisdictional developments and the associated land use management approaches. Fulfills Cultures - World Perspectives. Offered winter semester. Credits: 3

### **GPY 361 - People, Environment, and Development in the Amazon**

This course explores natural resource use and human settlement over time in the Amazon Basin, from early tribal societies to the present. Topics include extractive economies, trade in animal and forest products, conservation and development initiatives, and the changing demands for resources in urban centers of Amazonia today. Part of the Sustainability Issue. Cross-listed with ENS 361. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

### **GPY 362 - Farmers, Crops, and Our Challenging Agricultural World**

A geography of the world's agricultural practices and development at different scales, from traditional methods to industrial agriculture with an emphasis on farming societies. Topics include indigenous agriculture and crop domestication, agroforestry and plantation systems, land use

and rural societies, export crops, aquaculture and livestock, and drug cultivation. Fulfills World Perspectives. Part of the Globalization Issue. Cross-listed with ENS 362. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **GPY 363 - World Forests and Their Use**

A geography of the world's forests and their use, from traditional to industrial practices over space and time. Topics include the local, national, and international exploitation of forests, forest societies, foods, fuel and medicines, timber, protected areas, and the challenge of sustainable forest use in different regions and environments. Part of the Sustainability Issue. This course is cross-listed with ENS 363. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

### **GPY 365 - GIS for Economic and Business Decision-Making**

Explores the use of geographic information systems (GIS) technology in economic and business decision-making, including market area analysis, geodemographic segmentation, site selection, routing, customer profiling, sales territory management, and location strategies. Emphasis on hands-on activities. Problem-based learning approach. Part of the Information, Innovation, and Technology Issue. Cross-listed with MKT 365 and PA 365. Prerequisite: Junior standing. Credits: 3

### **GPY 370 - Introduction to Remote Sensing**

This course provides an introduction to the fundamentals of remote sensing and digital image processing technology. Topics include the remote sensing process, physical principles of remote sensing, major remote sensing systems, remote sensing data formats, image processing, and remote sensing applications in geography and other social sciences. Offered fall semester. Credits: 3

### **GPY 380 - Special Topics in Geography**

Provides an interdisciplinary opportunity for students to pursue advanced study in special topics related to geography. Topics vary each term. May be taken more than once when the topic is different. Offered on sufficient demand. Credits: 3

### **GPY 381 - Study Abroad I**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3 to 9

### **GPY 385 - GIS in Urban and Regional Analysis**

Focus on applications of Geographic Information Systems (GIS) techniques in urban and regional analysis. Using a hands-on approach, students will explore how to use GIS techniques and large data sets to analyze economic, demographic and social change in the knowledge-based economy. Part of the Information, Innovation, and Technology Issue. Cross-listed with PA 385 and ECO 385. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **GPY 399 - Independent Readings**

Independent supervised readings in selected topics. Offered every semester. Prerequisite: Permission of program coordinator. Graded credit/no credit. Credits: 1 to 3

### **GPY 407 - Advanced GIS**

An advanced level GIS course emphasizing decision analysis through applications of spatial statistics and geospatial modeling. Topics include multivariate statistics, error assessment and propagation, fuzzy logic, uncertainty, and decision risk in GIS modeling, location analysis, and terrain modeling using industry standard GIS software. Offered winter semester. Prerequisite: GPY 307. Credits: 4

### **GPY 410 - Landscape Analysis**

Landscape analysis is a broadly interdisciplinary study that includes concepts and methods of sustainable physical/human geography, ecology, planning, and architecture. It includes the biophysical and societal causes and consequences of landscape heterogeneity, processes, and evolution. Conceptual and theoretical core of this course links natural sciences with related human disciplines. Part of the Sustainability Issue. Cross-listed with ENS and PA 410. Offered fall semester. Prerequisite: Junior standing. Credits: 3

**GPY 412 - Global Environmental Change**

The main theme of this course is the changing nature of our environment and human-environmental interactions. Topics include climatic fluctuations, environmental reconstructions, the interaction between humankind and the environment since the prehistoric times, and human-induced environmental change of the last century at the global, continental, and regional scales. Part of the Sustainability Issue. Cross-listed with ENS 412. Offered winter semester. Prerequisite: Junior standing. Credits: 3

**GPY 470 - Digital Image Processing**

Provides theory and applications of digital image processing techniques. Focuses on the methodologies of thematic extraction of environmental information using computer-based image processing systems and interface between GIS and remote sensing. Topics include image enhancement, multispectral classification algorithms, and model development. Offered winter semester of odd-numbered years. Prerequisite: GPY 370. Credits: 3

**GPY 481 - Study Abroad II**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3 to 9

**GPY 490 - Internship**

Supervised work experience in an area related to geography. Offered every semester. Prerequisite: Permission of program coordinator. Graded credit/no credit. Credits: 1 to 9

**GPY 495 - Senior Thesis**

Working under the guidance of the course instructor, students will conduct original research in a topical area of their choice within the disciplines of geography and planning or their subdisciplines, write a senior thesis, and present their findings to a university audience. Offered fall semester. Prerequisite: Junior standing. Credits: 3

**GPY 496 - Field Research Project**

Practical and applied geography carried out as a field research project. Emphasizes methods and techniques useful for professional geographers with application of interdisciplinary knowledge in an intercultural environment. Research skills built through field research in topics of special interest. Substitutes for Capstone GPY 495 - Senior Thesis. Course offered spring/summer semester. Prerequisites: Junior standing and permission of instructor. Credits: 3

**GPY 499 - Independent Research**

Research conducted individually with faculty supervision. Attention given to written and oral presentation of research findings. Offered every semester. Prerequisite: Permission of program coordinator. Graded credit/no credit. Credits: 1 to 3

**GRK 101 - Elementary Ancient Greek I**

An introduction to ancient Greek vocabulary, grammar, and syntax with an emphasis on reading works from the Homeric and classical periods. Offered fall semester. Credits: 4

**GRK 102 - Elementary Ancient Greek II**

Continuation of GRK 101. Language work will be supplemented with discussions of ancient Greek history and culture. Offered winter semester. Prerequisite: Completion of GRK 101. Credits: 4

**GRK 201 - Intermediate Ancient Greek I**

Continuation of GRK 102. Reading of an entire dialogue by Plato, such as the *Apology* or *Crito*. Offered fall semester. Prerequisite: Completion of GRK 102. Credits: 4

**GRK 202 - Intermediate Ancient Greek II**

Readings from Homer's *Iliad* or *Odyssey*, supplemented by study of early Greek history and culture. Fulfills Cultures - World Perspectives. Offered winter semester. Prerequisite: GRK 201. Credits: 3

**GRK 285 - Study Abroad: Intermediate Ancient Greek**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context.

To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

**GRK 350 - Greek Prose**

Reading of texts representative of such genres as the philosophical dialogue (Plato), forensic and political oratory (Demosthenes, Lysias), historiography (Thucydides, Xenophon), or pastoral/homiletic/apocalyptic (the Pauline epistles, Revelation). Emphasis on the forms of prose that helped shape the Western tradition. Offered fall semester of even-numbered years. May be repeated for credit when topics vary. Prerequisite: GRK 202 Credits: 3

**GRK 351 - Greek Poetry**

Study of ancient Greek poetry such as the Homeric Hymn to Demeter, Hesiod's *Theogony*, Greek dramatic poets, or the lyric poetry of Archilochus, Sappho, and Simonides. Special attention to the meter, meaning, and context of poetry designed for public performance. May be repeated for credit when topics vary. Offered fall semester in odd-numbered years. Prerequisite: GRK 202. Credits: 3

**GRK 385 - Study Abroad: Advanced Ancient Greek**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

**GRK 399 - Independent Reading**

Supervised independent reading in Greek. Topic, credit, and time must be arranged with individual faculty member before registration. Offered fall and winter semester. Credits: 1 to 3

**GRK 400 - Advanced Greek Prose**

Reading of texts representative of such genres as the philosophical dialogue (Plato), forensic and political oratory (Demosthenes, Lysias), historiography (Thucydides, Xenophon), or pastoral/homiletic/apocalyptic (the Pauline epistles, Revelation). Emphasis on the forms of prose that helped shape the western tradition. Special attention to electronic resources in classics and to textual criticism. May be repeated for credit when topics vary. Offered winter semester in odd-numbered years. Prerequisite: One 300-level Greek course. Credits: 3

**GRK 401 - Advanced Greek Poetry**

Study of ancient Greek poetry such as the Homeric Hymn to Demeter, Hesiod's *Theogony*, Greek dramatic poets, or the lyric poetry of Archilochus, Sappho, and Simonides. Special attention to the meter, meaning, and context of poetry designed for public performance. Special attention to electronic resources in classics and textual criticism. May be repeated for credit when topics vary. Offered winter semester in even-numbered years. Prerequisite: One 300-level Greek course. Credits: 3

**GSI 201 - (Dis)Order and (In)Justice: An Introduction to Global Studies**

An interdisciplinary introduction to global studies using themes of order/disorder and justice/injustice to explore problems and issues affecting people globally. Focuses on interconnectedness of global concerns and links between the local and global, primarily from a social science perspective. Possible topics: migration, human trafficking, food security, anti-globalization movements, infectious disease. Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Credits: 3

**GSI 202 - History of Global Change and Social Transformation**

A historical inquiry into long-term processes of global change and social transformation. Focus is on increasing interconnectedness of human communities from the deep past to the present, including spread of cultural, market and ecological exchanges, transport and communication technologies, developing ideas of social justice, and their connections to contemporary times. Fulfills Foundations - Historical Perspectives. Fulfills Cultures - World Perspectives. Cross-listed with HST 202. Offered fall and winter semesters. Credits: 3

## Course Listings and Descriptions

### **HIM 301 - Introduction to Health Information Management**

This course provides an overview of the health information management (HIM) profession. Topics include analysis, licensing, certification, and accreditation documentation standards. Explores topics of patient confidentiality, form design, numbering systems, health information storage and retention systems, and computerization of health records. Course offered fall semester. Includes two hours laboratory time. Prerequisite: Admission to the health information management program. Credits: 3

### **HIM 302 - Health Care Law**

This course introduces the legal issues facing the healthcare industry. Topics include confidentiality, release of health information, subpoenas, liability issues, patient rights, fraud and abuse, and ethics of health information. Students will study federal and Michigan-specific laws and regulations related to protected health information through case studies. Course offered spring/summer semester. Prerequisite: HIM 301. Credits: 3

### **HIM 304 - Advanced Med Terms of Disease**

This course will build upon the student's knowledge of medical terminology as it relates to disease processes. Students will study the terminology related to etiology, manifestations, comorbidities and complications, and treatment options that occur with disease processes. Offered fall semester. Prerequisites: AHS 100 and BMS 251. Credits: 3

### **HIM 310 - Functional and Administrative Practices in Health Information Management**

This course introduces the functional and administrative HIM practices including capital/operational budgeting, procurement, and regulatory issues of the HIM department. Students will analyze budgetary reports common to HIM and health care compliance needs. Students evaluate human resource positional analysis, recruitment, supervision/retention, and project management duties related to the HIM department. Offered fall semester. Credits: 3

### **HIM 311 - CPT/HCPCS Coding**

This course introduces all aspects of CPT Coding and HCPCS Level II Coding. Coursework will focus on introductory outpatient coding with emphasis on Evaluation and Management (E and M) leveling and surgical procedures by interpreting chart documentation. Ethical coding principles will be presented along with 3M Encoder. Includes two hours laboratory time. Course offered fall semester. Prerequisites: AHS 100, BMS 251, HIM 301, and HIM 304. Credits: 3

### **HIM 320 - Applications of Organizational Planning for Health Information Management**

Introduction to techniques involved in the departmental strategic and project planning processes in HIM, along with supply chain management specific to health care facilities. In addition, the techniques of benchmarking and evidence-based practice for quality improvement will be discussed. Course offered fall semester. Prerequisite: HIM 301. Credits: 3

### **HIM 345 - Orientation to Health Information Management Practicum**

This course will provide students the expectations, responsibilities, and requirements of the field practicum. Students will create a cover letter and resume to obtain a field practicum within the health information management setting. Course offered fall semester. Prerequisites: Senior standing and admission to health information management program. Credits: 1

### **HIM 361 - Disease Classification System I**

This course introduces students to the International Classification of Diseases 10 Edition, Clinical Modification (ICD-10-CM), and Procedural Classification System (ICD-10-PCS). Emphasis on understanding and applying the coding rules and guidelines for the specific body systems will be demonstrated through the hands-on practice of both inpatient and outpatient coding scenarios. Offered fall semester. Prerequisites: HIM 301 and HIM 304. Credits: 3

### **HIM 362 - Disease Classification System II**

This course is a continuation of HIM 361: Disease Classification System I. The emphasis of understanding and applying the coding rules

and guidelines for the specific chapters will continue. Students also gain knowledge of how properly code assignment impacts reimbursement and Medicare Severity Diagnostic Related Groups (MS-DRG) assignment. Offered winter semester. Prerequisite: HIM 361. Credits: 3

### **HIM 364 - Financial Reimbursement**

This course will provide an overview of how health care services are reimbursed through U.S. public and private third party payers compared to reimbursement in international health care systems. Students will complete both paper and electronic claim forms showing how to maximize reimbursement through payer systems. Offered winter semester. Prerequisites: AHS 100 and HIM 301. Credits: 3

### **HIM 365 - Quality Management in Health Care**

This course will introduce students to the different techniques used to define, implement, and monitor total quality management (TQM) in health care. Students will learn the procedures that comprise the utilization review process. This course will provide students with the opportunity to collect and analyze data through a team-based approach. Course offered winter semester. Prerequisites: AHS 100 and HIM 301. Credits: 3

### **HIM 366 - Health Information Data Systems and Statistics**

This course will provide students with an overview of health information management practices, secondary data sources, registries, and indices. Students will also receive an overview of health information exchange, medical informatics, database design, health information technologies, electronic health record, and health information statistics. Offered fall semester. Prerequisites: AHS 100 and HIM 301. Credits: 3

### **HIM 402 - Health Information Management Review**

A comprehensive review of health information management concepts related to information technology, data security, quality management, revenue cycle and reimbursement, coding, health law, strategic planning, and project and operations management. This course will provide test taking methods and preparation for the national registered health information administrator certification exam. Course offered winter semester. Prerequisites: Senior standing and satisfactory completion of the HIM core courses. Credits: 1

### **HIM 470 - Field Practicum in Health Information Management**

The HIM practicum is a supervised professional practice experience within a health care setting. Students will engage in the management and supervision of the Health Information Management Department by completing various projects. An appropriate faculty member and the placement site supervisor will evaluate the student's performance (Capstone). Offered winter semester. Prerequisites: Senior standing and satisfactory completion of all prior HIM core courses. Credits: 12

### **HNR 201 - Live. Learn. Lead: An Introduction to Life in Honors**

This first-year honors seminar is designed to introduce students to the expectations of an honors education, the liberal tradition, the academic rigors of university life, skills of scholarly inquiry, and engagement with the university and wider community. Fulfills Foundations - Philosophy and Literature. Course offered fall semester. Prerequisite: Acceptance into the honors program. Credits: 3

### **HNR 209 - The Middle East Beyond the Headlines 1**

Course examines the historical and literary context from the pre-Islamic period through the Ottoman era. It begins with a background of history, religions, and literature before the birth of Muhammad, then focuses on the impact of Islam in Arabia and, later, on the Middle East and beyond. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Offered fall semester. Corequisites: HNR 209 and HNR 210 must be taken concurrently. Credits: 3

### **HNR 210 - The Middle East Beyond the Headlines 2**

Course examines the historical and literary context from the pre Islamic period through the Ottoman era. It begins with a background of history, religions, and literature before the birth of Muhammad, then focuses on the impact of Islam in Arabia and, later, on the Middle East and beyond. Fulfills Foundations - Philosophy and Literature. Offered fall semester. Corequisites: HNR 209 and HNR 210 must be taken concurrently. Credits: 3

**HNR 211 - The Worlds of Greece and Rome 1**

Course deals with the history, literature, intellectual history, philosophy, and arts of the Classical period with emphasis on Greeks and Romans. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Offered fall semester. Corequisites: HNR 211 and HNR 212 must be taken concurrently. Credits: 3

**HNR 212 - The Worlds of Greece and Rome 2**

Course deals with the history, literature, intellectual history, philosophy, and arts of the Classical period with emphasis on Greeks and Romans. Fulfills Foundations - Philosophy and Literature. Offered fall semester. Corequisites: HNR 211 and HNR 212 must be taken concurrently. Credits: 3

**HNR 213 - American Civilization 1**

Course provides a survey of American history, literature, and intellectual progress from European Colonization through Reconstruction. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Offered fall semester. Corequisites: HNR 213 and HNR 214 must be taken concurrently. Credits: 3

**HNR 214 - American Civilization 2**

Course provides a survey of American history, literature, and intellectual progress from European Colonization through Reconstruction. Fulfills Foundations - Philosophy and Literature. Offered fall semester. Prerequisites: HNR 213 and HNR 214 must be taken concurrently. Credits: 3

**HNR 215 - Europe: The Center and the Margins 1**

Course deals with European history, philosophy, and culture from the Middle Ages through the early modern period. The period emphasized varies with faculty expertise. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Prerequisites: HNR 215 and HNR 216 must be taken concurrently. Credits: 3

**HNR 216 - Europe: The Center and the Margins 2**

Course deals with European history, philosophy, and culture from the Middle Ages through the early modern period. The period emphasized varies with faculty expertise. Fulfills Foundations - Philosophy and Literature. Offered fall semester. Prerequisites: HNR 215 and HNR 216 must be taken concurrently. Credits: 3

**HNR 217 - The Making of Europe I**

First of a four-course sequence exploring the development of European culture. Covers the period from the late Roman Empire to approximately 1000 A.D. History, philosophy, literature, art, and music of this era are presented. Topics include feudalism, early church architecture, national epics, Gregorian chant, philosophy of St. Augustine. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Offered fall semester. Credits: 3

**HNR 218 - The Making of Europe 2: The High Middle Ages**

Second of a four-course sequence exploring the development of European culture. Covers the period from approximately 1000 A.D. to 1350 A.D. History, philosophy, literature, art, and music of this era are presented. Topics include papacy and monarchy, Gothic architecture, Dante, early polyphony, St. Thomas Aquinas. Fulfills Foundations - Philosophy and Literature. Offered winter semester. Prerequisite: HNR 217. Credits: 3

**HNR 219 - The Middle East Beyond the Headlines 3**

This course, which is a continuation of HNR 209/210, covers the history, literature, philosophy, and art of the Islamic Middle East from the decline of the Ottoman period to the present. This time period is one of growth and uncertainty, with such major historical events as the fall of the Ottoman Empire, World Wars I and II, and the colonization of the Middle East. The course looks at how these historical events left their mark in philosophy, literature (including poetry and the birth of the Arabic novel and postcolonial theory/criticism), and art. Fulfills Foundations - Arts. Offered winter semester. Prerequisites: HNR 209 and HNR 210. Must be taken concurrently with HNR 220. Credits: 3

**HNR 220 - The Middle East Beyond the Headlines 4**

This course, which is a continuation of HNR 209/210, covers the history, literature, philosophy, and art of the Islamic Middle East from the decline of the Ottoman period to the present. This time period is one of growth and uncertainty, with such major historical events as the fall of the Ottoman Empire, World Wars I and II, and the colonization of the Middle East. The course looks at how these historical events left their mark in philosophy, literature (including poetry and the birth of the Arabic novel and postcolonial theory/criticism), and art. Fulfills Cultures - World Perspectives. Fulfills one of the Issues requirements. Offered winter semester. Prerequisites: HNR 209 and HNR 210. Must be taken concurrently with HNR 219. Credits: 3

**HNR 221 - The Worlds of Greece and Rome 3**

Continues the study of history, philosophy, and culture of the Classical period begun in HNR 211. Fulfills Foundations - Arts. Offered winter semester. Prerequisite: HNR 211. Corequisite: HNR 222. Credits: 3

**HNR 222 - The Worlds of Greece and Rome 4**

Continues the study of history, philosophy, and culture of the Classical period begun in HNR 212. Fulfills Cultures - World Perspectives. Fulfills one of the Issues requirements. Offered winter semester. Prerequisite: HNR 212. Corequisite: HNR 221. Credits: 3

**HNR 223 - American Civilization 3**

Continues the study of American Civilization begun in HNR 213. Emphasis is on philosophy and arts in American culture. Fulfills Foundations - Arts. Offered winter semester. Prerequisite: HNR 213. Credits: 3

**HNR 224 - American Civilization 4**

Course continues the study of American Civilization begun in HNR 214. Emphasis is on philosophy and arts in American culture. Fulfills Cultures - U.S. Diversity. Fulfills one of the Issues requirements. Offered winter semester. Prerequisite: HNR 214. Credits: 3

**HNR 225 - Europe: The Center and the Margins 3**

Course continues the study of European history, philosophy, and culture begun in HNR 215. Fulfills Foundations - Arts. Offered winter semester. Prerequisite: HNR 215. Credits: 3

**HNR 226 - Europe: The Center and the Margins 4**

Course continues the study of European history, philosophy, and culture begun in HNR 216. Fulfills Cultures - World Perspectives. Fulfills one of the Issues requirements. Offered winter semester. Prerequisite: HNR 216. Credits: 3

**HNR 227 - The Making of Europe 3: Early Renaissance**

Third of a four-course sequence exploring the development of European culture. Covers the period from approximately 1350 A.D. to 1600 A.D. History, philosophy, literature, art, and music of this era are presented. Topics include Renaissance humanism; art of DaVinci, Michelangelo, Raphael; writing of Petrarch, Rabelais, Spenser; music of Machaut. Fulfills Foundation - Arts. Offered fall semester. Prerequisites: HNR 217 and HNR 218. Credits: 3

**HNR 228 - The Making of Europe IV: Late Renaissance**

Last of a four-course sequence exploring the development of European culture. Covers the period from approximately 1550 A.D. to 1700 A.D. History, philosophy, literature, art, and music of this era are presented. Topics include Protestant Reformation; Baroque art; Shakespeare, Cervantes, Milton; sacred and secular music; Descartes and Hobbes. Fulfills Cultures - World Perspectives. Fulfills one of the Issues requirements. Offered winter semester. Prerequisites: HNR 217, HNR 218, and HNR 227. Credits: 3

**HNR 231 - The Holocaust**

Investigates the psychological, social, political, historical, cultural, and economic sources of human aggression and cooperation by focusing on the Nazi destruction of European Jews in World War II. Fulfills Foundations - Social and Behavioral Sciences. LD. Cross-listed with PLS 240. Offered fall and winter semesters. Credits: 3

## Course Listings and Descriptions

### **HNR 232 - Trauma, Culture, Memory**

Examines a wide range of traumatic events (e.g., Nazi Holocaust, the assassination of Martin Luther King, Jr., the Vietnam War, and the Oklahoma City bombing) to understand the impact on culture and how culture, in turn, shapes the experience, meaning, resolution, and remembrance of these events. Course is interdisciplinary and incorporates materials from the arts, music, literature, and the sciences. Fulfills Foundations - Social and Behavioral Sciences. LD. Offered winter semester. Prerequisite: HNR 231 or permission of instructor. Credits: 3

### **HNR 235 - Democracy and Political Thinking**

Course explores the idea of democracy and its alternatives, with a focus on citizen participation, political judgment, and basic values of freedom, equality, and tolerance. The course pays special attention to the possibilities of, and obstacles to, student participation in politics, including the student's role in campus government. Fulfills Foundations - Social and Behavioral Sciences. Fulfills Cultures - U.S. Diversity. Offered fall semester. Credits: 3

### **HNR 236 - Modern Art and Modernity**

HNR 236 addresses significant developments in art, literature, music, film, and thought between 1860 and 1960 and will be discussed within a social, historical and cultural framework. This is a stand-alone arts course for honors students who did not fulfill the arts requirement in a sequence. Fulfills Foundations - Arts. Course offered winter semester. Prerequisite: Restricted to honors students. Credits: 3

### **HNR 241 - The Earth, A Global View**

Course has two objectives: (1) understanding earth as one global, holistic, delicately balanced dynamic system; and (2) understanding the critical interdependence between humans and earth systems. Required field trip. Fulfills Foundations - Physical Sciences with a lab. See Meijer Honors College. (3-0-3) Offered fall and winter semesters. Credits: 4

### **HNR 242 - Plants and People**

Plants are the dominant organisms on the landscape and are often taken for granted. The ecology, structure, function, genetics, and variety of plants are studied in order to develop an appreciation of the dependence of humans upon them for food, oxygen, shelter, medicines, and pleasure. Fulfills Foundation - Life Sciences without a lab. Offered fall and winter semesters. Credits: 3

### **HNR 243 - The Human Body in Motion I**

The first semester in the two-semester sequence fulfilling the general education requirements in science for honors students. The structure and function of human movement as well as the nature of science will be examined from biological, chemical, and physical perspectives in order to develop an appreciation for the human body. Fulfills Foundations - Physical Sciences with a lab. Offered fall semester. Credits: 4

### **HNR 244 - The Human Body in Motion II**

The second semester in the two-semester sequence fulfilling the general education requirements in natural science for honors students. This course is centered around projects designed to apply the skills, knowledge, and understanding acquired in the preceding course. Fulfills Foundations - Life Sciences. Offered winter semester. Prerequisite: HNR 243. Credits: 3

### **HNR 245 - Microbes and Society**

This course addresses the fundamental nature of microorganisms, microbial diversity, microorganisms as agents of disease, the role of microorganisms in the biosphere, and the utilization of microorganisms by humankind. Since microbes can cause tremendous suffering or provide countless benefits, microbiology greatly affects our everyday lives. Fulfills Foundations - Life Sciences. Offered fall semester. Credits: 3

### **HNR 246 - Chemistry in Perspective**

A one-semester course partially fulfilling the general education requirements in science for nonscience majors. The subject matter is the interplay between chemistry and important societal issues. Fulfills Foundations - Physical Sciences with a Lab. Offered fall and winter semesters. Credits: 4

### **HNR 247 - Molecules of Life in Perspective**

An introduction to basic biological concepts in the context of human health and disease. These concepts will provide the foundation for understanding the interplay between biotechnology and emerging strategies in health care. The impact of biotechnology on the social, economic, cultural, political, and ethical aspects of society will be explored. Fulfills Foundations - Life Sciences without a Lab. Offered winter semester. Credits: 3

### **HNR 254 - Africa Seen Through African Eyes 1**

This course surveys the history of African civilizations to the nineteenth century. It will concentrate on the political, economic, cultural, and social development of specific African societies before European conquest of the continent. The course will be more thematic than chronological. This course must be taken concurrently with HNR 255. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Offered fall semester. Prerequisite: Enrollment in the Meijer Honors College. Corequisite HNR 255. Credits: 3

### **HNR 255 - Africa Seen Through African Eyes 2**

This course surveys African civilizations through the medium of African literary texts and explores the relationship between literature and other arts, such as film and music. Analyzes the ways in which literature both reflects and interprets African societies from Pharaonic times through the 19th century. Must be taken concurrently with HNR 254. Fulfills Foundations - Philosophy and Literature. Offered fall semester. Prerequisite: Enrollment in the Meijer Honors College. Corequisite HNR 254. Credits: 3

### **HNR 256 - East Asia and the World: Ideas, Inventions, and Power 1**

This course is the first part of a four-course foundational interdisciplinary sequence on the geography, history, and culture of east and central Asia. Surveys the history of China from c. 10,000 BCE to the end of the Tang Dynasty in 907 CE. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Course offered fall semester. Prerequisite: Restricted to first-year students in the Meijer Honors College. Corequisite: HNR 257. Credits: 3

### **HNR 257 - East Asia and the World: Ideas, Inventions, and Power 2**

This course is the second part of a four course first year interdisciplinary sequence specifically devised for first year honors students. It surveys the literature and philosophy of China from c. 800 BCE (Zhou Dynasty) through to the modern period. Fulfills Foundations - Philosophy and Literature. Course is offered fall semester. Prerequisite: Restricted to first-year students in the Meijer Honors College. Corequisite: HNR 256. Credits: 3

### **HNR 258 - History of Science I**

HNR 258 focuses on the development of European science and art from 1400 - 1650, including anatomy, astronomy and physics, Romanesque and Gothic architecture, and Renaissance painting. It is the first of an integrated four-course sequence. Taken concurrently with HNR 259 this course satisfies the writing credit in foundations. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Course offered fall semester. Prerequisite: Enrollment in the Meijer Honors College. Corequisite: HNR 259. Credits: 3

### **HNR 259 - History of Science I**

HNR 259 focuses on the development of European philosophy, theology, and literature, as these relate to developments in science from 1400 - 1650, including Dante, Luther, Galileo, and Descartes. It is the second of an integrated four-course sequence. Fulfills Cultures - World Perspectives. Course offered fall semester. Prerequisite: Enrollment in the Meijer Honors College. Corequisite: HNR 258. Credits: 3

### **HNR 260 - Alliance and Conflict: World Construction in Religion and Society**

Starting from a social-scientific vantage point, this course focuses on the historical and cultural origins of monotheism in ancient Palestine/Judah and the Arabian Peninsula. This course provides the methodological groundwork for HNR 261 and HNR 262 by introducing historical method, social-scientific method, and methods from the sociology of

religion. Fulfills WRT 150 requirement. Fulfills Foundations - Historical Perspectives. Fulfills Cultures - World Perspectives. Course offered fall semester. Prerequisite: Enrolled in the Meijer Honors College. Credits: 3

**HNR 261 - Alliance and Conflict: World Construction in Religion and Society**

This course focuses on post 16th century trends, conservative and liberal, in monotheism as well as other religious influences on social-political intergroup relations (tolerance and intolerance). This course will also cover religious art and iconography as a form of social-political commentary and protest in the Western world. Fulfills Foundations - Arts. Course offered winter semester. Prerequisite: HNR 260. Corequisite: HNR 262. Credits: 3

**HNR 262 - Alliance and Conflict: World Construction in Religion and Society**

Beginning with Max Weber's secularization thesis, this course investigates the phenomenon of secularism as a response to modern forms of monotheistic religion within the Western world. It also addresses the conflict between secular-leaning cultures (such as France) and immigrating individuals of nonsecular cultures (such as Muslim immigrants to France). Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills one of the Issues requirements. Course offered winter semester. Prerequisite: HNR 260. Corequisite: HNR 261. Credits: 3

**HNR 263 - Theory and Practice of Rights I**

This is the first of a three-part foundational interdisciplinary sequence on the theory and practice of rights. It examines the historical origins and philosophical meaning of individual rights while exploring their importance to revolutionary political movements of the 18th, 19th, and 20th centuries in the United States and Europe. Fulfills WRT 150 requirement. Fulfills Cultures - U.S. Diversity. Course offered fall semester. Prerequisite: Restricted to first year honors students. Corequisite: HNR 201. Credits: 3

**HNR 264 - Theory and Practice of Rights 2**

This is the second of a three-part foundational interdisciplinary sequence on the theory and practice of rights in the United States and around the globe. It examines debates about the meaning of human rights and their value for addressing injustices in western and nonwestern contexts. Fulfills one of the Foundations - Social and Behavioral Sciences. Course offered winter semester. Prerequisites: HNR 263, first-year honors student. Corequisite: HNR 265. Credits: 3

**HNR 265 - Theory and Practice of Rights 3**

This is the third of a three-part honors foundational interdisciplinary sequence on the theory and practice of rights in the United States and around the globe. It explores the experience of and resistance to human rights violations in particular cultural contexts. Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Fulfills one of the issues requirements. Course offered winter semester. Prerequisites: HNR 263, first-year honors student. Corequisite: HNR 264. Credits: 3

**HNR 274 - Africa Seen Through African Eyes 3**

This course surveys the history of Africa from the late nineteenth century to the present. It will concentrate on African societies before European conquest; transformation of African societies under colonial rule; the rise of African Nationalism and the decolonization process; and the postindependence political and economic developments. Fulfills Foundations - Arts. Offered winter semester. Prerequisites: Enrollment in the Meijer Honors College, HNR 254 and HNR 255. Corequisite: HNR 275. Credits: 3

**HNR 275 - Africa Seen Through African Eyes 4**

This course surveys modern African civilizations through the medium of African literary texts and explores the relationship between literature and other arts, such as film and music. Analyzes the ways in which literature both reflects and interprets African societies from conquest through colonialism to independence. Must be taken concurrently with HNR 274. Fulfills Cultures - World Perspectives. Fulfills one of the

Issues requirements. Offered winter semester. Prerequisites: Enrollment in the Meijer Honors College, and HNR 254 and HNR 255. Corequisite: HNR 274. Credits: 3

**HNR 276 - East Asia and the World: Ideas, Inventions, and Power 3**

This course is the third part of a four course foundational interdisciplinary sequence specifically devised for first-year students in the Meijer Honors College. It surveys the history and culture of east and SE from c. 900 CE to the present. Fulfills Foundations - Arts. Course offered winter semester. Prerequisites: WRT 150, restricted to first year students in the Meijer Honors College. Corequisite: HNR 277. Credits: 3

**HNR 277 - East Asia and the World: Ideas, Inventions, and Power 4**

This course is the fourth part of a four-course first-year interdisciplinary sequence specifically designed for first-year honors students. It surveys the arts, literature and culture of Korea and Japan from c. 800 CE to the present. Fulfills Cultures - World Perspectives. Fulfills one of the Issues requirements. Course offered winter semester. Prerequisite: Restricted to first-year honors students. Corequisite: HNR 276. Credits: 3

**HNR 278 - History of Science II**

HNR 278 focuses on the development of European science and art from 1650-1850, with particular emphasis on Newton, chemistry, the Enlightenment, and Romanticism. It is the third of an integrated four course sequence. Taken concurrently with HNR 279 this course satisfies the SWS requirement. Fulfills Foundations - Arts. Course offered winter semester. Prerequisite: Enrollment in the Meijer Honors College. Corequisite: HNR 279. Credits: 3

**HNR 279 - History of Science II**

HNR 279 covers some of the methodological, metaphysical, and ethical issues of modern science from Newton through the 1800s and places these in their historical and cultural contexts. It is the fourth of an integrated four course sequence. Taken concurrently with HNR 278 this course satisfies the SWS requirement. Fulfills Foundations - Philosophy and Literature. Fulfills one of the Issues requirements. Course offered winter semester. Prerequisite: Enrollment in Meijer Honors College. Corequisite: HNR 278. Credits: 3

**HNR 280 - Honors Special Topics**

A study of special topics, areas, or experiences not covered in the curriculum. The selected focus will be described in the class schedule. Offered on demand. Prerequisites: Admission to the Meijer Honors College; previous HNR coursework. Credits: 1 to 3

**HNR 281 - Study Abroad - Ghana**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

**HNR 311 - Honors Junior Seminar**

An intensive, in-depth study of a special problem or topic. The seminar, taken in the junior or senior year, is a Capstone for the liberal arts component of the student's education. It provides an occasion for considering the ways in which liberal arts disciplines impinge upon each other. Fulfills Cultures - World Perspectives. Fulfills one of the Issues requirements. Prerequisite: Junior Standing. Credits: 3

**HNR 312 - Honors Junior Seminar**

An intensive, in-depth study of a special problem or topic. The seminar, taken in the junior or senior year, is a Capstone for the liberal arts component of the student's education. It provides an occasion for considering the ways in which liberal arts disciplines impinge upon each other. Fulfills Cultures - U.S. Diversity. Fulfills one of the Issues requirements. Prerequisite: Junior Standing. Credits: 3

**HNR 313 - Honors Junior Seminar**

An intensive, in-depth study of a special problem or topic. The seminar, taken in the junior or senior year, is a Capstone for the liberal arts and sciences component of the student's education. It provides an occasion for considering the ways in which liberal arts and sciences disciplines impinge upon each other. Fulfills one of the Issues requirements. Prerequisite: Junior standing. Credits: 3

## Course Listings and Descriptions

### **HNR 380 - Honors Advanced Special Topics**

Advanced study of special topics, areas, or experiences not covered in the curriculum. The selected focus will be described in the class schedule. Offered on demand. Prerequisite: Junior standing or 12 previous credits in HNR courses. Credits: 1 to 4

### **HNR 399 - Independent Study**

Intensive study of a topic under supervision of a faculty member. Offered upon demand. Prerequisites: Previous honors coursework; junior status. Credits: 1 to 4

### **HNR 499 - Honors Senior Project**

An individually designed project that is the culminating study in the student's major field. Offers an opportunity to do intensive study, writing, or research in the major or principle cognate field. Permit required. Credits: 1 to 4

### **HRG 501 - Anatomy and Physiology of Hearing and Balance**

A study of the anatomy and physiology of the peripheral and central auditory and balance systems. Knowledge in this area will provide the basis for evaluation and treatment of individuals with hearing and/or balance disorders. Offered fall semester. Prerequisite: Admission to the audiology program. Credits: 3

### **HRG 504 - Instrumentation and Hearing Science**

A study of topics and procedures of instrumentation and hearing science that are fundamental to clinical practice including electronics, filters, acoustical impedance, analog and digital signals, and acoustics. Offered winter semester. Prerequisite: Admission to the audiology program. Credits: 3

### **HRG 508 - Psychoacoustics**

Psychoacoustics is the study of the relationship between a sound stimulus and the behavioral response it produces in a listener. Research methodology in the field will be discussed and applied to current measures of the physical and psychological characteristics of sound and perception. Applications to clinical audiology will be addressed. Offered spring/summer semester. Prerequisites: Admission to the audiology program and successful completion of HRG 504. Credits: 3

### **HRG 521 - Audiologic Assessment**

This course is designed to provide a foundation of assessment tools used in clinical audiology. Information gathered from this course will form the basis for audiologic test procedures used in clinical experiences. Offered fall semester. Prerequisite: Admission to the audiology program. Credits: 3

### **HRG 525 - Neurophysiologic Measures I**

The first course of a two course sequence on neurophysiologic measures, including physiological and electrophysiological measurements used for assessment of the human auditory system. Focus will be on the principles of measurement, clinical applications, and clinical measurement of auditory evoked potentials and otoacoustic emissions. Offered fall semester. Prerequisite: Admission to the audiology program. Credits: 3

### **HRG 526 - Neurophysiologic Measures II**

The second of a two-course sequence on neurophysiologic measures, covering current and proposed physiological and electrophysiological measurements used for clinical assessment of the human auditory system. Topics will include advanced treatment of the auditory brainstem response, auditory steady-state response, middle latency evoked response, electroneuronography, and vestibular evoked myogenic potentials. Offered winter semester. Prerequisite: HRG 525 Credits: 3

### **HRG 527 - Vestibular Assessment and Rehabilitation**

Study of concepts in clinical testing, treatment, and mechanisms of rehabilitation of disorders of the vestibular and balance system including an advanced study of the anatomy and physiology of the oculomotor and vestibular systems. Offered spring/summer semester. Prerequisite: HRG 501 Credits: 3

### **HRG 541 - Amplification I**

An introduction to issues and technologies that are important in the area of amplification. Topics will be related to hearing aid technology and assistive listening devices. Prerequisite: Admission to the audiology program. Credits: 3

### **HRG 542 - Amplification II**

This course provides a treatment of the issues and technologies that are important in the area of amplification, with a particular focus on the appropriate selection, programming, and fitting of devices for pediatric, adult, and geriatric populations. Offered winter semester. Prerequisite: HRG 541. Credits: 3

### **HRG 545 - Auditory Habilitation and Rehabilitation**

This course addresses the impact of hearing loss on human communication across the lifespan. Contemporary aural habilitation and rehabilitation procedures for individuals with hearing loss will be considered. Offered spring semester. Prerequisites: HRG 541 and HRG 542. Credits: 3

### **HRG 562 - Professional Issues in Audiology**

Professional issues relevant to the practice of audiology. Includes contemporary diagnostic and rehabilitation issues affecting the profession. Course offered winter semester. Prerequisite: Admission to the audiology program. Credits: 1

### **HRG 566 - Evidence-Based Practice in Audiology**

This course addresses the application of evidence-based practice to the field of audiology with consideration of diverse patient populations and ethical practice. Content is treated with emphasis upon problem solving using evidence-based practice and the integration of information across didactic and practical knowledge bases toward clinical skill development. Offered spring/summer semester. Prerequisite: Admission to the audiology program. Credits: 1

### **HRG 568 - Audiology Clinical Lab**

This course addresses basic clinical skills designed to prepare students for their first community placement in which they use these skills for hearing, balance screening and assessment. Offered winter semester. Prerequisite: Admission to the audiology program. Credits: 1

### **HRG 570 - Audiology Fieldwork**

This is the first supervised audiology practicum. Students participate in basic audiology clinical practice under the supervision of professional audiologists. Offered spring/summer semester. Prerequisite: HRG 568. Credits: 1

### **HRG 606 - Auditory Pathophysiology and Heredity**

A study of the disorders of the external, middle, and inner ears, the central auditory system, and the vestibular system, including an examination of heredity as related to disorders of the human auditory and vestibular systems. Offered winter semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 2

### **HRG 607 - Radiographic Imaging and Pharmacology for Audiology**

This course addresses topics of particular relevance to audiology practice in a medical setting. The role of radiographic imaging for audiologic diagnosis will be considered as well as the mechanisms of pharmacology and mechanisms of ototoxicity. Offered spring semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 2

### **HRG 623 - Hearing Across the Lifespan**

This course focuses on the nature, assessment, and treatment of hearing disorders with pediatric through geriatric populations. Students will learn evaluation techniques and treatment strategies for patients across the lifespan with hearing impairment. Legal and professional implications of practice with these patient populations will be discussed. Offered fall semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 3

### **HRG 629 - Clinical Decision Making in Audiology**

This course serves as a capstone experience during which students are provided the opportunity to synthesize their knowledge and skills in audiology across disorder areas and the lifespan using a case study approach. Offered spring/summer semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 2

**HRG 642 - Educational Audiology and Auditory Processing Disorders**

A study of educational audiology, including the role of the educational audiologist, the educational difficulties of children with hearing impairments, and the methods to address those problems. Auditory processing disorders, as well as the assessment, treatment, and neuroanatomy and physiology of these disorders will be discussed. Offered winter semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 2

**HRG 645 - Cochlear Implants and Tinnitus**

A study of cochlear implants including selection criteria for candidacy, steps in cochlear implantation, pre and post implant audiological procedures, and habilitation and rehabilitation of patients with cochlear implants. Characterization, assessment, and treatment of tinnitus will also be discussed. Offered fall semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 3

**HRG 648 - Mentoring and Counseling in Audiology**

This course addresses the principles and practices of counseling patients with hearing impairment and their families as part of clinical practice. How to communicate and interact effectively with patients experiencing hearing loss will be discussed. Best practices of mentoring other professionals and preceptors is also discussed. Offered winter semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 2

**HRG 661 - Hearing Conservation**

This course addresses issues regarding hearing conservation in industry and the community, including noise abatement. Focus will be placed on advocacy and intervention for hearing risks in occupational, recreational, educational, and home settings. Noise assessment, risk factors, hearing protectors, audiometric testing, employee training, and record keeping will be discussed. Offered fall semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 2

**HRG 664 - Audiology Practice Management**

Issues regarding the management of an Audiology Practice will be discussed. Topics include professional ethics and the legalities of practice, employee/employer laws and regulation, current status of the healthcare system services and reimbursement, and development of an Audiology Practice. Offered winter semester. Prerequisites: Admission to the audiology program and successful completion of all previously required courses in the Au.D. curricular sequence. Credits: 2

**HRG 670 - Audiology Practicum**

This is the second-year supervised audiology practical experience. Students gain clinical experience working with patients across a range of ages, disorder areas, and type of clinical setting. Professionals in the community will supervise and instruct students in basic audiology clinical practice. Offered every semester. Prerequisites: HRG 570 and all previously required courses in the Au.D. curricular sequence. Credits: 2

**HRG 690 - Research Preparation in Audiology**

This course addresses principles and practices of basic and applied research in Audiology. Topics include experimental design, evidence-based practice, overview of statistical methods, and application to clinical populations. Students should develop skills to make informed decisions about the relevance of research to clinical practice. Offered spring/summer semester. Prerequisites: Admission to the audiology program, successful completion of all previously required courses in the Au.D. curricular sequence, and a prior course in statistics (the requirement is for an undergraduate statistics course, but this prerequisite may also be fulfilled by a graduate-level statistics course). Credits: 3

**HRG 799 - Independent Study in Audiology**

This course provides opportunity for in-depth study in an area of special interest as directed by a faculty member. Offered every semester. Prerequisites: Admission to the audiology program. Requires department chair and faculty supervisor approval. Credits: 1 to 6

**HRT 105 - Introduction to Human Rights**

Introduction to the historical and conceptual development of human rights as moral, legal, and cultural constraints on the behavior of states in relation to their citizens. Analysis is theoretical, exploring philosophical arguments surrounding the historical development of human rights and their current role in legal, cultural, literary and political products. Fulfills Foundations - Philosophy and Literature. Cross-listed with PLS 105. Offered fall and winter semesters. Credits: 3

**HRT 316 - Human Rights in International Politics**

An analysis of human rights as an increasingly influential principle in international relations, and the friction between sovereignty and international standards of behavior. Topics covered within class may include the theoretical origins of human rights, international norms, international law, sovereignty, interventionism, particularly viewed through historical and contemporary human rights cases. Cross-listed with PLS 316. Offered fall semester. Prerequisite: PLS 103 or PLS 211 or junior standing. Credits: 3

**HRT 319 - Human Traffic and Trafficking**

Drawing on interdisciplinary approaches to globalization, the course critically examines the forced and/or coercive global transfer of people, the traffic and trafficking of humans, through historical and contemporary perspectives. Topics may include migrant smuggling, forced labor, slave trade, sex workers, voices of survival workers, and self-advocacy in survival communities. Part of the Globalization Issue. Cross-listed with HST 319 and LIB 319. Course offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**HRT 320 - Voices of the Civil Rights Movement in the United States**

This interdisciplinary course integrates numerous expressive genres, including autobiographies, oral histories, and music, to examine how activists challenged human rights violations. Narrations of individual transformations show how shared experiences, ideologies, and opposition expanded understandings of human rights nationally and globally during the civil rights movements in the United States. Part of the Human Rights Issue. Fulfills U.S. Diversity requirement. Cross-listed with LIB 320. Offered every other year. Prerequisite: Junior standing. Credits: 3

**HRT 335 - Theory of Human Rights**

Critical examination of theories of human rights, with emphasis on classical ethical and political thought and the development of modern rights theory. Assessment of arguments both supporting and denying human rights, and applications to contemporary issues of slavery and trafficking, torture, genocide, and rights of women and sexual minorities. Cross-listed with PLS 335. Offered fall semester. Prerequisite: PLS 105 or HNR 263. Credits: 3

**HRT 389 - Study Abroad in Human Rights**

Coursework completed by student in study abroad programs. Course offered each semester. Prerequisite: Instructor permission. Credits: 3

**HRT 450 - Reflection on Human Rights**

Directed reflection upon and integration of the student's work in human rights coursework and research. Students will prepare a final project that reflects learning from their whole body of work in the human rights Minor. Course offered fall and winter semesters. Prerequisites: Human rights minors, permission of instructor. Credits: 1

**HRT 490 - Internship in Human Rights**

Internship experience in the wider human rights world combined with biweekly classroom discussion of ongoing service work and some assigned reading. Students will prepare a portfolio documenting their term's work and reflections. Course offered each semester. Prerequisite: Permission of instructor. Credits: 3

**HSC 201 - The Scientific Revolution**

Examines the revolutionary changes in people's view of their world and of themselves during the sixteenth and seventeenth centuries, from an animated magical world to a clockwork universe inhabited by mechanical men. The works of Copernicus, Galileo, and Newton are examined; their impact on society, religion, literature, and morals is sketched. Fulfills Foundations - Historical Perspectives. Offered fall, winter, and occasional

## Course Listings and Descriptions

spring/summer semesters. Offered for SWS credit during the spring/summer semester. Credits: 3

### **HSC 202 - The Technological Revolution**

Investigates the four major technological revolutions that have made a significant impact on society during the last 2,000 years. Emphasizes the transformation to a scientifically oriented industrial society in modern times. Occasionally offered for SWS credit. Fulfills Foundations - Historical Perspectives. Offered fall, winter, and occasional spring/summer semesters. Credits: 3

### **HSC 399 - Readings in the History of Science**

Offers students the opportunity to explore a topic in the history of science in depth under the supervision of a staff member. Offered fall and winter semesters. Prerequisites: Two history of science courses and permission of instructor. Credits: 1 to 3

### **HST 101 - Introduction to World Civilizations**

Designed to support general education goals and develop historical perspectives, this course emphasizes the comparison of selected African, American, Asian, and European civilizations from ancient times to the present, exploring the variety of activities that divide and unite human beings across cultures, time, and space. Fulfills Foundations - Historical Perspectives. Offered every semester. Credits: 3

### **HST 102 - Introduction to European Civilizations**

Designed to support general education goals and develop historical capabilities, this course examines European history from the fall of Rome to the present. It emphasizes the interaction of political, social, economic, intellectual, and cultural factors to produce historical change and alter Europe's relationship to the rest of the world. Fulfills Foundations - Historical Perspectives. Offered every semester. Credits: 3

### **HST 103 - Introduction to American Civilizations**

Designed to support general education goals and develop historical capabilities. This course examines American history from European contact with the Native Americans to the present, emphasizing the interaction of political, social, economic, intellectual, and cultural factors that shaped the United States and the nation's interaction with the world. Fulfills Foundations - Historical Perspectives. Offered every semester. Credits: 3

### **HST 180 - Special Topics in History**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 3

### **HST 200 - Writing History**

This gateway course introduces students to basic research, analytical, and methodological skills through explorations of primary and secondary sources. In addition, students learn how to create a historical argument by developing a research question, annotated bibliography, and a research prospectus or research paper. Topics will vary from semester to semester. Offered each semester. Credits: 3

### **HST 202 - History of Global Change and Social Transformation**

A historical inquiry into long-term processes of global change and social transformation. Focus is on increasing interconnectedness of human communities from the deep past to the present, including spread of cultural, market and ecological exchanges, transport and communication technologies, developing ideas of social justice, and their connections to contemporary times. Fulfills Foundations - Historical Perspectives. Fulfills Cultures - World Perspectives. Cross-listed with GSI 202. Offered fall and winter semesters. Credits: 3

### **HST 203 - World History to 1500 A.D.**

Basic content and methods of history through an introductory study of world cultures before 1500. The course focuses on specific societies in Africa, Asia, Europe, and the Western Hemisphere, analyzing and comparing the ways in which political, economic, social, cultural, and demographic factors influenced the development of these various cultures. Required for majors. Fulfills Foundations - Historical Perspectives. Supplemental writing skills course. Offered every semester. Credits: 3

### **HST 204 - World History since 1500**

Basic content and methods of history through an introductory study of world cultures from 1500 to present. The course focuses on specific societies in Africa, Asia, Europe, and the Western hemisphere, analyzing and comparing the ways in which political, economic, social, cultural, and demographic factors influenced the development of these various cultures. Required for majors. Supplemental writing skills course. Fulfills Cultures - World Perspectives. Offered every semester. Credits: 3

### **HST 205 - American History to 1877**

The development of the United States from the Colonial Period to the end of Reconstruction with an emphasis on the role that race, ethnicity, culture, political thought, economics, and gender played in shaping American values and institutions. Fulfills Cultures - U.S. Diversity. Offered each semester. Credits: 3

### **HST 206 - American History since 1877**

The legacy of Jim Crow, the impact of immigration on political systems in an urban industrial society, the quest of social, civil, racial, gender, and political equality, competing economic and political thought, and the emergence and preservation of America as a world power. Required for majors. Supplemental writing skills course. Fulfills Cultures - U.S. Diversity. Offered every semester. Credits: 3

### **HST 207 - European Civilization to the Later Middle Ages**

An historical survey focusing on the development of European civilization from Classical Greece to the Later Middle Ages. This course will explore the intellectual, social, religious, political, and cultural aspects of the formation of Europe. Topics include the rise and fall of Greece and Rome, and the formation of Europe. Fulfills Foundations - Historical Perspectives. Credits: 3

### **HST 208 - European Civilization since the Later Middle Ages**

Examines major events in European history from the Later Middle Ages to the present, including social, political, economic, and cultural developments. Topics will include the Reformation and Renaissance, the Age of Revolutions, the rise of fascism and communism, the two world wars and the Holocaust, and events since 1945. Fulfills Foundations - Historical Perspectives. Credits: 3

### **HST 211 - History of Islamic Civilization**

An introduction to the history of Islamic civilization and the development of its relationships with Western Europe and the United States. Supplemental writing skills course. Fulfills Cultures - World Perspectives. Credits: 3

### **HST 212 - India: History and Civilization**

Examines the history, culture and civilization of India from ancient to early modern period. It covers the rise and fall of civilizations, kingdoms, and dynasties. In tracing historical developments, the course emphasizes the rich and diverse culture of human experiences that have shaped a relatively unique civilization in South Asia. Fulfills Cultures - World Perspectives. Fulfills Foundations - Historical Perspectives. Offered fall semester of even-numbered years. Credits: 3

### **HST 230 - Latin America in World History**

This is a broad survey of Latin American history from the pre-Columbian period to the present. The course will focus on major issues and themes in Latin American history. Topics include Amerindians, conquest, slavery, independence, national identity, foreign intervention, revolutions, and inequality. Fulfills Cultures - World Perspectives. Credits: 3

### **HST 235 - Africa in World History**

Surveys the African continent from prehistory to the present. The course introduces students to the study of Africa from a global perspective and will focus on major issues in African history. Topics will include human origin, migration, technology, slavery, Christianity, Islam, colonization, and independence. Fulfills Cultures - World Perspectives. Credits: 3

### **HST 240 - A History of East Asia to 1800**

Introduces major themes of the history of East Asia (China, Japan, Korea, and Vietnam) from prehistory to 1800. Explores cultural interactions among East Asian countries as well as their indigenous cultural traits.

Some basic skills, such as critical reading and writing, will also be practiced. Fulfills Cultures - World Perspectives. Credits: 3

#### **HST 241 - A History of East Asia since 1800**

A broad overview of East Asian political systems, social changes, economic transformation, regional relations, and cultural interaction since 1800. Major historical events and trends along with cultural differences and interactions will be examined. Emphasis is given to China and Japan, though Korea and Vietnam are also covered. Fulfills Cultures - World Perspectives. Credits: 3

#### **HST 290 - Research Methods in History**

Explores historical research methods and focuses on how historians challenge dominant theories of knowledge and the major methodologies employed in the social sciences and humanities; examines the ways in which historians shape research questions and determine the types of materials used. Prerequisite: STA 215. Credits: 3

#### **HST 301 - Colonial America**

A history of the British North American colonies through the conclusion of the Seven Years War. Topics include the origins of the colonies, relations with the Native Americans, British colonial policy, the origins of slavery, and social, political, and cultural development of the colonies. Credits: 3

#### **HST 302 - Revolutionary America**

A study of the American Revolution. Topics may include the causes and consequences of the American Revolution, and social/political/economic developments in the United States through the War of 1812. Credits: 3

#### **HST 303 - Era of Sectional Conflict, Civil War, and Reconstruction**

This course focuses on the rise in sectional tensions, the conduct of the Civil War, and the tensions over the postwar/Reconstruction period in the United States. Credits: 3

#### **HST 305 - America Confronts Modernity**

Analysis of topics in the Gilded Age and progressive Era. Topics may include the modernization of technology, agriculture, and industry; urbanization; immigration; labor relations; international trade; military ventures; race relations at home and abroad; Progressivism and Populism; and the 1920s. Credits: 3

#### **HST 306 - The 'American Century': From the Great Depression to Vietnam**

Thematic survey of the United States from the 1930s through the Vietnam War with focus on political, social, cultural, intellectual, and economic trends, in particular the Great Depression, the development of the welfare state, World War II, the Cold War, the civil rights movement, and the tumult of the 1960s. Credits: 3

#### **HST 307 - United States since 1970**

Thematic survey of the United States since the Vietnam War, with focus on political, social, cultural, intellectual, and economic trends. Particularly the impact of globalization and the end of the Cold War, industrial and technological change, multiculturalism, consumerism and the mass media, and the ascendancy of conservatism. Credits: 3

#### **HST 308 - Cultural and Social Topics in U.S. History**

Examines various topics in U.S. social and cultural history. Course explores a specific topic defined by the instructor. May be repeated for credit if content varies. Credits: 3

#### **HST 309 - Cultural and Social Topics in European History**

Examines various topics in European social and cultural history. Course explores a specific topic defined by the instructor. May be repeated for credit if content varies. Credits: 3

#### **HST 310 - Cultural and Social Topics in Nonwestern History**

Examines various topics in Nonwestern cultural and social history. Course explores a specific topic defined by the instructor. Maybe repeated for credit if content varies. Fulfills Cultures - World Perspectives. Credits: 3

#### **HST 311 - History of Religion in the United States**

This course is a study of the major developments in the religious history of the United States from the first North American colonies to the start of the twenty-first century, concentrating on the relationship between religion and other aspects of American history. Credits: 3

#### **HST 312 - History of American Women**

Analysis of the political, social, economic, and cultural history of women in American society from the colonial era through the present. Topics include domesticity, suffrage, health, employment, race, war, and feminism. Credits: 3

#### **HST 314 - African American History**

Examines the history of African Americans from forced migration through the Civil Rights movement. Issues studied include race relations, black culture in slavery, emancipation, the origins of segregation, the "great migration," and the Civil Rights movement. Fulfills Cultures - U.S. Diversity. Credits: 3

#### **HST 315 - Latinos: The Forging of Ethnic Identities**

Examination of the ways in which Mexicans, Cubans, Puerto Ricans, Central Americans, and others have over time created ethnic identities in the United States out of their transnational experiences. Also explores the impact of this process on American political, economic, and social structures. Credits: 3

#### **HST 316 - U.S. Civil Rights Movement History**

This course will focus on United States civil rights leaders and their rhetoric of resistance, and focus on the social and cultural formations that undermined racial segregation. It will also examine the events and forces that created space for a successful movement. Credits: 3

#### **HST 317 - History of American Foreign Relations**

Historical development of United States relations with foreign powers focusing on issues of war and peace. Concentration on significant periods of policy formation and change, with attention to factors determining policy. Credits: 3

#### **HST 318 - History of Democracy in America**

Examines the historical development of democratic principles, ideologies, and practices in American history through case studies of particular crises in American democracy. Focuses on limits of democracy and debates among Americans and between scholars about practice of democracy in a variety of areas and from a multiplicity of viewpoints. Part of the Human Rights Issue. Prerequisite: Junior standing. Credits: 3

#### **HST 319 - Human Traffic and Trafficking**

Drawing on interdisciplinary approaches to globalization, the course critically examines the forced and/or coercive global transfer of people, the traffic and trafficking of humans, through historical and contemporary perspectives. Topics may include migrant smuggling, forced labor, slave trade, sex workers, voices of survival workers, and self-advocacy in survival communities. Part of the Globalization Issue. Cross-listed with LIB 319 and HRT 319. Course offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

#### **HST 320 - American Indians**

An examination of selected topics and peoples from among the diverse Native American peoples north of Mexico, from the mythic beginnings to the modern era. Topics include problems of writing Indian history, ethnohistory, Indian-white relations, environmentalism, survival, assimilation, and Indian perspectives on American history. Credits: 3

#### **HST 322 - American Identity and Sports**

The course examines American sports and how sports have helped construct ideas of race, ethnicity, gender, and class, and how individuals use sports to prove Americanness. Part of the Identity Issue. Prerequisite: Junior standing. Credits: 3

#### **HST 323 - Michigan History**

A survey of the major economic, political, and social themes in Michigan. Special emphasis will be placed on the urban development of Detroit and Grand Rapids, the auto industry, race relations, and modern political trends. Credits: 3

#### **HST 325 - Topics in the History of Sport**

Examines sports history in different regions and chronological periods. Topics will vary, but all sections will explore sport within the broader contexts of social, political, cultural, and economic trends. In addition, particular interest will be paid to issues such as race, class, sexuality, and gender in sport. Credits: 3

## Course Listings and Descriptions

### **HST 327 - History of United States Urban Society**

An historical analysis of American urban structures including the commercial city, the industrial city, the suburbs, and the edge city. These structures will be seen as metaphorical theatrical stages upon which ethnic, racial, gender, and economic groups create social and cultural formations. Credits: 3

### **HST 328 - U.S. Constitutional and Legal History**

Introduction to the constitutional and legal history of the United States, with particular emphasis on the social, political, and economic contexts of the law and Constitution, the origins of the Constitution, and evolution of constitutional jurisprudence, the development of legal practices, and the relationship between the citizen and the state. Credits: 3

### **HST 329 - U.S. Intellectual History**

Examines the major trends in American thought from the colonial period to the present. Examples of topics covered include evangelicalism, republicanism, the Transcendentalists, feminism, the impact of Darwin and science on social thought, race, pragmatism, modernist criticism, liberalism, conservatism, and postmodern critical theory. Credits: 3

### **HST 330 - Colonial Latin America**

This course will focus on specific themes related to Latin American civilization and culture from pre-conquest times to the nineteenth century. Topics include Amerindian civilizations; encounters between Amerindians, Europeans, and Africans; makings of a colonial society; collapse of colonial rule; and wars of independence. Cross-listed with LAS 330. Credits: 3

### **HST 331 - Modern Latin America**

This course will focus on themes related to Latin America from the independence period to the present day. Major themes will include patterns of state formation and models of economic development; United States intervention; the origins and course of radicalism and counter-revolution; and the problems of peaceful reform. Credits: 3

### **HST 332 - Emergence of Modern India and South Asia**

This course examines the emergence of Modern India and South Asia from the seventeenth century to the present. Topics include: tradition, modernity, imperialism, culture, religion, women and gender, migration, globalization, human rights, nationalism, Indian diaspora, and conflict and cooperation between the South Asian countries and between India and major world powers. Fulfills Cultures - World Perspectives. Part of the Globalization Issue. Prerequisite: Junior standing. Credits: 3

### **HST 333 - Modern China**

Introduction to modern Chinese history from the late Ch'ing Dynasty to the present. Particular emphasis will be on China's two revolutions in 1911 and 1949 and the rise of Communism. Credits: 3

### **HST 334 - The Making of the Caribbean**

A survey of Caribbean history from the precolonial era to the rise of nationalism and independence. Course will emphasize specific islands and will cover a wide range of topics, such as the rise of the plantation system, slavery and emancipation, cultural retention, resistance, migration, and inter-regional relations. Credits: 3

### **HST 335 - Africa Before 1870**

The course will focus on specific themes and characteristics of selected cultures and civilizations in Africa before European conquest. Topics will include economic activity, culture, social organization, indigenous religions, gender and sexuality, textiles and clothing, African slavery, and state formation. Credits: 3

### **HST 336 - Africa After 1870**

The course will focus on specific themes related to European conquest of Africa and the transformation of selected African cultures under colonial rule. Topics include scramble for partition, military conquest, missionary activity, colonial economy and social changes, genocide and forced labor, resistance and nationalism, decolonization and liberation. Credits: 3

### **HST 337 - The Age of Islamic Empire**

A historical and cultural examination of the Islamic peoples from pre-Islamic Arabia to the end of World War I. Emphasis on social, religious,

economic, and political factors during each phase in Islam's development since the eighth century. Credits: 3

### **HST 338 - Modern Middle East**

A survey of cultural, economic, and political developments in the Middle East and North Africa from the end of World War I, with particular attention to the rise of nationalism and issues of modernization. Credits: 3

### **HST 339 - Modern Iran**

This course is a study of the major developments in the history of Iran from the Qajar shahs to the current Islamic Republic, concentrating on the relationship between state and society by highlighting religious, political, and cultural developments in modern Iran. Credits: 3

### **HST 342 - History of Buddhism and East Asian Religions**

Examines Buddhism and major religious traditions of East Asia and their modern developments through historical perspectives. Explores the visions, values, and activities of people in India, Tibet, China and Japan, and how their religious traditions have shaped their life-experiences. Studies religious interactions among East Asian countries and their indigenous traits. Fulfills Cultures - World Perspectives. Part of the Identity Issue. Prerequisite: Junior standing. Credits: 3

### **HST 343 - History of South Africa**

Examines the political, social, and economic history of South Africa from the late seventeenth century to the early 1990s. The course will analyze the forces that created modern South Africa, particularly European conquest and colonization; mineral discoveries; industrialization; Apartheid; religion and the Dutch Reformed Church; and African resistance. Prerequisites: HST 204, HST 235, or junior standing. Credits: 3

### **HST 350 - Ancient Greece**

Greek history during the Archaic and Classical Periods. Emphasis on the development of historical writing in the Greek World, a critical examination of ancient and modern historiography, and significant aspects of Greek political and social history. Credits: 3

### **HST 351 - Ancient Rome**

Roman history from the foundation of the city of Rome through the reign of Augustus. Emphasis on the development of historical writing in the Roman World, a critical examination of ancient and modern historiography, and significant aspects of Roman political and social history. Credits: 3

### **HST 355 - Medieval Europe**

This course will explore the intellectual, political, religious, and cultural aspects of medieval Europe from the waning of the Roman Empire to the arrival of the Black Death in the fourteenth century. Emphasis will be placed on the intellectual, social, and spiritual uniqueness of medieval European civilization. Credits: 3

### **HST 357 - The Black Diaspora and the Meaning of Sports, 1800 to the Present**

This course explores the Black Diaspora (1800-present) through the lens of the black athlete in order to help examine global issues such as race, politics, economics, and gender. Part of Globalization Issue. Cross-listed with AAA 357. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### **HST 360 - Tudor and Stuart England**

English history from 1485 to 1714 with appropriate attention to political, constitutional, and religious issues. Credits: 3

### **HST 361 - Modern Britain**

Examines Britain's social, political, and economic history from 1688 to the present. Topics include industrialization, building and collapse of empire, two world wars, and other major political and social changes in modern British history. Credits: 3

### **HST 364 - Renaissance and Reformation Europe**

Survey of European history from 1350 to 1560. Topics include political, social, cultural, intellectual, and religious history, with emphasis on major changes in these areas in Renaissance Italy and Reformation Germany, and on the connections between these changes. Credits: 3

**HST 366 - Spain in the Age of Empire**

Examines the history of Spain from medieval times to present. It emphasizes the early modern period as the high point of Spain's cultural, political, and economic influence in Europe and examines the decline of the Spanish empire, the Spanish Civil War, and Spain's 20th-century transition to democracy. Credits: 3

**HST 370 - History of Medicine and Health**

Interdisciplinary exploration of the diverse ways that western societies from Ancient Greece to the modern era have defined health and disease, provided health care, managed the environment, and sought to prevent illness. Examines the strengths and limits of past solutions to health questions and their applicability to modern society. Part of the Health Issue. Prerequisite: Junior standing. Credits: 3

**HST 371 - Historical Perspectives on Gender and Sexualities**

Variable topics centering on the history of gender and sexuality. Topics include historical understandings of gender identity and sexual orientation and may vary by region and era. May be repeated if content varies. Cross-listed with WGS 371. Credits: 3

**HST 372 - From Slavery to Freedom**

Ironically, modern concepts of freedom emerged from societies deeply invested in its opposite, slavery. This course looks at the history of slavery and its abolition in four American societies, Haiti, the U.S., Cuba, and Brazil, to distinguish the distinctive ways in which each of them defined and constructed freedom. Credits: 3

**HST 374 - Revolution in the Americas**

Men and women make history, sometimes through gradual, passive means and sometimes through sudden, active means. In the Americas, both categories of history-making have been common. This course explores international relations in the hemisphere by comparing revolutionary and evolutionary processes of change from Tierra del Fuego to the Northwest Territories. Cross-listed with LAS 374. Credits: 3

**HST 375 - History of Mexico**

This course surveys the history of Mexico from the earliest human inhabitation to the present. It will introduce students to the major political, social, and cultural forces that have shaped the modern nation of Mexico. Cross-listed with LAS 375. Credits: 3

**HST 376 - History of Witch Hunts**

Examines witch trials in various places and times across history, from a variety of perspectives, with emphasis on the marginalization of the accused witches within their communities. Geographical and chronological focus will vary, but may include early modern Europe, colonial North America, or contemporary Africa. Part of the Identity Issue. Credits: 3

**HST 377 - History of Warfare**

Survey of the role of warfare in world history from prehistory to the beginning of the industrial era. Uses a variety of media and sources to examine why and how humans have fought wars and how warfare has affected different aspects of human experience in different world regions and eras. Credits: 3

**HST 378 - Contesting Human Rights**

This course takes a game-based approach, based on written and oral analyses of primary sources, to explore key historical moments when human rights and questions of who should have them were contested. Students engage through collaborative role-play with complex historical situations in which rights were defined and fought over. Part of the Human Rights Issue. Prerequisite: Junior standing. Credits: 3

**HST 380 - Special Topics in History**

A study of special topics, areas, or periods of history not offered in the regular curriculum. The selected focus will be described in the class schedule. Expectations of students in this course approximate those of other 300-level history courses. Credits: 1 to 4

**HST 386 - 20th Century Europe**

Examines Europe in the 20th century, including the age of total war; the Holocaust and its legacy; postwar recovery; the Cold War; social, political

and cultural developments in East and West; the rise of the European Union; the end of communism; and contemporary Europe. Credits: 3

**HST 387 - Modern Germany**

A survey of German history and culture since 1870, including the Imperial period of Bismarck and Wilhelm II, World War I, the Weimar Republic, Hitler's Third Reich, World War II, postwar division, and reunified Germany. Credits: 3

**HST 389 - Russian History**

From the ninth through the nineteenth century. Topics include the origins of Russian expansion, the development of Russian civilization, and the origins of Revolution. Credits: 3

**HST 390 - Soviet History**

From the Russian Revolution to the recent past. Topics include Lenin, Stalin, World War II, and the Cold War. Credits: 3

**HST 393 - Study Abroad: Jamaica**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits: 1 to 6

**HST 395 - Study Abroad: Germany and Poland**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study program. By permit only. Credits: 3

**HST 399 - Independent Study**

Intensive study of a topic, arranged as to credit and content with a member of the department. No more than three credits of HST 399 may be applied to the major or minor. Offered on arrangement. Prerequisite: Junior standing. Credits: 1 to 3

**HST 400 - Junior Seminar in History**

Enables students to hone skills developed in HST 200 and honed in 300-level courses. Students discuss and evaluate a common body of readings on a chosen topic and develop specific research questions that will grow into significant research projects. May be repeated if content varies. Prerequisites: HST 200 and junior standing. Credits: 3

**HST 405 - Local and Community History**

A seminar focused on the techniques of using material from local archives and other nearby sources for historical research. Course offered spring/summer semesters of even-numbered years. Prerequisite: Junior standing. Credits: 3

**HST 405 - Local and Community History**

A seminar focused on the techniques of using material from local archives and other nearby sources for historical research. Course offered summers of even-numbered years. Prerequisite: Junior standing. Credits: 3

**HST 410 - History Journal**

The primary goal of this course is to maintain and publish the Grand Valley Journal of History. Students work collaboratively to review and publish journal articles, as well as to advertise the journal. Course offered fall semester. Prerequisite: Permission of instructor. Prerequisite can be demonstrated in one of two ways: (1) demonstration of a basic working knowledge in the discipline of history through previously taken courses, (2) demonstration of a basic working knowledge through a 1-2 page essay describing the student's understanding of the discipline of history, including its methods and areas of focus. Credits: 3

**HST 415 - Museum Studies**

Examines the history of museums; the organization, operation and multiple functions of museums; their contributions to public life; and the political, legal, ethical, and other contemporary debates concerning the roles of museums as cultural institutions. Also introduces practical skills such as collections management, exhibition design, and public outreach and education. Cross-listed with CLA 415. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

## Course Listings and Descriptions

### **HST 420 - Public History**

Provides students with the practical and theoretical frameworks of public history, which is the use of the historical method outside of academia, in places such as museums, government, historical societies, and the business world. Students will learn to develop public history projects to serve local institutions in collaborative groups. Course offered winter semester. Prerequisite: Junior standing. Credits: 3

### **HST 490 - History Internship**

Supervised work experience in a history-related field, initiated by the student, who must prepare a proposal in consultation with a faculty advisor and a worksite supervisor. The student will submit a final report, and both the worksite supervisor and the faculty advisor will evaluate the internship. Offered every semester. Prerequisites: 15 hours of coursework in history and permission of the department chair. Credits: 1 to 3

### **HST 495 - Varieties of History (Capstone)**

The Capstone serves as a culminating experience for students trained in historiography. It builds upon students' growing sophistication in historical practice by emphasizing foundational concerns of the profession. Professor's field of expertise determines the area of focus for the course. Offered fall and winter semesters. Prerequisites: HST 400 and senior standing. For history majors only except by permission of the chair. Required for majors. Credits: 3

### **HST 498 - Senior Thesis**

Working with a faculty advisor, the student conceives and completes an individualized historical research project resulting in a written paper evaluated by the faculty advisor. Prerequisite: Senior standing. Credits: 3

### **HST 625 - The United States in the Nuclear Age**

A study of major political and diplomatic developments in U.S. history, 1945 to 1975. Offered every third year. Credits: 3

### **HST 630 - The Middle East in the 20th Century**

An introduction to the contemporary history of the Middle East, focusing on the recent crisis areas and problems of modernization. Offered every third year. Credits: 3

### **HST 632 - A History of Brazil**

Larger than the continental United States, Brazil offers much to the study of the modern world. The course uses Brazilian history from 1500 to the present to examine major questions that continue to perplex analysts of the human condition. Course requires no prior knowledge of the history of Brazil. Offered every other year. Credits: 3

### **HST 633 - Issues in Third World History**

An introduction to major debates in modern Asian, African, and/or Latin American history, emphasizing the critical analysis of third world interpretations of history, modernization, politics, colonialism, nationalism, and society. Offered every other year. Credits: 3

### **HST 643 - The French Revolution**

An examination of both the history and historiography of the French Revolution of 1789, emphasizing critical analysis of sources and their interpretation. Offered every third year. Credits: 3

### **HST 648 - European Origins of World Wars I and II**

An investigation of the causes, both long-term and proximate, of the two world wars fought during the first half of the twentieth century, emphasizing varying interpretations of the origins of the wars. Offered every third year. Credits: 3

### **HST 680 - Special Topics in History**

Study of selected historical topics or periods not offered in the regular curriculum. Topics vary between United States and world history. Offered every year. Credits: 1 to 3

### **HTM 101 - Introduction to Hospitality and Tourism**

Explores the hospitality and tourism industry, including, but not limited to, lodging, food and beverage, and meeting and event planning. This course enables students to explore a myriad of career options, see parts of the industry first hand, and begin to understand this dynamic global industry. Offered fall and winter semesters. Credits: 4

### **HTM 175 - International Food and Culture**

An exploration of world cultures via an examination of foods, focusing each semester on a different international cuisine. Demonstrates the ways in which intellectual, social, religious, political, economic, and geographic factors affect the development of regional cuisines. Exploration of culture and tastings of the region's food and beverages are included. Fulfills Cultures - World Perspectives. Offered winter semester. Credits: 3

### **HTM 180 - Special Topics in Hospitality and Tourism Management**

Consideration of selected topics not ordinarily dealt with in other courses. Topics to be determined by faculty interest and student request. Offered on sufficient demand. Credits: 1 to 4

### **HTM 190 - Field Preparation**

An orientation course preparing hospitality and tourism management majors and those who wish to minor in hospitality and tourism management by means of a cooperative education program for entry into the hospitality and tourism management work environment. This course must be taken prior to the student's registering for the first field experience. Offered fall and winter semesters. Credits: 1

### **HTM 202 - International Tourism**

Introduction to international tourism focusing on the socioeconomic effects of international tourism along with the inherent public-private interaction. International tourism is more than a set of industries, but rather an activity that encompasses human behavior, uses of resources (public and private), and interaction with other people, economies, and environments. Fulfills Cultures - World Perspectives. Offered fall semester. Prerequisite: HTM 101 suggested. Credits: 3

### **HTM 213 - Introduction to Food and Beverage Management**

An introduction to the operation, management, and control of food and beverage organizations, with emphasis on operational efficiency, productivity, profitability, and service. Prerequisite: HTM 101 (may be taken concurrently if junior standing). Credits: 3

### **HTM 222 - Introduction to Lodging Management**

This course provides students with an introduction to lodging operations. Central components include guest service, front desk operations, housekeeping duties, basics of food and beverage, sales and marketing, and facility engineering and maintenance. Prerequisite: HTM 101 (may be taken concurrently if junior standing). Credits: 3

### **HTM 235 - Tourism and Recreation Management**

An introduction to the dynamic domestic (U.S.) tourism and recreation/leisure industries, focusing on their strong linkages to both nonprofit and for-profit oriented providers. Emphasis is given to entrepreneurship, economic development, sustainability, career opportunities, and the management of organizations. Offered on sufficient demand. Credits: 3

### **HTM 237 - Fundamentals of Recreation and Leisure Programming**

An analysis of concepts and principles of recreation and leisure services program development, with attention to examination of recreation activity taxonomies, methods of assessing needs, the process of program planning, and development and evaluation of a program plan. Includes principles of learning for adult and other age groups. Course offered winter semester. Prerequisite: HTM 101. Credits: 3

### **HTM 240 - Introduction to Meeting and Event Management**

An introduction to the planning, implementation, and follow-up of professional meetings, events, conferences, and conventions. Offered fall and winter semesters. Prerequisite: HTM 101 or permission. Credits: 3

### **HTM 250 - Food Production and Kitchen Management**

The application of managerial practices and processes to food preparation, production, safety, and sanitation. Prerequisite: HTM 213. Credits: 4

### **HTM 253 - Convention Sales and Service**

An introductory course exploring sales in the convention and meetings industry from the supplier's perspective. Focus will be placed on examining the needs of the supplier's clientele base and the importance of service management skills. Students will demonstrate skills in selling, negotiating, marketing, planning, organizing, and servicing. Offered winter semester. Prerequisite: HTM 101. Credits: 3

**HTM 268 - Adventure Tourism**

An introductory course exploring the rapidly growing and diverse market for activity-based tourism. This class reviews the provision, management, and philosophy of outdoor activities and controlled adventure as well as identifying the motives and characteristics of the adventure traveler. Credits: 3

**HTM 275 - Culinary Tourism**

Engages learners in the process of understanding the rich and complex food traditions of the United States of America and how an understanding of these traditions contributes to the management of culinary tourism programs. Course offered fall semester. Credits: 3

**HTM 280 - Special Topics in Hospitality and Tourism Management**

Consideration of selected topics not ordinarily dealt with in other courses. Topics to be determined by faculty interest and student request. Offered on sufficient demand. Credits: 1 to 4

**HTM 281 - Disney College Program I**

This course is a complement to the experience while participating in the Walt Disney World/Land College Program. Central components include recognizing the need to network and exploring the “Wonderful World of Disney” so students learn how to provide better service to guests, and clarifying student career goals. Offered fall and winter semesters. Prerequisite: Permission of instructor. Credits: 2

**HTM 282 - Disney College Program II**

This course is a complement to the experience while participating in the Walt Disney World/Land College Program. Central components include advanced implementation of Disney’s successful guest service standards, identifying proven techniques, and application of these techniques in other enterprises, as well as participating in service learning opportunities. Offered fall and winter semester. Prerequisite: Permission of instructor. Credits: 2

**HTM 290 - Field Experience I**

A semi-structured and supervised situation in which students receive basic training and directed work experience in selected entry-level positions consistent with their career preference. Emphasis on job competence and performance, professionalism, and work relations. Management instruction in selected basic operational tasks will also be required. Offered every semester. Prerequisites: HTM 190 and permission. Credits: 2

**HTM 318 - Responsible Beverage Management**

A look at the responsibilities and demands made of the contemporary beverage manager and ways to address them. Attention will be given to legal aspects, liability, social concerns, product knowledge, controls and operations, and responsible service. Certification in a recognized server training program will be required. Offered fall semester. Prerequisites: HTM 213 and HTM 361. Credits: 3

**HTM 323 - Festival and Special Event Management**

This introductory course is a comprehensive overview of the theory and procedures associated with managing festivals and special events. The role of marketing and communication, environmental planning, creation of event strategies, governmental involvement, and entrepreneurial perspectives of event management are augmented with experiential learning in a real-time regional festival or special event. Offered fall and spring/summer semesters. Prerequisite: HTM 101. Credits: 3

**HTM 330 - International Event Management**

An overview of the theory and practices associated with managing a festival and special event in an international setting. The application of theoretical concepts allows students to better understand the festival and events industry, the complexity of designing, delivering, and evaluation of such experiences, and application of a festival/events model. Course offered spring/summer semester. Prerequisite: Permission of instructor. Credits: 3

**HTM 333 - Hospitality Facilities Management**

The management of the hospitality facility with emphasis on preventive maintenance, energy, sustainability, and security. Offered fall semester. Prerequisite: HTM 101. Credits: 3

**HTM 343 - Human Resource Management**

A study of the relationship among work, human conduct, and human and organizational development fundamental to the service concern. A systems approach to staffing, training, scheduling, evaluating, and accounting for the human element in hospitality operations. Offered fall and winter semesters. Prerequisites: HTM 101 or permission; junior standing. Credits: 4

**HTM 350 - Banquet and Catering Management**

A course focused on the creative, logistical, and business aspects of planning and implementing banquets and catered events. Offered winter semester. Prerequisite: HTM 213. Credits: 3

**HTM 361 - Hospitality Law and Legislation**

A study of hospitality and travel law with emphasis on current legislative and lobbying activities. Consideration given to societal leverage in influencing and initiating legal and political activity and policy. Offered fall and winter semesters. Prerequisite: BUS 201. Credits: 3

**HTM 368 - Geotourism**

A study of geotourism, tourism that sustains or enhances the geographic character of a place. Topics include community development, land use and planning, conservation of resources, and tourist satisfaction and marketing, with the purpose of sustaining or enhancing the environment, culture, aesthetics, heritage, and the well-being of a place’s residents. Part of the Sustainability Issue. Offered fall and winter semesters. Prerequisites: Junior standing and HTM 202 (recommended). Credits: 3

**HTM 373 - Hospitality Information Analysis**

A systematic approach to the gathering and analysis of data from operations. Structured to take the student from accounting system basics through the production of a variety of reports and budgets. Emphasis is on the utilization of the data for improved financial and objective-based, proactive decision-making. Offered fall and winter semesters. Prerequisites: HTM 213, HTM 222, CIS 150, ACC 213; junior standing. Credits: 4

**HTM 375 - Hospitality and Tourism Research**

An examination of the relationship between generic theory and applied research in the hospitality and tourism industry. This course examines the purposes, applications, procedures, constraints, and management of applied research. Examples of quantitative and qualitative research are compared and contrasted. Offered fall and winter semesters. Prerequisites: HTM 101 and STA 215. Credits: 3

**HTM 380 - Special Topics in Hospitality and Tourism Management**

Study of significant topics and issues not addressed in other courses. Previous topics have included beverage management, professional development, etiquette, club management, business and industry, food service, etc. Offered fall and winter semesters. Prerequisite: Permission. Credits: 1 to 4

**HTM 390 - Field Experience II**

A second semi-structured and supervised situation in which students receive further training and directed work experience in selected positions consistent with their career preference. Emphasis on job competence and performance, professionalism, and work relations. Management instruction in selected operational tasks will also be required. Offered every semester. Prerequisites: HTM 290 and permission. Credits: 2

**HTM 399 - Independent Study**

Study of an advanced topic of interest in hospitality and tourism management. Offered every semester. Prerequisite: Permission. Credits: 1 to 4

**HTM 402 - Tourism Policy Issues**

This course provides a comprehensive overview of the theories of tourism development as well as an analytical approach to worldwide development issues. The roles of stakeholders are evaluated and there is a focus throughout on the applied theoretical discussions regarding development and sustainable management of tourism destinations and attractions. Offered winter semester. Prerequisite: HTM 202 or permission of instructor. Credits: 3

## Course Listings and Descriptions

### **HTM 413 - Advanced Food and Beverage Management**

This advanced course in food and beverage management builds on fundamentals acquired in prior food and beverage curriculum and internships. Central components include leadership theory; planning, control, and analysis of food and beverage operations, and customer expectations and service. Examination of current trends will vary by semester. Offered winter semester. Prerequisites: HTM 250, HTM 290, and CIS 150. Credits: 4

### **HTM 422 - Advanced Lodging Management**

This advanced course in lodging management builds on fundamentals acquired in prior lodging curriculum and field internship experience. Central components include multiple unit property management, franchising, budgeting and labor, environmental design, safety and security, risk management, leadership theory, and ethics. Examination of current trends vary by semester. Offered fall and winter semesters. Prerequisites: HTM 222 and HTM 290. Credits: 4

### **HTM 437 - Leadership in Recreation and Leisure**

Fundamentals of theoretical and applied leadership questions, major leadership theories and paradigms, identification of primary leadership antecedents and consequences, discussion of important measurement issues, comparing the effectiveness of the most influential leadership development strategies, and an experiential application of leadership theory in a recreation or leisure organization. Course offered winter semester. Prerequisites: HTM 235 and HTM 237. Credits: 3

### **HTM 440 - Advanced Meeting and Event Management**

This advanced course in the management of meeting and events builds on fundamentals acquired in prior sales and events curriculum and internships. Central components include leadership theory, ethics, program design and logistics for myriad events, destination marketing, event sponsorship, and risk management. Examination of current trends. Offered fall semester. Prerequisites: HTM 240, HTM 253, HTM 290. Credits: 3

### **HTM 452 - Hospitality and Tourism Marketing**

Applications of basic marketing principles and strategies to hospitality, tourism and leisure services. Discussions will define specific market segments and address the various marketing, promotional, and communication mix tools available to the hospitality and tourism industry. Offered fall and winter semesters. Prerequisites: STA 215 and MKT 350. Credits: 3

### **HTM 480 - Special Topics in Hospitality and Tourism Management**

A senior seminar designed to assess critical issues in hospitality and tourism and the impact of current events, trends, and developments on hospitality and tourism administration. Open to senior hospitality and tourism management majors and to others by permission of instructor. Offered on sufficient demand. Credits: 3

### **HTM 490 - Senior Internship**

A structured experience designed to provide management training and career direction in helping students articulate from academia into a management track or staff position in their chosen field. Offered every semester. Prerequisites: HTM 290 and HTM 390 or their equivalents; senior standing; permission. Credits: 2

### **HTM 495 - Hospitality Management (Capstone)**

Capstone class providing a framework to view the discipline, industry, and management from a perspective incorporating the economic, social, cultural, environmental, political, technological, and physical aspects. Emphasis on a broad managerial perspective to critically assess the issues facing the profession. Offered fall and winter semesters. Prerequisites: HTM 343, HTM 361 and HTM 373. Credits: 3

### **HTM 499 - Independent Research**

Supervised research in hospitality and tourism management for junior and senior majors. Offered every semester. Prerequisite: Permission. Credits: 1 to 4

### **IDS 180 - Interdisciplinary Studies Special Topics**

This is an interdisciplinary special topics course. Focus will vary by semester and instructor. Course offered fall and winter semesters. Credits: 1 to 3

### **IDS 181 - Intercultural Competence Through Study Abroad**

The course will introduce students to the challenges and opportunities of international travel, study, and living, and provide them with basic tools for ensuring a successful study abroad experience. Course offered fall semester. Credits: 1

### **IDS 182 - Community Reading Project**

This course engages students in an interdisciplinary examination of issues raised by the GVSU community read. The book is selected annually, so the topics of this course will vary. Students will analyze the book and attend co-curricular programming to extend learning beyond the classroom. Course offered fall and winters semesters. Credits: 1

### **IDS 325 - Learning from Detroit: Education and Community Revitalization**

This course studies community revitalization efforts in the city of Detroit. Focusing on community-based initiatives that are strengthening neighborhoods, improving schools and fostering the well-being of children, families and neighborhoods in Detroit, this course invites students with diverse perspectives, from across content areas. The class includes two visits to Detroit. Part of the Identity Issue. Cross-listed with EDF 325. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

### **IDS 350 - Civil Discourse**

This topical course familiarizes students with communication tools of civil discourse. Students analyze the role of discourse in solving social problems and learn dialogic strategies for constructively engaging with diverse perspectives. Using the civil discourse skills of reasoning and respect, students collaborate with people of divergent views. Topical information: [www.gvsu.edu/civildiscourse/](http://www.gvsu.edu/civildiscourse/). Part of the Identity Issue. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **IDS 399 - Independent Readings**

Hours, credit, topics, and time to be arranged with the individual faculty members with approval of the department. Credits: 1 to 3

### **IDS 400 - Liberal Education and Problem Solving in the Workplace**

Applied learning that focuses on the practical uses of a liberal education in a corporate/professional setting. Explores various problem-solving approaches to help students develop innovative change management skills applicable to a variety of organizational settings. LEPS Leadership Portfolios will be finalized. Course offered fall and winter semesters. Prerequisite: LIB 382. Credits: 2

### **IPE 407 - Integrated Team Health Care**

Interprofessional education focused on integrated patient-centered practice is key to building effective health care teams that improve the experiences and the outcomes of participants. This course will apply principles of inter-professional education, which include collaborative, egalitarian, group-directed, experiential, reflective, and applied learning with, from, and about multiple health professions students. Cross-listed with IPE 507. Offered fall and winter semester. Prerequisites: Nursing-NUR 366, NUR 367; Corequisites: NUR 416, NUR 417. Occupational Therapy-OST 558, OST 571, and the first three semesters of didactic curriculum. Physician Assistant-PAS 515, PAS 551; Corequisite: PAS 552. Physical Therapy-PT 675, 677, two previous clinical experiences. Social work-Corequisite: SW 671. Credits: 2

### **IPE 507 - Integrated Team Health Care**

Interprofessional education focused on integrated patient-centered practice is key to building effective health care teams that improve the experiences and the outcomes of participants. This course will apply principles of interprofessional education, which include collaborative, egalitarian, group-directed, experiential, reflective, and applied learning with, from and about multiple health professions students. Cross-listed with IPE 507. Offered fall and winter semesters. Prerequisites: Nursing-NUR 366,

NUR 367; Corequisites: NUR 416, NUR 417. Occupational Therapy-OST 558, OST 571, and the first three semesters of didactic curriculum. Physician Assistant-PAS 515, PAS 551; Corequisite: PAS 552. Physical Therapy-PT 675, 677, two previous clinical experiences. Social work-Corequisite: SW 671. Credits: 2

**IR 380 - Special Topics in International Relations**

Examination of topics not ordinarily dealt with in other courses. Topics will be determined by faculty interest and student request. Consult class schedule for specific topics. IR 380 can be repeated for credit when the topic differs. Offered on sufficient demand. Credits: 1 to 3

**IR 399 - Independent Readings**

Independent readings on a selected topic of particular interest to the student. Existing courses are not ordinarily offered as independent study. IR 399 requires a literature review of the reading required for the course. Offered fall and winter semesters. Prerequisite: Approval of instructor before registration. Graded credit/no credit. Credits: 1 to 3

**IR 490 - International Relations Internship**

Supervised field experience in the U.S. or with an international organization, executive agency, interest group, legislative office, or nonprofit institution. The purpose is to allow the student to apply academic knowledge to a work experience. Offered every semester. Prerequisites: Junior standing and permission of the sponsoring institution. Credits: 2 to 6

**IR 495 - Seminar in International Relations (Capstone)**

Interdisciplinary exploration of a major theme or current topic in international relations. Seminars and independent research will help students identify research questions and generate hypotheses relevant to this theme. Offered fall and winter semesters. Prerequisite: Senior standing with a major in IR. Credits: 3

**IR 499 - Independent Research**

Independent study and research into an area of mutual interest to the student and faculty member. Course culminates in a research paper on the approved topic. Offered fall and winter semesters. Prerequisites: Permission from the instructor. Credits: 1 to 3

**ITA 101 - Beginning Italian I: Language and Culture**

An introduction to Italian language and culture. Practice in speaking, listening, reading, writing at the Novice level. Supplemented by multimedia and the Language Resource Center. No more than two years of high school Italian, or permission of instructor. Students are strongly encouraged to take the free Placement Exam in the Language Resource Center prior to registering. Offered fall semester. Credits: 4

**ITA 102 - Beginning Italian II: Language and Culture**

Continuation of ITA 101. Practice in speaking, listening, reading, and writing at Novice and Intermediate levels. Italian culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Students who did not complete ITA 101 at GVSU are strongly encouraged to take the free Placement Test in the Language Resource Center prior to registering. Offered winter semester. Prerequisite: C (not C-) or better in ITA 101, or credit, or appropriate placement test score. Credits: 4

**ITA 201 - Intermediate Italian I: Language and Culture**

Continuation of ITA 102. Practice in speaking, listening, reading, writing at the Intermediate level. Italian culture integrated throughout. Supplemented by multimedia and the Language Resource Center. Offered fall semester. Prerequisites: C (not C-) or better in ITA 102, or credit, or appropriate placement test score (free in the Language Resource Center). Credits: 4

**ITA 202 - Intermediate Italian II: Language and Culture**

Continued practice in speaking, listening, reading, writing at the Intermediate level. Emphasis on real-life communication. Review of grammar and expansion of vocabulary. Focus on Italian culture through authentic texts and multimedia materials. Fulfills Cultures - World Perspectives requirement. Prerequisite: C (not C-) or better in ITA 201,

or credit, permission of the instructor, or appropriate placement test score (free in the Language Resource Center). Credits: 4

**ITA 280 - Special Topics in Italian**

Class offered on a special topic related to Italian. Credits: 1 to 4

**ITA 380 - Special Topics in Italian**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 9

**ITC 100 - Introduction to Intercultural Competence**

This course introduces students to the concept of cultural competence, and provides them with the knowledge and application of skills necessary to succeed in diverse settings. This course examines theories of intercultural engagement and then requires students to consider how they might apply knowledge in diverse practical settings. Fulfills Cultures - U.S. Diversity. Credits: 3

**ITC 490 - Practicum: Intercultural Learning Experience**

The course is an application of intercultural principles in a public or community setting. Students will engage in both cohort learning activities, as well as individual experiential placements. Students on qualifying semester study abroad programs can complete the practicum concurrently with participation in the cohort. Offered fall and winter semester. Prerequisites: ITC 100, and filing of application for certificate in intercultural competence. Credits: 2 to 6

**ITC 495 - Culminating Seminar in Intercultural Competence**

This is the culminating course required for completion of the intercultural competence certificate. Students identify issues of cultural conflict in their communities or academic disciplines, and develop plans for how these issues might be addressed through cultural understanding or training. Offered winter semester. Prerequisites: ITC 490, completion of elective courses, approved application for the cultural competence certificate (apply prior to taking ITC 490). Credits: 3

**JPN 101 - Beginning Japanese I: Language and Culture**

An introduction to Japanese language and the culture in which it is embedded. Practice in speaking, listening, reading, writing, and culture at the beginning level. Supplemented by multimedia and the Language Resource Center. Offered fall semester. Credits: 4

**JPN 102 - Beginning Japanese II: Language and Culture**

Continuation of JPN 101. Further study in speaking, listening, reading, writing, and culture at the beginning level. Supplemented by multimedia and the Language Resource Center. Prerequisite: C (not C-) or better in JPN 101 or instructor approval based on interview. Credits: 4

**JPN 150 - Accelerated Beginning Japanese I and II: Language and Culture**

One semester accelerated beginning Japanese for students with prior study. Requires prior ability to actively use hiragana and katakana. Covers the same material as JPN 101 and JPN 102. Course offered fall semester. Prerequisite: Permission of instructor. Credits: 4

**JPN 180 - Special Topics in Japanese**

Course content varies. Expectations of students approximate those in other 100-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

**JPN 201 - Intermediate Japanese I: Language and Culture**

Continuation of JPN 102 or JPN 150. Continued study of speaking, listening, reading, writing, and culture at the intermediate Level. Supplemented by multimedia and the Language Resource Center. Offered fall semester. Prerequisite: C (not C-) or better in JPN 102 or instructor approval based on interview. Credits: 4

**JPN 202 - Intermediate Japanese II: Language and Culture**

Continuation of JPN 201. Continued study of speaking, listening, reading, writing, and culture at the intermediate Level. Supplemented by multimedia and the Language Resource Center. Fulfills Cultures - World Perspectives. Offered winter semester. Prerequisite: C (not C-) or better in JPN 201. Credits: 4

## Course Listings and Descriptions

### JPN 280 - Special Topics in Japanese

Course content varies. Expectations of students approximate those in other 200-level courses. May be repeated for credit when content differs. No more than four credits can be applied to the minor or major. Offered on sufficient demand. Credits: 1 to 4

### JPN 301 - Advanced Intermediate Japanese

As a continuation of Japanese 202 - Intermediate Japanese II, students will use the basic language skills developed in the first two years to discuss Japanese culture in the target language, developing linguistic accuracy and sophistication, expanding their range of familiar topics and vocabulary, and enhancing cultural awareness and sensitivity. Offered fall semester. Prerequisite: JPN 202 or appropriate placement test score. Credits: 3

### JPN 302 - Advanced Intermediate Japanese II

This course is a continuation of Advanced Intermediate Japanese (JPN 301). Offered winter semester. Prerequisite: JPN 301 or appropriate placement test score. Credits: 3

### JPN 321 - Pre-modern Japanese Civilization (to 1600)

This course explores the major trends in Japanese civilization and culture from antiquity to the beginning of the Early Modern period in 1600. Readings will consist primarily of primary sources in English translation, and will include history, religion, philosophy, art, literature, and theater. Cross-listed with EAS 321. Offered winter semester, every third year. Credits: 3

### JPN 322 - Early Modern Japanese Civilization

This course explores the major trends in Japanese civilization and culture from the end of the Tokugawa period in 1868 to the present. Readings will consist mainly of primary sources in English translation, and will include history, religion, philosophy, art, literature, and theater. Cross-listed with EAS 323. Offered winter semester, every third year. Credits: 3

### JPN 323 - Modern Japanese Civilization

This course explores the major trends in Japanese civilization and culture from the end of the Tokugawa period in 1868 to the present. Readings will consist mainly of primary sources in English translation, and will include history, religion, philosophy, art, literature, and theater. Offered winter semester, every third year. Credits: 3

### JPN 380 - Special Topics in Japanese

Offered on sufficient demand. Credits: 3

### JPN 386 - Traditional Japanese Theater

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### JPN 399 - Independent Reading

Offered fall and winter semesters. Credits: 1 to 4

### JPN 480 - Special Topics in Japanese

Course content varies. Expectations of students approximate those in other 400-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

### KOR 180 - Special Topics in Korean

Course content varies. Expectations of students approximate those in other 100-level courses. May be repeated for credit when content varies. Variable credit. Offered on sufficient demand. Credits: 1 to 9

### KOR 280 - Special Topics in Korean

Course content varies. Expectations of students approximate those in other 200-level courses. May be repeated for credit when content varies. Variable credit. Offered on sufficient demand. Credits: 1 to 9

### LAS 210 - Exploring Latin America

This course introduces students to the interdisciplinary study of the origins and development paths of Latin American and Caribbean societies, with attention to the interrelationship between these societies and the United States. Fulfills Foundations - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Credits: 3

### LAS 220 - Introduction to Latino/a Studies

An interdisciplinary introduction to the diversity and complexity of the US Latino/a population, with attention to intra ethnic and interracial relations, formation of social identities, and issues of assimilation and cultural conflict. Fulfills one of the Foundation - Social and Behavioral Sciences. Fulfills Cultures - U.S. Diversity. Course offered fall semester. Credits: 3

### LAS 320 - Model Organization of American States

This course prepares students to represent a Latin American country at the Model Organization of American States conference in Washington, D.C. Students learn about contemporary Latin American issues, study relevant international relations theory, master OAS and parliamentary procedures, and improve their public speaking and leadership skills. Offered winter semester. Prerequisites: LAS 210, PLS 211 or PLS 284. Credits: 3

### LAS 325 - Human Rights in Latin America

An interdisciplinary exploration of human rights in Latin America, with a focus on regimes indicted for human rights violations during the Cold War, and subsequent efforts to reform repressive political systems and resolve difficult questions of how to define and enact justice. Part of the Human Rights Issue. Offered fall semester. Prerequisites: Junior standing, and one of the following: LAS 210, PLS 105, PLS 211, or PLS 284. Credits: 3

### LAS 330 - Colonial Latin America

This course will focus on specific themes related to Latin American civilization and culture from pre-conquest times to the nineteenth century. Topics include Amerindian civilizations; encounters between Amerindians, Europeans, and Africans; makings of a colonial society; collapse of colonial rule; wars of independence. Cross-listed with HST 330. Credits: 3

### LAS 333 - Study Abroad - Latin America

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits may vary. Offered as needed. Prerequisite: Specific to instructor and course. Credits: 1 to 6

### LAS 373 - Latinos/as in West Michigan

An interdisciplinary examination of demographic, socioeconomic, political, and cultural trends in the growing, diverse Latino/a community in the West Michigan area. Students have option of conducting an original research project or engaging in service-learning. Part of the Identity issue. Fulfills Cultures - U.S. Diversity. Offered fall semester of even-numbered years. Prerequisite: Junior standing. Credits: 3

### LAS 374 - Revolution in the Americas

Men and women make history, sometimes through gradual, passive means and sometimes through sudden, active means. In the Americas, both categories of history-making have been common. This course explores international relations in the hemisphere by comparing revolutionary and evolutionary processes of change from Tierra del Fuego to the Northwest Territories. Cross-listed with HST 374. Offered winter semester. Prerequisite: LAS 210. Credits: 3

### LAS 375 - History of Mexico

This course surveys the history of Mexico from the earliest human inhabitation to the present. It will introduce students to the major political, social, and cultural forces that have shaped the modern nation of Mexico. Cross-listed with HST 375. Credits: 3

### LAS 376 - Latin American Cinema

A survey of cinema in Latin America. The course will analyze representative films as works of art and examine them as cultural, historical, political, and economic products that characterize and reveal diverse perspectives from significant film producing countries in Latin America. Course is cross-listed with CFV 376. Offered fall semester. Credits: 3

### LAS 378 - Contemporary Latin American Literature

A survey of Latin American literature of the past three decades, in English translation, taking in a variety of nations, regions, and cultures, including

Afro Latin and indigenous voices. Genres to be studied include the novel, the short story, poetry, dramas, testimonial narrative, speeches, folklore, and film. Cross-listed with ENG 378 and SPA 378. Offered winter semester of even numbered years. Prerequisite: LAS 210. Credits: 3

**LAS 380 - Special Topics in Latin American Studies**

Consideration of selected topics not ordinarily dealt with in the regular curriculum. Topics will be determined by faculty interest and student request and announced in the class schedule. Can be repeated for credit when the topic differs. Offered winter semester. Credits: 1 to 3

**LAS 399 - Independent Studies**

Before registering, students must arrange for supervision by a Latin American Studies faculty member and submit a contract (available from the LAS coordinator) specifying the topic and scope of the study. Ordinarily no more than three credits of LAS 399 may count toward the minor. Instructor approval prior to registration. Offered every semester. Prerequisite: Permit required. Credits: 1 to 3

**LAS 490 - Latin American Studies Internship**

Supervised work experience in all Latin American studies-related field, initiated by the student, who must prepare a proposal in consultation with a faculty advisor and a worksite supervisor. The student will submit a final report and both the worksite supervisor and the faculty advisor will evaluate the internship. Offered every semester. Prerequisites: Nine hours of LAS-related coursework and permission of the program coordinator. Credits: 1 to 3

**LAT 101 - Elementary Latin I**

An introduction to Latin vocabulary, grammar, and syntax with emphasis on the language of the classical period. Offered fall semester. Credits: 4

**LAT 102 - Elementary Latin II**

Continuation of LAT 101. Offered winter semester. Prerequisite: LAT 101. Credits: 4

**LAT 150 - Intensive Elementary Latin**

An intensive review of the essentials of Latin grammar and syntax for students with prior study but who are not adequately prepared for 200-level courses. Not open to students with credit in LAT 101, 102, or their equivalent. Offered winter semester. Prerequisite: Prior experience of Latin at secondary level or permission of instructor. Credits: 4

**LAT 201 - Intermediate Latin I**

Continuation of LAT 102. Introduction to the study of selected ancient authors. Offered fall semester. Prerequisite: LAT 102 or appropriate high school background. Credits: 4

**LAT 202 - Intermediate Latin II**

Readings in Virgil's Aeneid, supplemented by study of the history and culture of Augustan Rome. Fulfills Cultures - World Perspectives. Offered winter semester. Prerequisite: LAT 201, or appropriate high school background. Credits: 3

**LAT 285 - Study Abroad: Intermediate Latin**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

**LAT 350 - Latin Prose**

Readings from the works of authors such as Cicero, Livy, Pliny, Tacitus, in genres such as oratory, history, philosophy, and epistolary writing. Attention to the development of genre and to the ways in which Latin prose has helped shape the western tradition. May be repeated for credit when topics vary. Offered fall semester of odd-numbered years. Prerequisite: LAT 202. Credits: 3

**LAT 351 - Roman Epic**

Readings from epic works such as Vergil Aeneid, Ovid Metamorphoses, Lucan Bellum Civile. Attention to the development of the genre and the ways in which Latin epic has helped shape the western tradition. May be repeated for credit when topics vary. Offered fall semester of even-numbered years. Prerequisite: LAT 202. Credits: 3

**LAT 352 - Roman Poetry**

An introduction to Roman poetry other than epic through a close reading of works such as the comedies of Plautus or Terence; the love poetry of Tibullus, Catullus, Propertius, or Ovid; the lyric poetry of Horace; the minor poetry of Ovid, Martial, or Juvenal. May be repeated for credit when topics vary. Offered winter semester in alternating, even-numbered years. Prerequisite: One 300-level Latin course. Credits: 3

**LAT 353 - Latin Prose Composition**

Study of Latin syntax and prose style, with emphasis on introductory prose composition and reading select prose models (Sallust, Cicero, Seneca, Pliny, Tacitus). Special attention to broad grammatical structures, complex syntax, and stylistic variations. May be repeated for credit when topics vary. Offered winter semester, odd-numbered years. Prerequisite: LAT 351. Credits: 3

**LAT 380 - Special Topics in Latin**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

**LAT 385 - Study Abroad: Advanced Latin**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

**LAT 399 - Independent Reading**

Supervised independent reading in Latin. Topic, credit, and time must be arranged with individual faculty member before registration. Offered fall and winter semesters. Credits: 1 to 3

**LAT 400 - Advanced Latin Prose**

Advanced study of Latin prose authors such as Caesar, Cicero, Sallust, Livy, Seneca, Pliny, and Tacitus. Special attention to electronic resources in classics and elements of textual criticism. Offered winter semester of even-numbered years. Prerequisite: One 300-level Latin course. Credits: 3

**LAT 401 - Advanced Roman Poetry**

Advanced study of Roman poets such as Plautus, Catullus, Lucretius, Virgil, Horace, Ovid and Juvenal. Special attention to electronic resources in classics and elements of textual criticism. May be repeated for credit when topics vary. Offered fall semester. Prerequisite: One 300-level Latin course. Credits: 3

**LAT 404 - Latin Narrative**

Study of Latin narrative in verse or prose, in genres such as epic poetry (Ennius, Virgil, Lucan), the Roman novel (Petronius, Apuleius), biography (Suetonius), and historiography. Special attention to the evolution of narrative forms and to narrative as a vehicle of social commentary. Offered winter semester of even-numbered years. Prerequisite: One 300-level Latin course. Credits: 3

**LIB 100 - Reflect, Connect, Engage**

Can education transform your life and change your world? Explore how liberal education empowers students to question themselves and their society, through critical engagement with classical and contemporary philosophical and literary texts. Discover how liberal education teaches skills that can help you develop your personal, professional, and civic lives. Fulfills Foundations - Philosophy and Literature. Offered every semester. Credits: 3

**LIB 201 - Diversity in the United States**

Explores how the intersections of race, ethnicity, gender, sexual orientation, class, religion, and physical abilities affect the material lives and media representations of various cultural groups in the United States. Engages historical and current debates regarding issues of immigration, meritocracy, segregation, the economy, the environment, and identity. Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills Cultures - U.S. Diversity. Offered fall and winter semesters. Credits: 3

## Course Listings and Descriptions

### **LIB 301 - Interdisciplinary Research Methods**

This course is a survey of selected interdisciplinary research methods. It includes comparative analysis of research methods used in natural and life sciences, social sciences, and the humanities, with a focus on integrative and problem-solving methodologies. Procedures for evaluating data, sources, and findings are reviewed. Offered each semester. Credits: 3

### **LIB 310 - Creativity**

An interdisciplinary study of those ideas that stimulate the creative processes and innovation in information and technology in a diversity of human practices, including, but not limited to, artistic, philosophical, scientific, and entrepreneurial endeavors, with a focus on practicing innovativeness and creativity in a variety of areas. Part of the Information, Innovation, and Technology Issue. Offered each year. Prerequisite: Junior standing. Credits: 3

### **LIB 311 - Meaning: The Humanities Resource**

Introduction to concepts related to the construction, expression, propagation, and understanding of meaning in a diverse society. Emphasis on multidisciplinary perspectives underpinning authentic individual and/or collective agency per dialogue, democracy, and other critical forms of praxis. Offered once or twice per year, depending on demand. Credits: 3

### **LIB 312 - Dialogue, Integration, and Action**

An interdisciplinary examination of the basic interpretations of dialogue in a diverse world. This course engages the theory and practice of dialogue through personal reflection, integration, and action. Students develop this relational art for personal, professional, and civic lives, and understand its implication for the possibility of a democratic life. Offered fall and winter semesters. Credits: 3

### **LIB 314 - Life Journeys**

Students will examine their own identity by means of personal and critical reflection through works selected from literature, mythology, philosophy, art, film, and music. Students will gain insight into their own life journey and the life journeys of others, empowering them to be more fully themselves in the world. Part of the Identity Issue. Offered every semester. Prerequisites: Junior standing and WRT 150. Credits: 3

### **LIB 319 - Human Traffic and Trafficking**

Drawing on interdisciplinary approaches to globalization, the course critically examines the forced and/or coercive global transfer of people, the traffic and trafficking of humans, through historical and contemporary perspectives. Topics may include migrant smuggling, forced labor, slave trade, sex workers, voices of survival workers, and self-advocacy in survival communities. Part of the Globalization Issue. Cross-listed with HST 319 and HRT 319. Course offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **LIB 320 - Voices of the Civil Rights Movement in the United States**

This interdisciplinary course integrates numerous expressive genres, including autobiographies, oral histories, and music, to examine how activists challenged human rights violations. Narrations of individual transformations show how shared experiences, ideologies, and opposition expanded understandings of human rights nationally and globally during the civil rights movements in the United States. Part of the Human Rights Issue. Fulfills U.S. Diversity requirement. Cross-listed with HRT 320. Offered every other year. Prerequisite: Junior standing. Credits: 3

### **LIB 322 - Wicked Problems of Sustainability**

Sustainability, as a wicked problem, is an intractable, on-going, and high-stakes issue. This course engages students in participatory research on the inextricably linked dimensions of sustainability, such as economics, environment and social equity. Students will work with community partners to address specific interdisciplinary problems of sustainability. Part of the Sustainability Issue. Offered all semesters. Prerequisite: Junior standing. Credits: 3

### **LIB 323 - Design Thinking to Meet Real World Needs**

Design Thinking is an iterative, project-based, problem-solving process valued in organizations both locally and internationally. As interdisciplinary teams, students in this course will use the Design Thinking process to better facilitate the chaos of innovation by

collaborating with stakeholders to meet real world needs. Part of the Information, Innovation, and Technology Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **LIB 325 - LGBTQ Identities**

This interdisciplinary course draws on scholarship in the fields of sociology, literature, history, anthropology, LGBTQ, cultural, and gender studies in order to teach students about lesbian, gay, bisexual, transgender, intersex, and queer complex identities (identity formation and development), identifications, and the social, political, historical, and cultural problems underpinning these constructions. Part of the Identity Issue. Offered once a year. Prerequisite: Junior standing. Credits: 3

### **LIB 326 - Sexuality, Justice, and Advocacy**

An exploration of sexuality through an interdisciplinary lens; topics include adult sexual development, public policy, and methods of advocacy for sexual health and justice. Through various learning activities, including field study with campus and community organizations, students will increase their knowledge and facilitation skills related to sexual health education. Part of the Health Issue. Course cross-listed with WGS 326. Course offered every semester. Prerequisite: Junior Standing. Credits: 3

### **LIB 330 - The Idea of Nature**

How do our ideas about nature shape our relationships to the natural world? This course examines global influences on ideas of nature, as expressed in science, religion, philosophy, literature and art, and the resulting effects on human relationships with the natural world, and on natural systems globally and locally. Part of the Sustainability Issue. Course offered winter semester. Prerequisite: Junior standing. Credits: 3

### **LIB 331 - Person and Profession**

A study in various professions of the relationship between the person and her/his working life as portrayed in literature, film, art, and social analysis, with special attention to the growth of the idea of profession and professionalism among other concepts of work. Offered every other year. Credits: 3

### **LIB 341 - Leadership for Social Change**

An examination of the theory and practice of leadership in social change movements, focused on developing personal and organizational capacities for leadership in a liberal education context. Students identify a contemporary social issue and create an action plan for resolution, addressing that issue with at least one action step. Part of the Information, Innovation, and Technology Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **LIB 342 - Food Matters**

An interdisciplinary exploration of food consumption and growing practices in local and global markets. Students examine competing information and arguments about evolutionary, historical, socio-political, cultural, and environmental factors shaping current food systems and their connections to cultural practices, nutrition, agriculture, political climates, and global trends in equitable access to food. Part of the Health Issue. Offered each semester. Prerequisite: Junior standing. Credits: 3

### **LIB 350 - The Immigrant Experience in the U.S.**

An interdisciplinary course framing immigration in the United States as part of a global struggle for human rights. Students develop an understanding of the experiences of diverse immigrants and how migrations shape the U.S. historically, economically, politically, and culturally. Examines policies and perspectives about citizenship and human rights. Part of the Human Rights Issue. Fulfills Cultures - U.S. Diversity. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **LIB 366 - American Society and Media**

Interdisciplinary approach to the ways in which mediated mass culture produces meaning in contemporary American society as examined through a variety of critical lenses such as political economy and sociocultural analyses of the organization of the mass media, media content, and audience reception studies of film, television, and/or music cultures. Part of the Information, Innovation, and Technology Issue. Cross-listed with SOC 366. Offered every year. Prerequisite: Junior standing. Credits: 3

**LIB 380 - Special Topics in Liberal Studies**

A variable topics course emphasizing the practice of liberal studies in relation to a contemporary problem, issue, or theme. May be repeated for credit. Credits: 3

**LIB 382 - Leadership Portfolio Development**

Reflective inquiry and readings develop and demonstrate leadership values such as integrity, organizational communication, and problem-solving skills. The leadership portfolio provides an online learning space that builds on and synthesizes learning in an e-portfolio while compiling resources for future classes and/or employment opportunities. Course offered fall and winter semesters. Credits: 1

**LIB 399 - Independent Reading**

A scholarly or creative project initiated by the student who has a special interest in a subject not available in the current curriculum. Student, faculty, and advisors agree on the scope of the study, its components, and methods of evaluation. Offered every semester. Credits: 1 to 6

**LIB 400 - Global Visionary Thinkers**

This variable topics course examines the life and work of a visionary person or persons outside the U.S. whose theories and/or actions have effected deep change. The impact of these visionary ideas and actions result in paradigm shifts within global cultures, institutions, societies, and world views. May be repeated for credit. Fulfills Cultures - World Perspectives. Offered once a year. Credits: 3

**LIB 401 - Visionary Thinkers in the American Mosaic**

A variable topics course that focuses on the life and work of a significant contributor to the American mosaic and thereby the United States' vision of diversity. Fulfills Cultures - U.S. Diversity. May be repeated for credit. Offered winter semester. Credits: 3

**LIB 402 - Feminist Visionary Thinkers**

This variable topics course examines the life and work of a significant feminist visionary thinker or thinkers whose theories, work, and/or actions have effected deep change in the world resulting in paradigm shifts within global cultures, institutions, societies, and world views. Cross-listed with WGS 402. May repeat for credit. Course offered winter semester. Credits: 3

**LIB 480 - Special Topics in Liberal Studies**

Features a person who has done significant work in several areas and whose life and career we can usefully study. Students meet in discussion groups before and after lecturer's visit. May be repeated for credit. Offered winter semester. Credits: 1

**LIB 490 - Internship**

A supervised work experience through which students can relate liberal studies principles, academic work, and practice. Student, faculty, and advisors agree on the scope of the study, its components, and methods of evaluation. Offered every semester. Credits: 1 to 6

**LIB 491 - Practicum**

Three or more hours a week of applying liberal studies principles in a public or community setting. This might take the form of a case study, field involvement, or conference attendance and should result in a statement evaluating the theory and practice of liberal studies. Offered every semester. Credits: 1 to 6

**LIB 495 - Senior Seminar (Capstone)**

Students will contrast classical and contemporary statements on liberal education in relation to the principles and core courses on which the program rests. Students will develop and present their senior theses. Offered winter semester. Prerequisite: LIB 301. Credits: 3

**LIB 499 - Independent Research**

Independent research and investigation from an interdisciplinary perspective. Offered every semester. Credits: 1 to 6

**LS 201 - Introduction to Law**

Introduction to the legal profession, with emphasis on paralegal roles and responsibilities; legal ethics; and major substantive areas of law in the United States including criminal law and substantive civil law areas

of agency, business organizations, contracts, real and personal property, torts, wills, and estate administration. Offered fall and winter semesters. Credits: 3

**LS 324 - Legal Research and Writing**

Introduction to legal research methods, including state and federal reported cases, digests, annotated codes, state and federal administrative regulations, and computerized legal research. Introduction to writing of briefs of court decisions and legal memoranda. Offered fall and winter semesters. Prerequisite: LS 201 with a grade of C or better. Credits: 3

**LS 350 - Family Law**

This course studies family law by examining key concepts, case law, statutory law, and documents along with fact-gathering techniques and drafting considerations. Topics covered include marriage, dissolution of marriage, adoption, child support and custody, parental rights and obligations, nontraditional families, and property law. Offered fall and winter semesters. Credits: 3

**LS 370 - Women and the Law**

Overview of legal limitations on sex discrimination in the United States and efforts to end discrimination; marriage and divorce; relationships outside of marriage; reproductive rights and biological factors impacting these rights; violence against women; and employment discrimination focusing on gender-based influences that contribute to these human rights violations. Part of the Human Rights Issue. Cross-listed with WGS 370. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**LS 380 - Special Topics in Legal Studies**

Focuses on topics not ordinarily dealt with in other courses. Topics will be determined by faculty interest and student request. Although the course can be repeated, no more than six credits can be applied to a legal study major. Offered on sufficient demand. Credits: 1 to 4

**LS 399 - Independent Reading in Legal Studies**

Independent supervised readings on selected topics not dealt with in-depth in another course. Offered every semester. Graded credit/no credit. Credits: 1 to 3

**LS 420 - Property and Probate Law**

A study of property and probate law through the examination of key concepts, case law, statutory law, and documents. Fact-gathering techniques and drafting considerations will be highlighted. Topics include real estate, personal property, environmental law, wills, and probate. Offered fall and winter semesters. Prerequisite: LS 201 (may be taken concurrently). Credits: 3

**LS 422 - Commercial Law**

A study of commercial law through the examination of key concepts, case law, statutory law, and documents. Fact-gathering techniques and drafting considerations will be highlighted. Topics include partnerships, corporations, employment law, bankruptcy, and consumer protection law. Offered winter and summer semesters. Prerequisite: LS 201 (may be taken concurrently). Credits: 3

**LS 426 - Civil Litigation I**

An exploration of all phases of the pretrial litigation process in civil matters, including procedures at the federal and state level. Students will develop an understanding of the attorney-client relationship, investigation of claims, jurisdiction, venue, pleadings, motion practice, discovery, and litigation strategy. Offered fall and winter semesters. Prerequisites: LS 301 or LS 201 (may be taken concurrently) or permission of instructor. Credits: 3

**LS 428 - Civil Litigation II**

An in-depth exploration of trial preparation, the conduct of civil trials, post-trial matters, and alternative dispute resolution. Particular attention is paid to methods of organizing and analyzing discovery materials, evidentiary issues, trial strategy and practice, and post-trial matters. Offered fall and winter semesters. Prerequisites: LS 201 and LS 426. Credits: 3

## Course Listings and Descriptions

### **LS 490 - Legal Studies Internship**

Internship in a government, private, or corporate law office or other law-related setting under individual faculty supervision to allow students to apply academic knowledge to professional experience. May be repeated for up to six credits. Offered every semester. Prerequisites: LS 201, and LS 324, and LS 426 (taken before or concurrently with LS 490). Requires senior status and permission of internship coordinator. Graded credit/no credit. Credits: 3 to 6

### **LS 495 - Legal Thought (Capstone)**

Explores the philosophy, politics, and ethics of law and legal reasoning. Study of the major schools of thought that have informed jurisprudence in the United States and its modern critiques. Familiarity with the fundamentals of legal reasoning and the structure and operation of the legal system will be assumed. Offered fall and winter semesters. Prerequisites: LS 201, LS 324, and senior standing. Credits: 3

### **LS 499 - Independent Study and Research**

An independent study and research project based on knowledge acquired in other courses, internships, or other legal studies courses. The research will be in the area of the student's interest. Graded credit/no credit. Offered every semester. Prerequisites: Senior standing and permission of instructor. Credits: 1 to 3

### **LSS 180 - Laker Strategies for Success**

Readings, Lectures, and/or discussions in specific topics not normally covered by other courses in the program. Credits: 0

### **MAT 300 - Music, Art, and Theatre for Elementary Education**

A practical course for elementary-teacher candidates introducing creative principles, methods, and materials for teaching music, art, and theatre pertinent to elementary instruction. Closed to music, art, and theatre majors and minors. Credits: 3

### **MAT 380 - Special Topics in Music, Art, and Theatre**

Readings, Lectures, and/or discussions in specific topics not normally covered by other courses in the program. Credits: 1 to 9

### **MBA 601 - Quantitative Analysis for Business Decisions**

Provides knowledge necessary to identify and tackle business problems using quantitative tools with a focus on understanding and analyzing data. Considerable emphasis will be placed on implications of statistical information to make informed decisions for any functional area within an organization. Offered spring/summer semester. Prerequisite: Admission to the full-time integrated M.B.A. (FIMBA) program. Credits: 2

### **MBA 602 - Essential Business Technologies**

Provides students with knowledge in current and emerging technology in today's business world. Emphasis will be placed on learning advanced concepts that apply to the Global Digital firm to enable and facilitate all of the organization's relationships with vendors, customers, and employees digitally. Offered spring/summer semester. Prerequisite: Admission to the full-time integrated M.B.A. (FIMBA) program. Credits: 1

### **MBA 603 - Basics of Integrated Business Processes**

This course provides an accelerated introduction to the key logistics and financial processes in organizations. The focus will be on the steps, data, documents, and information associated with the execution of processes. The course will also provide hands-on experience in the use of enterprise systems in process execution. Offered spring/summer semester. Prerequisite: Admission to the full-time integrated M.B.A. (FIMBA) program. Credits: 3

### **MBA 604 - Financial Modeling**

This course focuses on the development of spreadsheet and computer-based skills to analyze complex decisions facing financial managers. Topics include time value of money, capital budgeting, cost of capital, financial statements and forecasting, valuation, risk evaluation, and return. Offered spring/summer semester. Prerequisite: Admission to the FIMBA program. Credits: 3

### **MBA 615 - Integrated Business Processes with ERP Systems**

This course examines the integrated nature of business processes across traditional functional areas of organizations at strategic and operational

levels. In addition, it demonstrates how enterprise resource planning (ERP) systems are tools which facilitate this cross-functional process integration. Offered fall semester. Prerequisites: MBA 601, 602, and 603 with a cumulative GPA of 3.0. Credits: 15

### **MBA 634 - Sustainability Principles and Practices**

This course, which carries 1.5 credit hours, provides an introduction to, and analysis of, the fundamental theories, concepts, principles, and practices of "sustainability" in the global society in which we live. Students analyze and apply theories to real-world scenarios, including to their current employers and work assignments. Offered winter semester. Prerequisites: MBA 615 and a cumulative GPA of 3.0. Credits: 1.5

### **MBA 642 - Corporate Strategy for Business Cycles**

Focuses on techniques to deal with cyclical economic fluctuations. Topics include using economic indicators to forecast the onset and duration of business cycles, impact on business of government stabilization efforts, estimating the firm's vulnerability to economic fluctuations and the opportunities to reduce the risk inherent in business cycles. Offered winter semester. Prerequisites: MBA 615 and a cumulative GPA of 3.0. Credits: 3

### **MBA 677 - Business Ethical Problems and Perspectives**

The study of ethical problems commonly encountered in modern global business environments. Students will study the ethical issues of character, leadership, decision-making, organizational governance, and social responsibility. Offered winter semester. Prerequisites: MBA 615 and a cumulative GPA of 3.0. Credits: 1.5

### **MBA 678 - Leadership and Ethics**

The indivisible interrelationship between leadership and ethics will be stressed in the context of the "leadership life cycle," and through the introduction of material from philosophy, moral psychology, and the neurosciences. Offered spring/summer semester. Prerequisites: MBA 634, 642, 677, and a cumulative GPA of 3.0. Credits: 3

### **MBA 689 - Business Fellowship**

Employment in a professional capacity for 40 hours per week for 12 weeks as arranged by the FIMBA program. Course is required for the FIMBA program and will be taken during the second spring/summer semester of the cohort program. Offered spring/summer semester. Prerequisite: Completion of 20 hour/week fellowship both fall and winter semesters. Credits: 1

### **MES 201 - Introduction to the Middle East**

An entry-level course introducing students to the variety and complexity of the Middle East. Provides a broad view of the region from the perspective of several disciplines and is especially suitable for students having little familiarity with the region. Fulfills Foundations - Historical Perspectives. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Credits: 3

### **MES 202 - Arab Americans**

Introduces students to the Arab American community in the United States, and its historical experiences and to other salient social and political issues. Topics include such issues as immigration, race and ethnicity, gender, political behavior, economic development, education, media coverage, and civil rights. Fulfills Cultures - U.S. Diversity. Course offered winter semester. Credits: 3

### **MES 301 - International Business and Culture**

Explores how business is done in a country or region, and how culture influences business and its environment. Reviews country's history, economics, politics, government, arts or education. Explores how business practices may differ from U.S. practices. To be taught in that country as part of a study abroad program. Cross-listed with BUS 301. Course offered spring/summer semester. Credits: 3

### **MES 330 - Arab Identity in Literature and Culture**

This course examines the complexities of forming, constructing, and shaping Arab identity within a vast Arab world. Such complexity will be examined through written and oral accounts, audio and visual sources, and literary authors from the Arab world. All materials read in English translation. Does not count toward Arabic minor. Part of the Identity Issue.

Cross-listed with ARA 330. Course offered fall and winter semesters.

Prerequisite: Junior status Credits: 3

### **MES 333 - Study Abroad- Middle East Studies**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits may vary. Offered as needed.

Prerequisite: Specific to instructor and course. Credits: 1 to 6

### **MES 350 - Islam: Scripture and Ritual**

The purpose of this course is to deepen the students' understandings of Islam in its religious, social, and historical contexts, i.e. to understand how Muslims live and what they believe. Offered winter semester. Credits: 3

### **MES 370 - Contemporary Issues in the Middle East: The Model Arab League**

Students in this course will learn about the current political, environmental, economic, social, cultural, military, and international affairs of Middle Eastern countries. They will research these issues and participate in the Model Arab League simulation as part of the course. May be repeated for credit if content differs. Part of the Human Rights Issue. Course offered winter semester. Prerequisite: Junior standing. Credits: 3

### **MES 380 - Special Topics in Middle East Studies**

Consideration of selected topics not ordinarily dealt with in the regular curriculum. Topics will be determined by faculty interest and student request and will be announced in the class schedule. Can be repeated for credit when the topic differs. Credits: 3

### **MES 386 - Arabic through Culture and Customs**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 3

### **MES 399 - Independent Studies**

Before registering, students must arrange for supervision by a Middle East studies faculty member and submit a contract (available from the MES coordinator) specifying the topic and scope of the study. Instructor approval required prior to registration. Offered every semester. Credits: 1 to 3

### **MGT 268 - Business Processes and Management Information Systems**

This course is designed to give the student an understanding of the importance of common business processes and their relationship with information systems in modern companies. Gaining insight into the integration that good information systems, specifically Enterprise Resource Planning (ERP) systems, foster in an organization. Offered every semester. Prerequisite: CIS 150. Credits: 3

### **MGT 303 - International Business and Culture**

An introduction to the issues that a company will experience when doing business in a global economy. Emphasis is on the influence of culture on business practices. Topics will include economic structures, marketing approaches, accounting and financial issues, management and organization issues, and distribution issues. Fulfills Cultures - World Perspectives. Part of the Globalization Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### **MGT 305 - Managerial Skills**

This course is focused on developing useful managerial skills such as business information literacy, business research skills, critical thinking, interpersonal conflict management, problem solving, and decision-making, or a business technology skill. Theory is heavily supplemented with application through exercises and projects. May be repeated if content differs. Offered fall semester of even-numbered years. Prerequisite: Junior standing. Credits: 3

### **MGT 330 - Entrepreneurship and Small Business Management**

An exploration of opportunities for self-employment and product development. The course features a comprehensive survey of the entrepreneurship process: recognizing opportunities, evaluating business

potential, sources of financing, launching a new business venture, and issues related to managing growth. Application of management principles to operating issues of small, evolving businesses. Offered fall and winter semesters. Credits: 3

### **MGT 331 - Concepts of Management**

The management process through an examination of its functions of planning, organizing, motivating, and controlling work and work performance in a business organization. Theoretical concepts and applications through the use of selected case materials. Offered every semester. Credits: 3

### **MGT 333 - Human Resource Management**

Focuses on the work of human resource departments in acquiring, training, developing, appraising, compensating, and managing employees. Strong focus on legal requirements of HR practices. Introduces the growing role of strategic human resource management. Prerequisite: MGT 331. Credits: 3

### **MGT 334 - Employment and Labor Law**

Analysis of major employment and labor laws affecting management and employee rights. Specific topics include tort; contract and negligence law; constitutional law; administrative laws prohibiting discrimination, data theft, and invasion of privacy; and litigation, mediation, and arbitration. International employment laws will be addressed for comparison purposes. Credits: 3

### **MGT 336 - Compensation and Benefits Management**

Provides students with an understanding of the compensation system. Emphasis on the design, development, and implementation of a total compensation system that balances internal consistence with external competitiveness. Prerequisite: MGT 333. Credits: 3

### **MGT 337 - Supply Chain Management**

Examines the organization of a purchasing department, its objectives, functions, and personnel. Purchasing specifications, standards, bidding, ordering, and sources are among the topics covered. Discussion and analysis of the duties and responsibilities of the materials handling manager in a typical manufacturing firm. Specifically, the handling of materials in the manufacturing process is discussed, including coordination between manufacturing departments and plants within a firm. Credits: 3

### **MGT 340 - Ethics and Business, Social Justice and Sustainability**

This course explores the relationship between business development, social justice, and the growing emphasis on sustainable business practices (e.g. "conscious capitalism"). Business will be studied in a way that includes the study of community, commitment to the common good, and one's own values. Part of the Sustainability Issue. Offered each semester. Prerequisite: Junior standing. Credits: 3

### **MGT 345 - Team Building**

A class which integrates theory and application by teaching students how to be effective members of a work team. Emphasis on both logical and creative problem solving. Dynamics and processes within teams serve as the focus of analysis, learning, and practice. Offered every year. Credits: 3

### **MGT 350 - Principles of Electronic Commerce**

This course introduces students to the fundamental concepts and frameworks of electronic commerce. Topics include strategic role of EC, impact on an organization and its value system, assessment of available business models, overview of the technological infrastructure, and a discussion of critical legal, societal, and management issues. Offered winter semester. Prerequisite: MGT 268. Credits: 3

### **MGT 351 - Enterprise Information Systems**

This course provides a comprehensive understanding of Enterprise Information Systems (EIS) focusing on Enterprise Resource Planning (ERP) Systems and the key role they play in modern organizations. Students will gain an understanding of ERP Systems from both a functional (business process) and implementation perspective using SAP R/3 software. Offered fall and winter semesters. Prerequisite: MGT 268. Credits: 3

## Course Listings and Descriptions

### **MGT 355 - The Diversified Workforce**

An examination of the experiences of different groups in the U.S. workforce, including race, ethnicity, gender, age, disability, and sexual orientation. Cultural differences are explored and consideration is given to the ways in which organizational norms operate to include or marginalize different groups of people. Fulfills Cultures - U.S. Diversity. Credits: 3

### **MGT 360 - Business Process Redesign**

This course explores business processes and their place in the modern business organization. It will emphasize concepts, techniques, methods and skills needed to identify, analyze, and redesign business processes. Business Process Redesign software will be used extensively. Offered fall semester. Prerequisite: MGT 268. Credits: 3

### **MGT 361 - Management Science**

Application of the scientific, mathematical, and quantitative methods to managerial decision-making under conditions of certainty, risk, and uncertainty. Specific topics include, linear programming, transportation, assignment, project management, queuing theory, decision analysis, and simulation. Offered every semester. Prerequisites: CIS 150 and STA 215. Credits: 3

### **MGT 362 - Computers in Operations Management**

Familiarizes students with the modeling, methodologies, and software used in developing operations management systems. Offered every year. Prerequisites: MGT 366 and MGT 268. Credits: 3

### **MGT 363 - Managing Quality**

Provides students with an overview of total quality management. Emphasis on philosophy, tools, and the integrated systems for the continuous improvement of process and product quality. Offered every year. Credits: 3

### **MGT 364 - Service Operations Management**

An overview of the planning, controls, and designs of operations in the service industry. Emphasis on the application of economic principles, decision tools, and models to solve problems encountered in the service environment. Offered every year. Credits: 3

### **MGT 365 - Strategic Management of Operations**

Designed to enhance comprehension of the operations management function at the strategic level to gain experience in identifying and analyzing strategic problem situations and to develop recommendations for action. Offered every year. Prerequisite: MGT 366. Credits: 3

### **MGT 366 - Operations Management**

Application of strategic and quantitative tools and techniques in manufacturing and service organizations. Specific topics include manufacturing strategy formulation, forecasting, aggregate planning, scheduling, Just in Time, management and assurance of quality, inventory management, and advanced technologies, including Enterprise Resource Planning (ERP) Systems. Offered every semester. Prerequisites: STA 215 and MGT 268. Credits: 3

### **MGT 367 - Manufacturing Planning and Control**

Basic course in manufacturing planning and control. Topics include capacity planning, forecasting, production activity control, master production scheduling, production planning, independent demand inventory management, material requirements planning, and Just in Time. Offered fall semester. Prerequisites: MGT 268 and MGT 366. Credits: 3

### **MGT 371 - Systems Analyses and Design**

Provides a comprehensive presentation of the concepts, procedures, and tools necessary for analyzing and designing management information systems. Students will develop skills necessary throughout the systems development cycle, e.g. project management, data collection, analysis, design, testing, and documentation. Students will apply course concepts and skills in a team project. Offered fall semester. Prerequisite: MGT 268. Credits: 3

### **MGT 380 - Special Topics in Management**

Analysis and discussion of advanced topics, contemporary problems, and new or controversial topics. Specific topics will reflect interest of students

and instructors. Offered on sufficient demand. Prerequisite: Permission of instructor. Credits: 3

### **MGT 429 - Staffing and Development**

This course addresses the concepts, practices, trends, and techniques related to the strategic acquisition and development of talent. Legal, ethical, and global issues in human resources staffing and development are explored throughout the course. Students convert concepts into practice through integrative case studies and/or projects. Offered fall and winter semester. Prerequisite: MGT 333. Credits: 3

### **MGT 430 - Organizational Development**

Examines change as a dynamic and essential process in organizations and explores the manager's role as a change agent. Emphasis is given to the ability to plan, initiate, and implement changes with the potential to improve the functioning of organizations and their members. Prerequisite: MGT 331. Credits: 3

### **MGT 431 - Strategic Human Resources Management**

The consideration of human resource management from a strategic perspective. Includes discussion and analysis of the emerging use of the human resource function as a strategic tool. Students convert concepts into practice through the use of strategic cases and/or professional projects and exercises. Prerequisite: MGT 333. Credits: 3

### **MGT 432 - Grievance Administration, Arbitration, and Collective Bargaining**

Problems and issues in the negotiation of collective bargaining agreements in the public and private sectors. Grievance procedures and arbitration under a union contract. The resolution of disputes over wages, seniority, work assignments, and other common employment relations will be covered. Prerequisite: MGT 334. Credits: 3

### **MGT 433 - International Human Resource Management**

Focus on the effects of globalization on human resource activities and facilitates development of a set of skills essential for a successful career as a global manager. Prerequisite: MGT 333. Credits: 3

### **MGT 437 - Family Business**

Develops the intricate connections between management, ownership, and family dynamics that characterize family business. Its intention is to do this primarily by bringing together established members of the local family owned business community and students with family business backgrounds or interests. Credits: 3

### **MGT 438 - Business Ethics**

An inquiry into the relevance of the classical ethical literature to the resolution of everyday business problems. Particular emphasis will be placed on the practical usefulness of the Socratic tradition. That tradition requires that we attend to clarifying our own values, as well as those of others. We will read a number of Socratic Dialogues, respond to a variety of business cases, and attend to the relationship between them and the process of understanding ourselves. Prerequisite: MGT 331. Credits: 3

### **MGT 466 - International Management and Multinational Corporations**

A study of the managerial challenges of conducting business in a global economy. Emphasis on cultural differences and their impact on the situations and issues managers confront when working internationally. Fulfills Cultures - World Perspectives. Prerequisite: Senior standing. Credits: 3

### **MGT 467 - Advanced Topics in Operations and Supply Chain Management**

This course is designed to familiarize students with strategic planning, modeling, and developing practical applications in operations and supply chain management. Cost-effective distribution policies for multi-echelon inventory systems, transportation and routing management and location planning is also covered. Prerequisite: MGT 366. Credits: 3

### **MGT 471 - Enterprise Systems Configuration**

Students will learn about business processes in modern organizations, managing change to those processes, and configuring an Enterprise Resource Planning system to implement business process changes.

Project organizational skills will be enhanced as students work on cross-functional teams to implement changes. Offered fall semester. Prerequisite: MGT 268. Credits: 3

#### **MGT 475 - Customized ERP Solutions**

Students will learn how to customize Enterprise Resource Planning software using programming languages like ABAP, SAP's proprietary language. Students will learn generalized programming concepts as well as the specifics of programming with ABAP. Students will explore the difficulties associated with making changes to "off-the-shelf" software. Offered winter semester. Prerequisites: MGT 471 and (CIS 160 or CS 160) and (CIS 333 or CS 333). Credits: 3

#### **MGT 480 - Special Topics in Management**

Provides students, regardless of major, with opportunities to work under faculty supervision as part of a student team on actual projects for organizations and corporations and to learn and practice technical and communication skills and ethical considerations. Credits: 3

#### **MGT 490 - Management Internship**

This course will be used to grant management credit to students who complete internships in the management field. Prerequisites: Junior standing; minimum 2.5 GPA. Graded credit/no credit. Credits: 1 to 6

#### **MGT 495 - Administrative Policy**

The study of functions and responsibilities of general management in terms of analyzing problems that affect the performance, character, and success of the total business enterprise. Emphasis on corporate strategy and its implementation. International aspects of corporate strategy are included. Offered every semester. Prerequisites: Senior standing and all core classes. Credits: 3

#### **MGT 499 - Independent Research**

Students propose an independent study culminating in a written and oral report. The proposal must include learning outcomes and a readings list. Proposals involving primary research should include a detailed description of objectives and methodology. Students must find an interested faculty member to help them prepare the proposal and to supervise the independent research. Offered each semester. Credits: 1 to 3

#### **MGT 633 - Management of Human Resources**

Topics include employee evaluation and development, resistance to change, discipline, affirmative action, safety and health, rewards, and compensation. A major course goal is the development of an administrative point of view for the purpose of achieving organizational objectives through the efforts of others. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

#### **MGT 635 - Planned Change and Organizational Development**

Addresses issues of individual, group, and organizational change from a strategic, problem-solving perspective. Strategies for changing organizational culture, enhancing creativity, building teams, and dealing with dysfunctional aspects of planned change are presented. Prerequisite: BUS 631. Credits: 3

#### **MGT 660 - Operations and Supply Chain Management**

Develops an understanding and appreciation of the conceptual and quantitative aspects of operations management as a core business competency in manufacturing and service environments. Emphasis is placed on specific operations management concepts/methods such as supply chain management, lean operations/just-in-time, inventory management, MRP/ERP, aggregate planning, and total quality management/SPC. Offered every semester. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

#### **MGT 665 - Enterprise Information Systems**

This course enables students to experience enterprise information systems (EIS) from the perspectives of the end users and designers, using EIS. Various software modules are explored - financial accounting, cost management, materials management, production planning and control and sales and distribution- with particular focus on underlying processes that they support. Offered winter semester. Prerequisite: BUS 610. Credits: 3

#### **MGT 669 - Process Analysis and ERP Systems**

Emphasizes business processes and their place in the modern business organization. Incorporates concepts, tools, techniques, and skills needed to identify, analyze, and redesign business processes. Explores SAP's R/3 to determine fundamental work processes supported in SAP's standard client. Offered fall semester. Credits: 3

#### **MGT 672 - Creativity and Social Entrepreneurship**

This course provides applied sustainable development tools and best practices that businesses and nonprofit organizations can use to address social entrepreneurship issues using innovative, interdisciplinary, and sustainable approaches. Offered fall semester. Prerequisite: Admission to a graduate program. Credits: 3

#### **MGT 680 - Special Topics in Management**

Analysis and discussion of advanced topics, contemporary problems, and new or controversial topics. Specific topics will reflect interest of students and instructors. Prerequisite: Permission of instructor. Credits: 1 to 3

#### **MGT 699 - Independent Study**

Independent research in the student's area of interest, supervised by a Seidman faculty member and culminating in a written and oral report. Written permission of supervising faculty required. Credits: 1 to 3

#### **MKT 350 - Marketing Management**

An introduction to marketing. Provides a general understanding and appreciation of the forces operating, institutions employed, and methods followed in marketing products and services both domestically and internationally. Offered every semester. Credits: 3

#### **MKT 351 - Consumer Behavior**

An overall view of some of the basic perspectives of consumer motivation and behavior. Offered fall and winter semesters. Prerequisite: MKT 350. Credits: 3

#### **MKT 352 - Marketing Research**

Detailed examination of business research procedures and applications. Problem definition, research design, data collection, sampling techniques, costs, etc. Case problems and projects. Offered fall and winter semesters. Prerequisites: MKT 350 and STA 215. Credits: 3

#### **MKT 353 - Marketing Negotiations**

This course develops an understanding and appreciation of the negotiation process. Definitions, concepts, strategies, and practical tactics encompassed in marketing negotiation are examined in circumstances involving pricing, products, distribution, promotion, and packaging. The course includes face-to-face negotiation projects. Offered fall and winter semesters. Prerequisite: Admission to Seidman College of Business or permission. Credits: 3

#### **MKT 354 - Distribution Institutions and Logistics**

An integrated study of supply chain and distribution channels, and their institutions in the global marketplace. Topics include an introduction to the supply chains, system design, advantages and disadvantages of various channel institution types, and the functional dimensions of supply chain and distribution management. Offered fall and winter semesters. Credits: 3

#### **MKT 355 - International Logistics**

Studies global trade management and logistics issues. Trade management issues will focus on documentation requirements, customs administration, and security issues. International logistics topics will include system design, intermediaries, legal, customer service, transportation, warehousing, and inventory. The course also deals with logistics operations within selected foreign markets. Offered fall semester. Credits: 3

#### **MKT 356 - Professional Selling**

The principles of professional salesmanship and their practical application in the marketing mix. Actual sales presentations by students are included. Offered fall and winter semesters. Prerequisite: MKT 350. Credits: 3

#### **MKT 357 - Retailing**

Introduction to retailing with emphasis on profit elements, pricing and merchandising policies, inventory, and merchandise control. Offered fall and winter semesters. Prerequisite: MKT 350. Credits: 3

## Course Listings and Descriptions

### **MKT 358 - Advertising and Marketing Communications**

A managerial analysis and examination of the nonpersonal demand generating element of the firm's marketing efforts. Includes study of communication theory; advertising; market, audience, and target segmentation and selection; media analysis; public relations; publicity; and most other nonpersonal communications activities. These elements are strongly related to personal selling in the private sector firm. Offered fall and winter semesters. Credits: 3

### **MKT 359 - Multinational Marketing**

Emphasizes global marketing decision-making from the manager's point of view. Examines how successful international companies, both large and small, decide which goods and services to market in specific parts of the world. Evaluates the strategies and tactics necessary for multinational marketing success. Offered fall and winter semesters. Credits: 3

### **MKT 360 - Marketing on the Internet**

Strategic use of the Internet for marketing goods and services across a range of product categories and how the Internet can be used to increase effectiveness, efficiency, and competitiveness. Specific areas of focus include market and marketing research, competitive monitoring, customer service, new product testing, and internal and external communications. Offered fall semester. Prerequisite: MKT 350. Credits: 3

### **MKT 361 - Sports Marketing**

An examination of the unique marketing strategies within the sporting industry. The course will explore these strategies from a variety of stakeholder perspectives. A special emphasis on the local sporting scene, which will include group and individual projects, case studies, and field trips. Credits: 3

### **MKT 365 - GIS for Economic and Business Decision-Making**

Explores the use of geographic information systems (GIS) technology in economic and business decision-making, including market area analysis, geodemographic segmentation, site selection, routing, customer profiling, sales territory management, and location strategies. Emphasis on hands-on activities. Problem-based learning approach. Part of the Information, Innovation, and Technology Issue. Course is cross-listed with GPY 365 and PA 365. Prerequisite: Junior standing. Credits: 3

### **MKT 369 - Creativity in a Cubicle Environment**

Exploration of strategies for enhancing personal and group creativity in the workplace. Factors which encourage and discourage creativity, including the work environment and employee attitudes, are also examined. Students will apply the strategies discussed in a variety of assignments. Offered fall and winter semesters. Credits: 3

### **MKT 370 - New Product Development**

This course teaches students how to develop a successful new product or service. Student teams experience the whole process involved in bringing a new product from idea to launch. Emphasis is on the application of fundamental marketing and entrepreneurial principles required to achieve continuous innovation and sustainable competitive advantage. Offered fall and winter semesters. Prerequisite: MKT 350. Credits: 3

### **MKT 375 - Marketing Ethics**

The ethical implications of several current marketing public policy issues will be discussed, including consideration of each issue with regard to the responsibility of business in society. Guidelines for ethical decision-making, principles of ethical leadership, and ethical behavior in corporate governance will also be reviewed. Credits: 3

### **MKT 380 - Special Topics in Marketing**

Analysis and discussion of advanced topics, contemporary problems, and new or controversial topics. Specific topics will reflect interest of students and instructors. Credits: 3

### **MKT 425 - Brand Management**

Strategies for building and measuring brand equity are discussed. Other topics to be covered include the management of brands on the Web, cobranding, and brand extensions. All students will complete a brand audit as part of the course. Offered fall semester. Prerequisite: MKT 350. Credits: 3

### **MKT 451 - Marketing Strategy**

A methodical analysis of a significant number of marketing cases selected from actual business experience to illustrate the application of sound principles to market planning, sales forecasting, and market management. Offered fall and winter semesters. Prerequisites: MKT 350 and senior standing. Credits: 3

### **MKT 452 - Marketing Analytics**

Examination of businesses' use of consumer data for business decisions in highly turbulent market environments. Drawing on techniques learned in MKT 352, Marketing Research, students will apply analytical software tools to case studies of marketing challenges, improving their ability to make business recommendations based on statistical analysis. Course offered winter semester. Prerequisite: MKT 352. Credits: 3

### **MKT 456 - Sales Management**

Application of management functions to the selling structure and sales problems of companies. Behavioral and quantitative disciplines are used in case study analyses. Organizing sales operations, sales planning, analysis, and evaluation are covered. Offered fall and winter semesters. Prerequisite: MKT 356 or permission of instructor. Credits: 3

### **MKT 457 - Logistics and Transportation**

Studies the role of transportation in the global supply chain and distribution channel, and the interaction of transportation with other supply chain logistics activities such as inventory control. Topics include logistics system design, transportation policy and infrastructure, each mode of freight transportation, and the management of transportation. Offered every other semester. Prerequisite: MKT 350. Credits: 3

### **MKT 490 - Marketing Internship**

This course will be used to grant marketing credit to students who complete internships in the marketing field. Prerequisites: Junior standing; minimum 2.5 GPA. Graded credit/no credit. Credits: 1 to 6

### **MKT 499 - Independent Research**

Students propose an independent study culminating in a written and oral report. The proposal must include learning outcomes and a readings list. Proposals involving primary research should include a detailed description of objectives and methodology. Students must find an interested faculty member to help them prepare the proposal and to supervise the independent research. Offered every semester. Credits: 1 to 3

### **MKT 651 - Marketing Management**

Focuses on developing an understanding of the role of markets and marketing in the macroeconomic environment, and on providing marketing managers with the knowledge and tools they will need to successfully analyze product markets and develop marketing strategies that will provide sustainable competitive advantage. Offered fall and winter semesters. Prerequisite: Completion of M.B.A. background equivalencies. Credits: 3

### **MKT 653 - Analysis of Distribution Systems**

In-depth examination of the fundamental structure of distribution systems in the U.S. economy. Emphasis on channels of distribution, transport modes, reseller systems, physical distribution management, and current policy issues. Prerequisite: MKT 651 or permission of instructor. Credits: 3

### **MKT 655 - Promotional Strategy**

Provides students with an understanding of the communications process as it applies to advertising and other areas such as product symbolism, packaging, pricing, channels, and personal selling. Students are required to apply basic concepts in determining the objectives of a communications-promotion program, establishing the relative roles of personal selling and advertising, building an advertising campaign, and determining the program budget. Prerequisite: Completion of M.B.A. background equivalents. Credits: 3

### **MKT 658 - International Marketing**

Introduces a conceptual framework that enables the student to identify and better understand the dimensions that are operative within a global marketing environment. Explores the relationship between these

dimensions and specific elements of a marketing program. While the course does not dwell on exporting per se, reasonable coverage is given to factors affecting the development of exporting activities. Prerequisite: MKT 651. Credits: 3

#### **MKT 660 - Marketing Research and Analysis**

An examination of marketing information needs and resources including the collection and dissemination of primary and secondary data and the cost-benefit consequences of all information gathering procedures. Topics include problem definition, research design, sampling techniques, data collection, analysis, etc. The emphasis is on conceptualizing, conducting, and evaluating marketing research. Prerequisite: MKT 651. Credits: 3

#### **MKT 661 - Internet Marketing**

Focus includes dimensions of the Internet (www, email, and usenet), users and uses, capabilities and limitations, website design, and acquiring an understanding of the forces and trends that are shaping marketing through new technologies. Students will hone Internet research skills and design an Internet marketing strategy for an organization. Offered winter semester. Prerequisite: MKT 651. Credits: 3

#### **MKT 680 - Special Topics in Marketing**

In-depth analysis of selected current topics and problems in marketing. Content will vary from semester to semester among the many subareas of marketing management, physical distribution, systems analysis/design, application, model building, and theory. Prerequisite: Admission to the M.B.A. program. Credits: 1 to 3

#### **MKT 699 - Independent Study**

Independent research in student's area of interest, supervised by a member of the Seidman faculty and culminating in a written and oral report. Written permission of supervising faculty required. Credits: 1 to 3

#### **MLL 100 - How to Learn a Foreign Language**

This course is designed to teach beginning world language students how to become successful language learners. Students will be introduced to strategies for understanding, learning and producing language and functioning in a foreign culture, they will also learn to set their own goals and assess their own progress. Corequisite: Concurrent enrollment in any world or classical language (Arabic, Chinese, French, German, Greek, Italian, Japanese, Latin, Russian, or Spanish) 101, 102, 150, or 201. Credits: 1

#### **MLL 300 - What's Language Got To Do With It?: Exploring Identity Through Language, Culture, and Literature**

Students will discover the impact of language, literature, and culture in the formation of identity. Discussion will be based on literary works and films from the different languages and regions of the world taught in the Department of Modern Languages and Literatures. All materials are in translation. Part of the Identity Issue. Course offered fall and winter semesters. Prerequisite: Junior status. Credits: 3

#### **MLL 380 - Special Topics in Modern Languages and Literature**

Consideration of selected topics not ordinarily dealt with in other courses. Topics to be determined; consult class schedule for specific topics. Can be repeated. Offered occasionally. Prerequisites: Variable. Credits: 1 to 9

#### **MLS 102 - Introduction to Medical Laboratory Sciences**

An introduction to principles and practices of cytotechnology, histotechnology, and medical technology and the professionals in these fields as members of the health care team. Restricted to freshmen, sophomores, or transfer students, or by permit. Credits: 1

#### **MLS 320 - General Laboratory Practice**

An introduction to laboratory sciences, including laboratory safety, instrumentation, quality control, specimen collection, and processing. An emphasis will be placed on urine analysis and the clinical application of urine examination. Offered winter semester. Prerequisites: BMS 290/291, CHM 232, and admission into the MLS program. Credits: 2

#### **MLS 350 - Management for Laboratory Science**

This course is designed to teach the principles of laboratory management. It will focus on underlying managerial concepts that will assist the learner

in application of this information to real-life situations. Learning units will cover four areas of management: basic principles and organizational structure, human resources, finance, and operations. Offered winter semester. Credits: 2

#### **MLS 370 - Diagnostic Microbiology I**

A study of the structure, function, and diagnostic characteristics of clinically significant viruses, parasites, and fungi, related to pathogenicity, transmission, control, and host response. Laboratory will emphasize specimen collection and diagnostic procedures for the identification of pathogenic microbes. Offered winter semester. Prerequisites: BMS 212 and BMS 213. Credits: 4

#### **MLS 371 - Diagnostic Microbiology I Laboratory**

Diagnostic Microbiology I Laboratory will focus on the study of the structure, function, and diagnostic characteristics of clinically significant parasites, fungi, and viruses. Specimen collection, microscopic observation, and diagnostic procedures for the identification of pathogenic microbes will be emphasized. Offered winter semester. Prerequisites: BMS 212/213. Corequisite: MLS 370. Credits: 1

#### **MLS 372 - Diagnostic Microbiology 2**

A study of the epidemiology, pathogenesis, and clinical significance of medically important bacterial agents involved in infectious disease processes. Discussion of diagnostic characteristics and methods used for laboratory identification of these organisms will also be emphasized. Offered fall semester. Prerequisites: BMS 212 and BMS 213. Credits: 3

#### **MLS 373 - Diagnostic Microbiology II Laboratory**

Diagnostic Microbiology II Laboratory will focus on medical bacteriology specimen collection and diagnostic procedures for the identification of clinically significant bacteria. Emphasis will be placed on application and integration of theory, practical application, and technical performance of laboratory skills in clinical bacteriology. Offered fall semester. Prerequisites: BMS 212 and BMS 213. Corequisite: MLS 372. Credits: 1

#### **MLS 380 - Special Topics in Medical Laboratory Science**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

#### **MLS 399 - Readings in Medical Laboratory Science**

Independent supervised readings on selected topics or supervised independent medical laboratory work. The topics, hours, and number of credits must be arranged with a faculty sponsor and approved by the program director. May be elected for one to four credit hours toward the major in medical laboratory science. Credits: 1 to 4

#### **MLS 410 - Clinical Immunoserology**

Principles of the immune response, immunological disorders, the methodology used in the detection of immunological disorders, and the correlation of test results to these disorders are presented through lecture, demonstration, and practical experience. Offered fall semester. Prerequisite: MLS 320. Credits: 3

#### **MLS 416 - Hematology**

A study of normal and abnormal blood cell development, morphology, and function. Blood dyscrasias will be studied with emphasis on the biochemical and morphological changes involved in disease. Prerequisites: BMS 208 and CHM 232. Credits: 3

#### **MLS 417 - Clinical Hematology Laboratory**

An introduction to a wide variety of hematology medical laboratory procedures with an emphasis on accurate performance, theoretical basis of tests, and correlation of data to disease. Prerequisite: MLS 416 (may be taken concurrently). Credits: 1

#### **MLS 422 - Clinical Chemistry**

Biochemical, physiological, and analytic aspects of organic and inorganic substances of medical interest, including electrolytes, blood gases, proteins, enzymes, lipids, drugs, and hormones are presented through lecture, demonstration, and practical experience. Offered fall semester. Prerequisite: MLS 320. Credits: 6

## Course Listings and Descriptions

### **MLS 450 - Clinical Practicum I**

The first of two full-time medical experiences. Practicing medical laboratory scientists will supervise and teach students in basic laboratory procedures, including urinalysis, immunoserology, hematology, and medical chemistry. The students will be exposed to patients and usual workload in the hospital laboratory. Offered fall semester. Prerequisite: MLS 320. Corequisites: MLS 372, MLS 410, MLS 422, BMS 416, and BMS 417. Credits: 1

### **MLS 460 - Advanced Clinical Science**

Advanced lecture and discussion of clinical laboratory science, with emphasis on hemostasis, bacteriology, transfusion medicine, and laboratory service assessment. Prerequisites: MLS 372, MLS 410, BMS 416. Corequisite: MLS 461. Credits: 5

### **MLS 461 - Advanced Clinical Laboratory**

Taken in conjunction with MLS 460 (Advanced Medical Science), this laboratory course is designed to provide the students with experience in advanced medical laboratory technologies. Emphasis will be placed on hemostasis, bacteriology, and transfusion medicine. Prerequisites: MLS 422 and BMS 417. Corequisite: MLS 460. Credits: 2

### **MLS 490 - Clinical Practicum II**

The second of two full-time medical experiences. Practicing medical laboratory scientists will supervise and teach students in advanced laboratory procedures, including hemostasis, medical chemistry, microbiology, and transfusion service. Students will be exposed to patients and usual workload in the hospital laboratory. Offered winter semester. Prerequisites: MLS 372, MLS 373, MLS 422, and MLS 450. Corequisites: MLS 460 and MLS 461. Credits: 5

### **MLS 495 - Issues in Medical Laboratory Science**

Exploration of issues that impact health care, particularly the laboratory professional. Includes in-depth discussions of research literature and its relevance to medical laboratory science. Students will work individually and in groups to prepare a paper, presentation, and a poster. Offered winter semester. Prerequisite: Senior standing in the medical laboratory science program. Corequisite: MLS 490. Credits: 3

### **MOV 101 - Foundations of Human Movement Science**

Exploration of the past, present, and future of human movement science highlighting professional preparation and opportunities. Credits: 3

### **MOV 102 - First Aid, CPR and AED**

Emergency care for the teacher, recreation leader, and allied health professional. Preparation for first aid, CPR (cardiopulmonary resuscitation), and AED (automated external defibrillation) certification. Credits: 2

### **MOV 180 - Special Topics in Movement Science**

Lecture, discussion, laboratory, or field study on a topic related to movement science. Offered on sufficient demand. Credits: 1 to 4

### **MOV 201 - Psychosocial Aspects of Physical Education and Sport**

A study of the psychosocial and cultural context of sports and physical education. The role of education and other institutional social and cultural forces that are integral to the sporting milieu, the psychological and behavioral factors that influence the sport setting, and participation will be studied. Credits: 3

### **MOV 202 - Social Cultural Dimensions of Sport**

Introduction to sport from a social and cultural perspective. In accordance with national certification standards, contemporary issues such as gender, race/ethnicity, disability, international cultures, the Olympics, sport education, professionalization of sport, societal stratification, youth sport, social problems in sport, and societal beliefs and values in sport will be examined. Offered every semester. Credits: 3

### **MOV 217 - Modern Principles of Athletic Training**

This course provides students with basic knowledge of the prevention, recognition, and management of conditions commonly experienced in a physically active population. Focus will also be on introducing students to the concept of evidence based practice as it relates to decision-making. Credits: 2

### **MOV 218 - Modern Principles of Athletic Training Lab**

This course will provide laboratory experiences commonly experienced in athletic health care settings. Students will be introduced to basic preventative measures including taping, wrappings, and equipment fittings; basic injury evaluations; and management techniques to include basic splinting and spine-boarding techniques. Offered every semester. Prerequisite: MOV 217 (may be taken concurrently). Credits: 1

### **MOV 280 - Special Topics in Movement Science**

Lecture, discussion, laboratory, or field study on a topic related to movement science. Offered on sufficient demand. Credits: 1 to 4

### **MOV 300 - Kinesiology**

Laws and principles of mechanics as they apply to the use of the human body, human mechanism, and its process of motor function. (2-1-0) Prerequisite: BMS 202 or BMS 208 or BMS 250. Credits: 3

### **MOV 304 - Introduction to Exercise Physiology**

The physiological responses to an acute bout of exercise, adaptations to exercise training, and the mechanisms responsible for them in relation to health, fitness, and athletic performance. Prerequisite: BMS 202 or BMS 251 or BMS 290. Credits: 3

### **MOV 309 - Measurement and Evaluation**

Introduction to scientific measurement and evaluation, special studies, research projects, and instrumentation applied specifically to physical education. (1-1-0) Credits: 2

### **MOV 310 - Motor Skill Development**

The study of the acquisition of motor skills. The class investigates principles and theory of motor skill development as applied to the teaching and coaching of skilled performance. Offered fall and winter semesters; spring/summer on sufficient demand. Credits: 3

### **MOV 320 - Exercise Testing and Prescription**

Provides students the fundamental background for health and fitness assessment commonly used in fitness and clinical settings. Topics include epidemiology, cardiovascular assessment, strength assessment, weight control, body composition assessment, and exercise prescription. Prerequisite: MOV 304. Corequisite: MOV 321. Credits: 3

### **MOV 321 - Exercise Testing Lab**

Introduction to health and fitness assessments currently used in fitness, rehabilitation, and clinical settings. Prerequisite: MOV 304. Corequisite: MOV 320. Credits: 1

### **MOV 350 - The Obesogenic Environment**

Obesity is a global health issue. This course will examine obesity within the context of behavioral choices, and physical and social environments (e.g., public health policy, sociocultural influences, food accessibility, and media, marketing). Obesity prevention and intervention strategies will also be explored. Part of the Health Issue. Offered fall semester. Prerequisites: Junior standing, and PSY 101 or SOC 101. Credits: 3

### **MOV 365 - Clinical Exercise Physiology**

The health professional will apply the knowledge base of anatomy, physiology, biochemistry, and the practical application within a clinical exercise environment. Practical application, problem solving and integration of exercise physiology and exercise program design are stressed. Offered fall and winter semesters. Prerequisites: BMS 251 or BMS 290; and MOV 304. Credits: 3

### **MOV 380 - Special Topics in Movement Science**

Lecture, discussion, laboratory, or field study on a topic related to movement science. Offered on sufficient demand. Credits: 1 to 4

### **MOV 399 - Independent Readings**

Special studies in movement science upon consultation with faculty advisor and approval of department chair. Credits: 1 to 3

### **MOV 420 - Laboratory Practicum in Exercise Science**

Advanced study of human performance laboratory skills. These include research skills, group exercise teaching skills, metabolic testing, clinical stress testing, body composition assessment techniques and practical skills required of the ACSM health fitness instructor. Offered fall and winter semesters. Prerequisites: MOV 320 and MOV 321. Credits: 2

**MOV 460 - Strength and Conditioning for Athletic Performance**

This course is designed to provide students with theoretical, practical, and applied knowledge of the physiological and biomechanical aspects of designing and implementing strength and conditioning programs for well-conditioned athletic populations. Offered fall and winter semesters. Prerequisite: MOV 420. Credits: 3

**MOV 470 - Exercise for Special Populations**

Presents information related to exercise for special populations that are found in the clinical health/fitness setting. Health assessment, exercise evaluation, exercise prescription, and electrocardiography are studied. Special populations include youth, elderly, pregnant, pulmonary disease, vascular disease, and musculoskeletal disorders. Prerequisites: MOV 320 and MOV 321. Credits: 3

**MOV 475 - Fieldwork in Exercise Science**

Practical field experience in a variety of fitness and wellness settings. Students will gain experience in group exercise leadership, individualized exercise programming, nutritional analysis and consulting, and exercise testing. Offered fall and winter semesters. Prerequisites: STA 215 and MOV 420. Credits: 2

**MOV 480 - Special Topics in Movement Science**

Lecture, discussion, laboratory, or field study on a topic related to movement science. Offered on sufficient demand. Credits: 1 to 3

**MOV 490 - Internship in Exercise Science**

Internship is on-site work experience at a health, fitness, wellness, or clinical facility approved by the internship supervisor and appropriately affiliated with Grand Valley State University. Internships are 300-600 hour experiences, 15 weeks in length. Offered every semester. Prerequisites: Completion of MOV 475 and permission of instructor. Credits: 6, 9, or 12

**MOV 495 - Professionalism in Exercise Science**

This Capstone course is designed to enhance the professional awareness, professional literacy and skills of the exercise science major. Students apply previous knowledge using oral, written, and computer literacy skills. Networking and involvement in professional organizations is stressed. Offered fall and winter semesters. Prerequisite: MOV 420. Credits: 3

**MOV 499 - Independent Study and Research**

Special studies in movement science in consultation with advisor and approval of department chair. Credits: 1 to 3

**MOV 580 - Special Topics in Movement Science**

Lecture, discussion, laboratory, or field study on a topic related to movement science. Credits: 1 to 3

**MOV 680 - Special Topics in Movement Science**

Lecture, discussion, laboratory, or field study on a topic related to movement science. Credits: 1 to 3

**MTH 097 - Elementary Algebra**

Introduction to topics covered in MTH 110. A symbolic, numeric, and graphic approach to elementary algebra. Topics include linear equations and inequalities, properties of exponents, factoring, quadratic equations, and radicals. Designed for students who need additional preparation for MTH 110. Does not count toward graduation. Credits: 4

**MTH 110 - Algebra**

A symbolic, numeric, and graphic approach to intermediate algebra with an emphasis on applications. Topics include operations, equations, and inequalities of linear, exponential, logarithmic, quadratic, rational, and radical functions. Please see the mathematics program for placement test details. Offered fall, winter, and spring/summer semesters. Prerequisite: MTH 097 or assignment through Grand Valley math placement. Credits: 4

**MTH 122 - College Algebra**

A culminating experience in algebra for conceptual understanding and application in other fields. Primary topics include families of functions (polynomial, rational, exponential, logarithmic and their compositions), algebraic skills for making and using mathematical models, and multiple representations of algebraic relationships. Fulfills Foundations - Mathematical Sciences. Course offered each semester. Prerequisite: MTH 110 or assignment through Grand Valley math placement. Please

see the mathematics program for placement details. Graphing calculator required: TI83 or TI84 recommended. Credits: 3

**MTH 123 - Trigonometry**

A study of the trigonometric functions with an emphasis on graphing, identities, inverse trigonometric functions, and solving equations. Additional topics include solving triangles, vectors, complex numbers, and polar coordinates. Fulfills Foundations - Mathematical Sciences. Please see the mathematics program for placement details. Offered fall, winter, and spring/summer semesters. Prerequisite: MTH 122 (may be taken concurrently) or assignment through Grand Valley math placement. Graphing calculator required: TI83 or TI84 recommended. Credits: 3

**MTH 124 - Precalculus: Functions and Models**

Study of preparatory material for calculus using symbolic algebra and trigonometry for solving equations, representing functions, and modeling, plus appropriate technology. Core topics: concept of function, average rate of change of a function, inverse and composite functions, trigonometric functions, exponential and logarithmic functions, and right triangle trigonometry. Fulfills Foundations - Mathematical Sciences. Course offered fall semester. Prerequisite: MTH 110. Credits: 5

**MTH 125 - Survey of Calculus**

A study of the concepts of calculus for students majoring in business, economics, life sciences, and social sciences. Differentiation and integration of algebraic, exponential, and logarithmic functions. Emphasis on applications. Fulfills Foundations - Mathematical Sciences. Please see the mathematics program for placement details. Offered fall and winter semesters. Prerequisite: MTH 110 or assignment through Grand Valley math placement. Credits: 3

**MTH 131 - Introduction to Mathematics**

A survey for nonmathematics majors. Topics selected from inductive and deductive reasoning, geometry, statistics, computers, modeling, number theory, numeration systems, the mathematics of decision-making, and applications. Fulfills Foundations - Mathematical Sciences. Please see the mathematics program for placement details. Offered winter semester. Prerequisite: MTH 110 or assignment through Grand Valley math placement. Credits: 3

**MTH 180 - Special Topics in Mathematics**

Readings, lectures, discussions, or lab (or any combination) in specific mathematics topics at an introductory or elementary level. Offered on sufficient demand. Prerequisite: Permission of the instructor. Credits: 1 to 3

**MTH 201 - Calculus I**

A development of the fundamental concepts of calculus using graphical, numerical, and analytic methods with algebraic and trigonometric functions of a single variable. Limits and continuity, derivatives, indefinite integrals, definite integrals, and the Fundamental Theorem of Calculus; applications of derivatives and integrals. Please see the mathematics program for placement details. Fulfills Foundations - Mathematical Sciences. Offered fall and winter semesters. Prerequisites: MTH 122 and MTH 123; or MTH 124; or assignment through Grand Valley math placement. Credits: 4

**MTH 202 - Calculus II**

Continuation of MTH 201 using graphical, numerical, and analytic methods to study exponential, logarithmic, hyperbolic, and inverse trigonometric functions. Indeterminate forms, improper integrals, integration techniques, sequences and series, Taylor polynomials, and power series. Offered fall and winter semesters. Prerequisite: MTH 201. Credits: 4

**MTH 203 - Calculus III**

Continuation of MTH 202 using graphical, numerical, and analytic methods to study parametric equations, polar coordinates, vector algebra in two and three dimensions, differentiation and integration of vector functions of a single variable, and scalar functions of several variables. Offered fall, winter, and spring/summer semesters. Prerequisite: MTH 202. Credits: 4

## Course Listings and Descriptions

### **MTH 210 - Communicating in Mathematics**

A study of proof techniques used in mathematics. Intensive practice in reading mathematics, expository writing in mathematics, and constructing and writing mathematical proofs. Mathematical content includes elementary logic, congruence arithmetic, set theory, functions, equivalence relations, and equivalence classes. Offered fall and winter semesters. Prerequisites: MTH 201 and WRT 150. Credits: 4

### **MTH 221 - Mathematics for Elementary Teachers I**

Exploration of the teaching and learning of geometry, measurement, patterns and functions, probability, and statistics in elementary school mathematics, emphasizing development of mathematical representations and communication. Concepts are developed through hands-on experiences exploring mathematical models, strategies, relationships, and problem-solving. Fulfills Foundations - Mathematical Sciences. Prerequisites: MTH 110 or MTH 122 and at least sophomore standing. Credits: 4

### **MTH 222 - Mathematics for Elementary Teachers II**

Exploration of the teaching and learning of number and operations (whole numbers, fractions, decimals, and number theory) in elementary school mathematics, emphasizing the development of number sense and unitizing. Concepts are explored through models, strategies, relationships, algorithms, and problem-solving. Fieldwork includes evaluating and tutoring elementary children. Prerequisites: MTH 110 or MTH 122 and at least sophomore standing; MTH 221 strongly recommended. Credits: 3

### **MTH 223 - Mathematics for Elementary Teachers III**

Explores teaching and learning of number and operations, geometry, measurement, patterns and functions, probability and statistics in elementary school mathematics, emphasizing development of number sense, unitizing, mathematical representations, and communication. Exploration through models, strategies, relationships, algorithms, and problem-solving. Fieldwork: Evaluating and tutoring children. Equivalent: MTH 221 and MTH 222. Prerequisite: MTH 201. Credits: 5

### **MTH 225 - Discrete Structures: Computer Science**

Logic, sets, counting techniques, cardinality, relations, functions and sequences, matrices, mathematical induction, and computer science applications. Please see the mathematics program for placement details. Offered fall and winter semesters. Prerequisite: MTH 122 or MTH 123 or MTH 201 or assignment through Grand Valley math placement. Credits: 3

### **MTH 227 - Linear Algebra I**

Vectors in two and three dimensional space, systems of linear equations, matrix algebra, determinants, vectors in  $n$  dimensional space, subspace, dependence, bases, linear transformations, eigenvectors, and applications. Offered fall and winter semesters. Prerequisite: MTH 202. Credits: 3

### **MTH 229 - Mathematical Activities for Secondary Teachers**

In-depth study of mathematical content suitable to secondary classrooms. Integrated discussions of student's learning, pedagogy, secondary curricula, NCTM Standards, and relevant research. Service learning includes 20 hours of active classroom observations, including lesson design and implementation. Within the mathematics major or minor, applies only to secondary certification emphasis. Offered fall and winter semesters. Prerequisites: MTH 201 or equivalent and sophomore standing. Credits: 3

### **MTH 300 - Vector Analysis**

Multivariable calculus and vector analysis including the change of variables formula, line integrals, surface integrals, Green's theorem, Stokes' theorem, and the divergence theorem. Applications in physics. Prerequisite: MTH 203. Credits: 3

### **MTH 302 - Linear Algebra and Differential Equations**

Matrix algebra and determinants. Introduction to the theory of differential equations. Methods of solution (including Laplace transform techniques) of linear equations, as well as some special types of nonlinear equations. Applications in physical, biological, and social sciences. Offered fall and winter semesters. Prerequisite: MTH 203. Credits: 4

### **MTH 304 - Analysis of Differential Equations**

Solution methods for first order and second order linear equations (including power series and numerical methods). The linear algebra of linear systems and their solutions. Qualitative analysis of linear and nonlinear systems: phase plane; existence and uniqueness; stability, and applications in physical, biological, and social sciences. Prerequisites: MTH 203 and MTH 227. Credits: 3

### **MTH 312 - Cryptography and Privacy**

An introduction to cryptography and information security with a focus on applications and issues from diverse areas. Topics will include a study of cryptographic primitives, historical cipher systems, symmetric and public-key cryptography, hash functions, digital signatures, electronic voting, and contemporary issues in privacy and security. Part of Information, Innovation, and Technology Issue. Offered winter semester of even-numbered years. Prerequisites: Junior standing and successful completion of any Mathematical Sciences Foundations course. Credits: 3

### **MTH 315 - Discrete Mathematics**

Basic and advanced counting techniques, including the Pigeonhole Principle and inclusion-exclusion; recurrence relations; partial orderings; graph theory, special paths, planarity, chromatic number, networks, trees, traversals, digraphs. Algorithms and proof techniques. Offered fall and winter semesters. Prerequisite: MTH 210. Credits: 3

### **MTH 322 - Geometry for Elementary Teachers**

Analyze characteristics and properties of geometric objects, transformations and representations, visualization and spatial reasoning, measurement systems and tools, dynamic geometric software. Integrated discussion of children's learning, curricula, standards, and research for K-8. Fieldwork includes lesson design and implementation. Within the mathematics major or minor, applies only to elementary certification emphasis. (2-0-2) Offered every year. Prerequisites: MTH 223 or both MTH 221 and MTH 222. Credits: 3

### **MTH 323 - Probability and Statistics for Elementary Teachers**

Analyze data and chance. Gathering, organizing, constructing, and interpreting data displays, distributions and models, making inferences and predictions. Integrated discussions of children's learning, pedagogy, curricula, assessment, standards, and relevant research for K-8. Fieldwork includes designing/teaching units. Within the mathematics major or minor applies only to elementary certification emphasis. Offered every year. Prerequisite: MTH 322. Credits: 3

### **MTH 324 - Algebra for Elementary Teachers**

Analyze characteristics and properties of number systems, patterns, proportions, functions, variables, and algebraic structures. Integrated discussions of children's learning, pedagogy, elementary and middle school curricula, NCTM Standards, and relevant research. Fieldwork includes writing lessons/problems and observing students. Within the mathematics major or minor, applies only to elementary certification emphasis. Offered every year. Prerequisites: MTH 210 and either MTH 223 or (MTH 222 and MTH 221). Credits: 3

### **MTH 325 - Discrete Structures: Computer Science 2**

Properties of relations, equivalence relations, partial orderings, fundamental concepts of graphs, trees, digraphs, networks, and associated algorithms; computer science applications. Offered fall and winter semesters. Prerequisite: MTH 225. Credits: 3

### **MTH 327 - Linear Algebra II**

Vector spaces, bases, dimensions, linear transformations, canonical forms, eigenvalues and geometric applications. Prerequisite: MTH 227. Credits: 3

### **MTH 329 - Teaching Middle Grades Mathematics**

Emphasis on what mathematics is, how students learn mathematics, planning and instruction, assessment, and professional decision-making. Conceptual, constructivist, and cooperative activities assist middle grades teachers in helping their students learn mathematics connecting algebra, geometry, number, measurement, statistics, and probability. Twenty hours of service-learning with middle grade students required. Offered fall and winter semesters. Prerequisites: C or better in MTH 202, MTH 210, and one of MTH 229, MTH 322, MTH 323, or MTH 324. Junior standing. Credits: 3

**MTH 331 - Euclidean Geometry**

Critical analysis of Euclidean geometry from transformational, algebraic, and synthetic perspectives. Coordinate and vector geometry relating transformational geometry to linear algebra. Informal study of historical development of Euclidean and non-Euclidean geometries and the questions relating to the parallel postulate to develop understanding of axiomatic systems. Offered fall and winter semesters. Prerequisites: MTH 210 and either MTH 227 or MTH 322. Credits: 3

**MTH 350 - Modern Algebra I**

Algebraic properties of the integers and the development of the rational, real, and complex number systems as algebraic structures. Topics from modern algebra include rings, integral domains, fields, and ring isomorphisms. Further study of algebraic structures using congruence arithmetic and factorization in the ring of integers and polynomial rings. Offered fall and winter semesters. Prerequisites: MTH 210, and either MTH 225 or MTH 227. Credits: 3

**MTH 360 - Operations Research**

Mathematical modeling under conditions of certainty and uncertainty. Linear programming, duality, and sensitivity analysis. Markov chains and other stochastic processes. Applications to problems in transportation, scheduling, and resource allocation. Prerequisites: MTH 227 and STA 312. (STA 312 may be taken concurrently.) Credits: 3

**MTH 380 - Special Topics in Mathematics**

Readings, lectures, discussions, or lab (or any combination) in specific mathematics topics. Permission of the instructor required. Offered on sufficient demand. Prerequisite: Dependent upon topic selected. Credits: 1 to 4

**MTH 386 - Study Abroad in Mathematics Education**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight mathematics education perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

**MTH 387 - Study Abroad in Mathematics**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight mathematics perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

**MTH 399 - Independent Readings**

Hours, credit, topics, and time to be arranged with individual staff members with approval of the department. Offered fall and winter semesters. Credits: 1 to 4

**MTH 401 - Mathematics for the Physical Sciences**

An introduction to the mathematics most relevant for the physical sciences and physical problems that demonstrate its need. Topics include vector analysis, including line and surface integrals, complex differentiable functions, and partial differential equations and Sturm-Liouville problems. Prerequisites: MTH 302 or 304, PHY 231, or permission of instructor. Credits: 4

**MTH 402 - Complex Variables**

Complex arithmetic derivatives and integrals of functions of a complex variable. Infinite series. Residue calculus. Applications to real integration and fluid flows. Prerequisites: MTH 203 and either MTH 227 or MTH 302. Credits: 3

**MTH 405 - Numerical Analysis**

Numerical methods in solving equations of a single variable, matrix algebra, numerical differentiation and integration, numerical solution to differential equations, polynomial approximations, and error estimates. Prerequisites: MTH 227, CIS 162; and MTH 302 or MTH 304. Credits: 3

**MTH 408 - Advanced Calculus I**

Techniques of proof, development of the real number system and its topology, a rigorous examination of limits, continuity, differentiation, and integration of functions on one real variable. Also a development of

techniques for solving problems not treated in an elementary calculus sequence. Offered fall and winter semesters. Prerequisites: MTH 203 and MTH 210. Credits: 3

**MTH 409 - Advanced Calculus II**

Infinite series, improper integrals, development of the topology of Euclidean  $n$ -space and rigorous examination of limits, continuity, and differentiability of functions of several variables. Prerequisites: MTH 227 and MTH 408. Credits: 3

**MTH 431 - Non-Euclidean Geometry**

A critical examination of several non-Euclidean geometries, including finite geometries, hyperbolic geometry, and spherical geometry; their relationships to Euclidean geometry; and the historical and philosophical significance of the development of non-Euclidean geometries. Prerequisites: MTH 210 and either MTH 331 or permission of the instructor. Credits: 3

**MTH 441 - Topology**

An introduction to the fundamental concepts of topology. The topology of the real number system and its generalizations to metric spaces and topological spaces. Topics include subspaces, neighborhood spaces, open and closed sets, interior and boundary of sets, continuity and homeomorphisms, connected and locally connected spaces, compact sets and spaces. Prerequisites: MTH 203, MTH 210, and MTH 227. Credits: 3

**MTH 450 - Modern Algebra II**

An introduction to groups, including homomorphisms and isomorphisms, Lagrange's Theorem, quotient groups, finite groups, and the Sylow Theorems. Additional topics from ring theory including polynomial rings, ideals, and quotient rings. Prerequisite: MTH 350. Credits: 3

**MTH 465 - Automata and Theory of Computation**

Introduction to basic mathematical models of computation and the finite representation of infinite objects. Finite automata, regular languages, nondeterminism, pushdown automata, context-free languages, Turing machines and variants, halting problems, time complexity of algorithms, and NP-Complete problems. Cross-listed with CIS 465. Prerequisites: CIS 162 and either MTH 315 or MTH 325. Credits: 3

**MTH 480 - Special Topics in Mathematics**

Readings, lectures, discussions, or lab (or any combination) in specific mathematics topics. Permission of the instructor required. Offered on sufficient demand. Prerequisite: Dependent upon topic selected. Credits: 1 to 4

**MTH 490 - Mathematics Internship Seminar**

Offered fall and winter semesters. Prerequisites: Approval of the department; senior status. Credits: 2

**MTH 495 - The Nature of Modern Mathematics (Capstone)**

A study of mathematics as a human intellectual endeavor impacting our culture, history, and philosophy. Includes an in-depth investigation, including analyses from the mathematical, historical, and philosophical perspectives, of several significant developments from various fields of mathematics. The specific developments considered will vary from semester to semester. Offered fall and winter semesters. Prerequisites: MTH 210, MTH 227, MTH 350, and at least three other 300-400 level mathematics courses. Credits: 3

**MTH 496 - Senior Thesis (Capstone)**

A senior thesis is written to demonstrate depth and sophistication in the major. Independent library research is conducted under the supervision of a faculty member. Students produce full-fledged, professional, oral and written presentations on this research. Offered upon arrangement. Prerequisites for students using MTH 496 as the Capstone course in the major: Completion of at least 27 credits of mathematics courses in the major, a GPA in the major of 3.0 or better, and consent of the instructor. For majors not using the course as the Capstone course: MTH 495 with a grade of B and consent of the instructor. For mathematics minors: Completion of the minor with a GPA of at least 3.0 and consent of the instructor. Credits: 3

## Course Listings and Descriptions

### **MTH 499 - Independent Study and Research**

Hours, credit, topics, and time to be arranged with individual staff members with approval of the department. Offered fall and winter semesters. Credits: 1 to 4

### **MTH 615 - Statistics with Probability**

A blend of theory and applications with emphasis on applications. This calculus-based statistics course includes such topics as probability distributions, sampling, estimation, confidence intervals, hypothesis testing, and regression. A statistical computer package will be used extensively. Prerequisite: Certification in secondary mathematics. Credits: 3

### **MTH 625 - Number Theory**

The mathematical treatment of the properties and the structure of the set of integers. Topics include prime numbers, divisibility, number-theoretic functions, the algebra of congruence classes, and applications. Prerequisite: Certification in secondary mathematics. Credits: 3

### **MTH 629 - Secondary Student Issues**

Research, theories, and recommendations of professional groups provide the foundation for exploring appropriate content, activities, applications and teaching techniques for meeting special needs of secondary students in mathematics. Special attention will be given to mathematics anxiety and avoidance. Prerequisite: Completion of 24 credit hours in program. Credits: 3

### **MTH 641 - Modern Geometry**

The study of geometry as a mathematical system, explorations of different geometries and their relations to physical space and as sources of mathematical models, investigations of geometrical thinking in problem solving in mathematics and areas outside of mathematics. Computer applications appropriate to school classrooms. Prerequisite: Certification in secondary mathematics. Credits: 3

### **MTH 645 - Discrete Mathematics**

A study of discrete mathematical structures, including sets, logic, algebraic structures, relations; graphs and digraphs, trees, and networks. Prerequisite: Certification in mathematics. Credits: 3

### **MTH 680 - Special Topics in Mathematics**

Readings, lectures, discussions, or lab (or any combination) in specific topics in mathematics or mathematics education. Offered on sufficient demand. Prerequisite: Permit required. Credits: 1 to 4

### **MTH 686 - High School Mathematics Workshop**

Expands the perspective on the teaching of precalculus secondary mathematics. The workshop will focus on the impact of technology, general approaches to problem solving, and the use of writing in the teaching of mathematics. Offered on sufficient demand. Prerequisite: Permission of department. Credits: 1 to 3

### **MTH 699 - Directed Readings in Mathematics**

Independent supervised reading on selected topics in mathematics. Credits and topics must be prearranged with a faculty member and approved by the department. Offered fall and winter semesters. Credits: 1 to 3

### **MUS 099 - Developmental Applied Music**

Lessons for music majors or minors who have been accepted conditionally because of a lack of music proficiency on their major instrument or voice. May be repeated for credit. Prerequisites: All students who wish to elect applied music must present written permission of the instructor at the time of registration and must register in an appropriate ensemble. Credits: 2

### **MUS 100 - Introduction to Music Literature**

Basic course in music, designed especially for liberal arts students. Study of musical forms, style, media and materials, coupled with the development of intelligent listening habits. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

### **MUS 101 - Grand Valley Singers**

The principle university choir. Fulfills degree requirements for major ensemble participation. Prerequisites: Successful audition and permission of instructor. Credits: 1

### **MUS 102 - Concert Band**

Develop aesthetic sensitivity, musical knowledge and ensemble performance skills through performance of standard wind band music. Meets degree requirements for major ensemble participation. Prerequisites: Permission of instructor. Audition required. Credits: 1

### **MUS 103 - Grand Valley Symphony Orchestra**

Fulfills degree requirements for major ensemble participation. Prerequisites: Audition and permission. Credits: 1

### **MUS 104 - Chamber Music Ensembles**

Chamber music groups such as string quartet, woodwind quintet, vocal ensembles, or brass quartet. Will be taken over two semesters for one credit. Credits: .5

### **MUS 105 - Grand Valley Jazz Ensemble**

Big jazz band. Prerequisite: Permission of instructor. Credits: 1

### **MUS 107 - Grand Valley Marching Band**

The university marching band. Two semesters required of B.M.E. woodwind, brass, and percussion majors. Fulfills degree requirements for major ensemble participation. Offered fall semester. Prerequisite: Successful audition at band camp. Credits: 1

### **MUS 108 - New Music Ensemble**

A performing ensemble dedicated to the music of our time. Solo, chamber, and large ensemble works drawn from the broad spectrum of contemporary music are performed. Activities include an annual commissioning program in which the ensemble works with a notable composer in the creation and realization of a new composition. Offered fall and winter semesters. Prerequisite: Permission of instructor. Credits: 1

### **MUS 109 - Select Women's Ensemble**

A women's ensemble open to campus and community singers. This chorale learns a variety of repertoire and participates in two concerts on campus each semester. Offered fall and winter semesters. Prerequisites: Audition and permission of instructor. Credits: 1

### **MUS 110 - Collegium Musicum**

Performance of older music (mainly before 1700) by students, either singing or playing on period instruments. Prerequisite: Permission of instructor. Credits: 1

### **MUS 111 - Grand Valley Basketball Pep Band**

This ensemble performs at every home basketball game and, like the Laker Marching Band, is an integral support unit for Athletics. Offered winter semester. Prerequisites: Audition and permission of instructor. Credits: 1

### **MUS 112 - Symphonic Wind Ensemble**

Enrollment limited to 40 finest wind and percussion instrumentalists at Grand Valley. Performs most challenging traditional and contemporary band literature. Fulfills degree requirements for major ensemble participation. Prerequisites: Audition and permission of instructor. Credits: 1

### **MUS 113 - Grand Valley Percussion Ensemble**

The Grand Valley Percussion Ensemble provides students with the opportunity to learn percussion techniques and literature through rehearsal and performance in a chamber setting. The literature performed is selected from the best available compositions for this instrumentation and performed without a conductor. Credits: 1

### **MUS 115 - Grand Valley Chamber Orchestra**

The principle string players of the University-Community Orchestra, plus keyboard and soloists, perform music from all eras without a conductor. Prerequisite: Permission of the instructor. Credits: 1

### **MUS 116 - Grand Valley Madrigal Ensemble**

Sixteen-voice SATB ensemble performing a cappella madrigals and motets of the early periods of music. Credits: 1

### **MUS 117 - Grand Valley University Arts Chorale**

Forty-voice SATB ensemble performing break choral masterpieces from the Renaissance through the twentieth century. Fulfills degree

requirements for major ensemble participation. Prerequisites: Audition and permission of instructor. Credits: 1

#### **MUS 118 - Varsity Men**

A singing group open to any interested male singer. The ensemble sings a variety of repertoire, including spirituals, barbershop, and folk song arrangements. Credits: 1

#### **MUS 119 - Survey of Music Literature I**

A survey of music literature from the Middle Ages through the mid-eighteenth centuries. Required of all music majors and minors. Offered fall semester. Prerequisites: Acceptance and registration in Bachelor of Music Education, Bachelor of Music, Bachelor of Arts (music) or music minor. Credits: 3

#### **MUS 120 - Survey of Music Literature II**

A survey of music literature of the late eighteenth through early twentieth centuries, concluding with a brief introduction to the study of nonwestern musical cultures. Required of all music majors and minors. Offered winter semester. Prerequisite: MUS 119. Credits: 3

#### **MUS 121 - University Band**

The University Band performs quality standard band literature and presents one concert at the end of the semester. Designed specifically for the nonmajor, the University Band meets during the winter semester and is open to all students. No audition is required for participation. Class may be repeated for credit. Offered winter semester. Credits: 1

#### **MUS 126 - Collaborative Piano**

Preparation for performance of piano accompaniments for appropriate soloists or ensembles. Offered fall and winter semesters. Credits: 1

#### **MUS 129 - Fundamentals of Music**

Beginning study of music notation, sight-singing, keyboard, and music terminology. Designed for the general student who wishes to learn the fundamentals of music as well as for the prospective music major or minor who has had no theoretical training. Fulfills Foundations - Arts. Credits: 3

#### **MUS 130 - Music Theory I**

Music fundamentals for music majors and minors. Musical notation using four clefs, simple, compound, and asymmetric meter, all scales, tertian harmonies to seventh chords, figured bass, and four-part writing. Required of all music majors. Offered fall semester. Credits: 3

#### **MUS 131 - Music Theory II**

Continuation of MUS 130. Secondary harmonies, harmonization of melodies, instrumental transposition. Harmonic and melodic analyses of selected Baroque and Classical works using the following forms and techniques: fugue, figured bass, variation, minuet and trio, sonata, rondo, concerto grosso, binary form. Required of music majors. Offered winter semester. Prerequisite: MUS 130. Credits: 3

#### **MUS 133 - Aural Perception and Sight-Singing I**

Introduction of solfeggio and rhythmic syllables, singing with one-line accompaniments, use of four clefs, two- and four-part dictation, improvisation with syllables, error detection. Listening for meter, bass lines, and melodic techniques. Required of all music majors. Offered fall semester. Prerequisites: Acceptance and registration in Bachelor of Music Education, Bachelor of Music, Bachelor of Arts (Music) or music minor. Credits: 1

#### **MUS 134 - Aural Perception and Sight-Singing II**

Continuing development of musicianship through intervallic drill, dictation and singing exercises with subdivision of the beat and syncopation. Aural recognition of cadence types, melodic techniques, and tonal forms as studied in MUS 131. Sing and play exercises with chordal accompaniment. Required of music majors. Offered winter semester. Prerequisite: MUS 133. Credits: 1

#### **MUS 141 - Private Instruction in Voice and Instruments – Freshman**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in

the current year Department of Music, Theatre, and Dance Handbook. Offered fall and winter semesters. Prerequisites: Permission of instructor. Registration in an appropriate ensemble. Credits: 1

#### **MUS 142 - Private Instruction in Voice and Instruments – Freshman**

The course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 141. Students must also be registered in an appropriate ensemble. Credits: 1

#### **MUS 144 - Private Instruction in Voice and Instruments - Freshman**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Offered fall and winter semesters. Prerequisite: Acceptance and registration into the Bachelor of Music. Credits: 3

#### **MUS 145 - Private Instruction in Voice and Instruments – Freshman**

The course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 144. Students must also be registered in an appropriate ensemble. Credits: 3

#### **MUS 170 - Stage Movement**

Movement training for actors and singers, using techniques of ballet, jazz, and modern dance. This class will produce flexible, coordinated bodies that will respond to the creative demands of the stage. Course offered fall and winter semesters. Credits: 1

#### **MUS 180 - Special Topics in Music**

An exploration of theatre, dance, and musical arts through lectures and attendance of professional performances. Offered fall and winter semesters. Credits: 1

#### **MUS 182 - Arts at Noon**

An exploration of musical arts through lectures and attendance at professional performances. Course offered fall and winter semesters. Credits: 1

#### **MUS 184 - Musical Performance Anxiety**

Students in this course will learn to identify physical and mental stress factors that contribute to musical performance anxiety. Additionally, students will learn different techniques to help alleviate the effects of musical performance anxiety and will create a systematic approach for performing under pressure. Course offered winter semester. Prerequisite: Concurrent enrollment in applied lessons. Credits: 3

#### **MUS 200 - Introduction to Music Education**

This course is designed to provide students with rudimentary experiences in and theoretical knowledge of music education curriculum, facilities and program design and knowledge of instructional techniques for all types of school-aged learners. Offered winter semester. Credits: 1

#### **MUS 218 - World Music**

An exploration of nonwestern music and western folk music. Develops listening skills and ability to describe musical sounds and structures. Introduces an ethnomusicological perspective that considers music in relation to other aspects of society and culture. Fulfills Foundations - Arts. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Credits: 3

#### **MUS 219 - Jazz History**

Survey of jazz from 1900—present; including Dixieland, blues, swing, be-bop, cool jazz, jazz fusion, free jazz and the avant garde, and the so-called “third stream.” Music background is helpful but not mandatory. Fulfills Cultures - U.S. Diversity. Offered fall semester. Credits: 3

## Course Listings and Descriptions

### **MUS 230 - Music Theory III**

A study of nineteenth-century harmonic, melodic, and formal techniques, including alternate resolutions of diatonic and chromatic seventh chords, altered and expanded tertian harmonies. Analyses of works in a variety of mediums. Introduction to species and harmonically governed counterpoint. Required of music majors. Offered fall semester. Prerequisite: MUS 131. Credits: 3

### **MUS 231 - Music Theory IV**

A study of post1900 musical techniques: extended chromatic and higher-numbered harmonies, their use and resolutions, including those in jazz and pop music. Study of non-tertian harmonies, bi-tonality, use of pitch sets, and serialism. Notation and reading of contemporary scores. Analysis of selected jazz improvisation. Required of music majors. Offered winter semester. Prerequisite: MUS 230. Credits: 3

### **MUS 233 - Aural Perception and Sight-Singing III**

Further development of musicianship using rhythmic and melodic dictation and singing using ties and chromaticism and modulation, harmonic dictation using secondary harmonies, two-part bicinia for sing-and-play exercises. Improvisation using typical jazz progressions. Interval singing, critical listening with four-voice examples. Required of music majors. Offered fall semester. Prerequisite: MUS 134. Credits: 1

### **MUS 234 - Aural Perception and Sight-Singing IV**

Intervallic singing and dictation using post1900 melodies. Aural recognition of contemporary musical techniques. Required of music majors. Offered winter semester. Prerequisite: MUS 233. Credits: 1

### **MUS 241 - Private Instruction in Voice and Instruments – Sophomore**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments, and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 142. Students must also be registered in an appropriate ensemble. Credits: 1

### **MUS 242 - Private Instruction in Voice and Instruments – Sophomore**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments, and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 241. Students must also be registered in an appropriate ensemble. Credits: 1

### **MUS 244 - Private Instruction in Voice and Instruments – Sophomore**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments, and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 145. Students must also be registered in an appropriate ensemble. Credits: 3

### **MUS 245 - Private Instruction in Voice and Instruments – Sophomore**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments, and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 244. Students must also be registered in an appropriate ensemble. Credits: 3

### **MUS 248 - Singing for Nonmajors**

This course is designed to provide vocal performance skills to nonmusic majors. The focus will be on building a basic technical foundation and skills for musical theatre auditioning. Course content and repertoire selection will be designed for the needs of the individual student group. Offered every semester. Credits: 1

### **MUS 253 - Woodwind Techniques**

Instruction in basic playing skills for the clarinet, saxophone, flute, oboe, and bassoon. Offered fall semester. Credits: 2

### **MUS 255 - Brass Techniques**

Instruction in basic playing skills on the trumpet, French horn, trombone, euphonium, and tuba. Offered winter semester. Credits: 2

### **MUS 257 - Class Percussion**

Offered winter semester. Credits: 1

### **MUS 258 - String Techniques**

Instruction in basic playing skills on the violin, viola, violoncello, and string bass. Offered fall semester. Credits: 2

### **MUS 263 - Keyboard Musicianship I**

Introductory keyboard skills, scales, chords, easy pieces, transpositions, improvisations, basic theory at the keyboard. Offered fall semester. Credits: 1

### **MUS 264 - Keyboard Musicianship II**

A continuation of MUS 263. Offered winter semester. Prerequisite: MUS 263. Credits: 1

### **MUS 267 - Opera Workshop**

Opera Workshop is designed specifically for the Bachelor of Music voice emphasis student. The singer/actor process will be explored through text study, theater games, and movement exercises. The singer/actor relationship to songs, arias, and scenes from opera and music theater will be the source of study. Offered fall semester. Prerequisite: MUS 144. Credits: 1

### **MUS 283 - Keyboard Musicianship III**

Intermediate keyboard skills, accompaniments to melodies, sequential and free transposition, improvisation, open-score reading, and other creative skills at the keyboard. Required of all majors. Offered fall and winter semesters. Prerequisite: MUS 264. Credits: 1

### **MUS 284 - Keyboard Musicianship IV**

A continuation of MUS 283. Required of all music majors whose primary instrument is voice. Offered fall and winter semesters. Prerequisite: MUS 283. Credits: 1

### **MUS 300 - Exploring American Music**

Introduction to a variety of American musical styles drawn from many cultures, including Native American, African American, Latino, and European American traditions. Topics may include folk music, religious music, Broadway, country, jazz, rock, and American classical music. Fulfills Cultures - U.S. Diversity. Offered fall semester. Credits: 3

### **MUS 301 - History of Rock and Roll**

This course presents an overview of how rock music has evolved from the latter half of the 20th Century through current musical representations. Additionally, it is expected that students will learn the ways in which rock music of the past and present represents social commentary and has influenced societal change. Part of the Human Rights Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **MUS 302 - Music: Medieval and Renaissance Eras**

A comprehensive study of the early development of European art music beginning with the musicalization of the mass, through the late Renaissance (1600). Focus on the emergence of compositional techniques, theoretical writings, and the development of musical forms. Offered fall semester of odd-numbered years on sufficient demand. Prerequisite: MUS 120. Credits: 3

### **MUS 303 - Music: Baroque Era**

A comprehensive examination of vocal and instrumental music from 1600 to 1750. Major forms studied will include concerto, opera, oratorio, cantata, and fugue. Principle composers studied will include Monteverdi, Scarlatti, Corelli, Vivaldi, Telemann, Handel, and J.S. Bach. An analytical and historical approach with emphasis on listening. Offered fall semester of even-numbered years on sufficient demand. Prerequisite: MUS 120. Credits: 3

### **MUS 304 - Music: Classical Era**

A comprehensive examination of vocal and instrumental music from 1750 to 1825. Large and small forms will be included with emphasis on the compositions of Mozart, Haydn, and Beethoven. Offered winter semester of even-numbered years. Prerequisite: MUS 120. Credits: 3

**MUS 305 - Music: Nineteenth Century**

A study of nineteenth-century music by composers of Europe and North America, considering examples of symphonic poems, lieder, character pieces, chamber music, and nationalistic music. Study of “classical” forms as altered in opera and symphonic music. Offered winter semester of odd-numbered years. Prerequisite: MUS 120. Credits: 3

**MUS 306 - Music from 1900-1960**

A survey of the development of the new and unique forms of expressive and intellectual 20th Century musical style from circa 1900 to 1960 including the exploration of impressionism, atonality, serialism, neo-classicism and other innovations of 20th Century master composers. Offered fall or winter semester. Prerequisite: MUS 120. Credits: 3

**MUS 307 - Music Since 1960**

A study of stylistic developments in music since 1960, with an emphasis on major compositional figures, the increasing influence of vernacular styles, the development of new electronic media, and developments outside of Europe and North America. Course offered in winter semester of even-numbered years. Prerequisites: MUS 120 and MUS 231. Credits: 3

**MUS 308 - Music History Seminar**

Examines a particular topic in music history, such as the development of a genre, the work of a composer, or a significant work. Regardless of topic, all sections will explore music in relation to historical, social, intellectual, and artistic developments. May be repeated for credit when content varies. Offered fall semester. Prerequisite: MUS 120. Credits: 3

**MUS 310 - Piano Literature**

A study of music written for the keyboard from the Renaissance to the present time. Offered on sufficient demand. Credits: 2

**MUS 320 - Introduction to Conducting**

Fundamentals of baton technique: laboratory experience in conducting, choral and instrumental works, cuing, score reading, and terminology. Offered fall semester. Prerequisites: MUS 231 and MUS 234. Credits: 2

**MUS 330 - Instrumentation/Orchestration**

A practical course in the arrangement of music for instruments of the orchestra and band as well as vocal scoring. Offered fall semester every other year. Credits: 3

**MUS 333 - Form and Analysis in Western Music**

A study of the principle formal types used in both instrumental and vocal music from 1700 to the present. Formal types discussed will include binary and ternary forms; rondo, sonata and sonata-rondo forms; ritornello in the concerto, and variation types. Offered fall semester. Prerequisite: MUS 231. Credits: 3

**MUS 337 - Jazz Theory**

Study of chord voicings beyond basic triads and seventh chords, and of basic contemporary jazz harmonic progressions. Substitute progressions will be studied along with various jazz scale forms. Various theories of jazz harmony will be explored along with analysis of tunes taken from the jazz repertoire. Offered once a year. Credits: 2

**MUS 338 - Techniques of Jazz Instruction**

Technique and practice in basic instructional, playing and improvisation skills appropriate to teaching American Jazz in public schools. Course offered winter semester. Prerequisites: MUS 200; MUS 341. Credits: 1

**MUS 341 - Private Instruction in Voice and Instruments – Junior**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 242. Students must also be registered in an appropriate ensemble. Credits: 1

**MUS 342 - Private Instruction in Voice and Instruments – Junior**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students

will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 341. Students must also be registered in an appropriate ensemble. Credits: 1

**MUS 344 - Private Instruction in Voice and Instruments – Junior**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Prerequisites: MUS 245. Students must also be registered in an appropriate ensemble. Credits: 3

**MUS 345 - Private Instruction in Voice and Instruments – Junior**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble and complete a half recital. Prerequisite: MUS 344. Credits: 3

**MUS 354 - Teaching the Developing Voice**

Principles of voice building as applied to the voices of children and adolescents; a course for prospective choral music teachers. Research-based readings, guided one-on-one instruction of singers from area school music programs, discussion of issues related to young singers. Restricted to music education majors. Course offered winter semester. Prerequisite: MUS 200. Credits: 2

**MUS 357 - Opera Theatre**

An ensemble course for voice students who have been assigned major roles in Opera Theatre mainstage productions. Emphasis on practical aspects of studio voice work, acting, and movement classes. Offered every semester. Prerequisite: Permission of instructor. Credits: 1

**MUS 359 - Diction for Singers**

Develops a basis for proper pronunciation and understanding of foreign language songs. Offered fall semester. Prerequisites: FRE 101 and GER 101. Credits: 2

**MUS 360 - Performance Literature**

Survey of solo musical literature representing the style periods typically associated with the students' applied area of musical study. Students will summarize, study, and examine appropriate vocal or instrumental repertoire for their applied area of musical study. Offered fall and winter semesters. Prerequisite: Permission of instructor. Credits: 2

**MUS 361 - Piano Pedagogy I**

A study of fundamentals of piano playing designed for prospective teachers. Includes a practicum in which students do guided teaching. Required of Bachelor of Music students whose primary instrument is piano. Offered fall semester. Credits: 3

**MUS 362 - Marching Band Techniques**

Designed to acquaint B.M.E. majors with all aspects of today's marching band. Offered every fall. Required of all B.M.E. instrumental majors. Credits: 2

**MUS 370 - Performance Pedagogy**

Performance Pedagogy focuses on teaching fundamentals, pedagogical traditions and techniques, interpretation of selected repertoire and musical progress, current pedagogical research pertaining to student's major performance area, and the maintenance and adjustment of the equipment/body for a successful performance. Offered fall and winter semesters. Prerequisite: Permission of instructor. Credits: 2

**MUS 371 - Piano Pedagogy II**

A study of intermediate and early-advanced materials for use in private and small group studio teaching. Includes review of journals, current technology, group strategies, and guided teaching. Required of B.M. students whose primary instrument is piano. Offered winter semester. Credits: 3

## Course Listings and Descriptions

### **MUS 379 - Piano Pedagogy Masterclass**

A course which focuses on the performance and interpretation of pedagogical repertoire as well as pedagogical research. Designed for those interested in a lifelong career of teaching. Offered fall semester. Credits: 1

### **MUS 380 - Special Topics in Music**

The opportunity to develop certain advanced skills or study material not regularly offered as part of the music curriculum. Prerequisite: Permission of instructor. Credits: 1 to 4

### **MUS 399 - Special Readings in Music**

Independent study in problems of music and music education. To be arranged with the instructor. Offered fall and winter semesters. Credits: 1 to 4

### **MUS 441 - Private Instruction in Voice and Instruments – Senior**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble and complete a half recital. Prerequisite: MUS 342. Credits: 1

### **MUS 442 - Private Instruction in Voice and Instruments - Senior**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble. This course may be repeated for credit. Prerequisites: MUS 441. Students must also be registered in an appropriate ensemble. Credits: 1

### **MUS 444 - Private Instruction in Voice and Instruments – Senior**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble as outlined in the current year Department of Music, Theatre, and Dance Handbook. Offered fall and winter. Prerequisites: MUS 345. Students must also be registered in an appropriate ensemble. Credits: 3

### **MUS 445 - Private Instruction in Voice and Instruments - Senior**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students will be required to register in an appropriate ensemble and complete a full recital. Offered fall and winter semester. Prerequisite: MUS 444. Credits: 3

### **MUS 446 - Private Instruction in Voice and Instruments - Elective**

This course is a weekly tutorial with an assigned instructor in the particular instrument or voice. Emphasis is on skill building, expressive capabilities, weekly assignments and consistent daily practice. Students must also be registered in an appropriate ensemble. This course may be repeated for credit. Course offered fall and winter semesters. Prerequisite: MUS 445. Credits: 3

### **MUS 456 - Teaching Music in the Elementary School**

Techniques and methods of teaching music to children in elementary schools. Students will explore developmentally appropriate music pedagogy and repertoire for the elementary music classroom. Restricted to music education majors. Course offered fall semester. Prerequisite: MUS 200. Credits: 2

### **MUS 461 - Instrumental Music Methods and Materials**

Includes a brief survey of current practices in music education, techniques and methods of instrumental music education, and introduction to materials of the music industry designed for school use. Restricted to music education majors. Course offered winter semester. Prerequisite: MUS 200. Credits: 2

### **MUS 465 - Choral/General Music in the Secondary School**

Techniques, trends, and materials in secondary general and choral music. Topics include: the adolescent voice, choral programming, the budget process, musicals, and contests and elective music classes. Restricted to

music education majors. Course offered winter semester. Prerequisite: MUS 200. Credits: 2

### **MUS 479 - B.A. Senior Project**

The B.A. senior project is an intensive individual experience in one or more aspects of music. It can take several forms, such as an academic paper, a lecture-recital, the direction of a performance, or a music-related internship. Offered fall and winter semesters. Prerequisite: Permission of instructor. Credits: 1 to 2

### **MUS 495 - Analytical Techniques (Capstone)**

A comprehensive course in analysis, pursued through examination of scores, drawn from a wide range of periods, styles, media, and genres, with an emphasis on structural analysis, tonal relationships, motivic growth and development, and on the exploration of the aesthetic similarities of all music. Prerequisite: Completion of one upper-level music elective 302-308, 330-337. Credits: 3

### **MUS 499 - Independent Study and Research in Music**

Advanced independent study in problems of music and music education. To be arranged with the instructor. Offered fall and winter semesters. Credits: 1 to 4

### **MUS 643 - Applied Music**

Private instruction on one's principal performing instrument. Offered fall and winter semester. Credits: 3

### **MUS 680 - Special Topics in Music**

Specialized topics ranging from specific genres of music to specific pedagogical issues in teaching. Offered on demand. Credits: 1 to 3

### **MUS 699 - Independent Study and Research**

Independent, graduate research or study in an area of music of special interest to the student. Prior to registration, the student must arrange for supervision by a faculty member and submit a contract (available in the Department of Music, Theatre, and Dance) specifying the scope of the proposed study. Offered every semester. Prerequisite: Permission of instructor and music department chair. Credits: 1 to 4

### **NRM 140 - The Climatic Factor**

A study of the atmosphere, broad aspects of weather and climate, microclimatology, and the geography of climate and effects on terrain, vegetation, and people. Does not count toward the N.R.M. major. Fulfills Foundations - Physical Sciences with a lab. (3-0-2) Offered fall and winter semesters. Credits: 4

### **NRM 150 - Introduction to Natural Resources**

An overview of the natural resources field, exploring how humans use and manage renewable natural resources and the associated ecosystems. Topics will include soils, wetlands, watersheds, fisheries, forestry, wildlife, resource policy and economics, restoration ecology, ecosystem management, and natural resource careers. Required in the NRM major and minor. (0-3-0) Offered fall and winter semesters. Credits: 3

### **NRM 180 - Special Topics in Natural Resources Management**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Credits: 1 to 4

### **NRM 230 - Introduction to Wildland Fire Management**

This course provides students with a basic introduction to wildland and prescribed fire ecology, behavior, and management. This is required training for all personnel seeking to become Wildland Firefighters under National Wildfire Coordinating Group (NWCG) certification standards. NWCG certifications S-130, S-190, and L-180 are granted upon successful course completion. Course offered winter and summer semester. Credits: 2

### **NRM 240 - Principles of Climatology**

The atmosphere, broad aspects of weather and climate, microclimatology, and paleoclimatology. Instrumentation, data presentation, ecoclimate, and microclimatological field observations. Lecture, laboratory, and field trips. (3-0-2) Credits: 4

**NRM 250 - Resource Measurement and Maps**

Techniques of resource measurement including understanding spatial relationships and tools associated with data analysis. Introduction to navigation with compass, vegetation sampling, use of geographic information systems, global positioning systems, remote sensing, and their integration. (2-0-3) Offered fall semester. Credits: 3

**NRM 280 - Special Topics in Natural Resources Management**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Credits: 1 to 4

**NRM 281 - Principles of Soil Science**

Aspects of the physical, chemical, and biological properties of soils. (3-0-3) Offered fall semester. Prerequisite: CHM 109 or CHM 115. Credits: 4

**NRM 300 - Ethical Recreation: Leave No Trace**

This three-day backpacking course covers how increasing recreational use of public lands can impact biophysical resources and visitors' experience. Students will apply the principles and practices of the Leave No Trace (LNT) program which are designed to reduce the effects of wildland recreation. LNT certification possible upon successful completion. Offered spring/summer semester. Prerequisites: Completion of the general education Life Sciences requirement. Junior standing. Permit required. Credits: 1

**NRM 308 - Wildlife Ecology**

This course provides an introduction to wildlife ecology including population ecology as it relates to wildlife management and conservation. Offered winter semester. Prerequisite: BIO 215. Credits: 4

**NRM 320 - Introduction to Resource Systems**

Basic principles, terminology, and methodology for the analysis and modeling of resource systems, including natural environments and human ecosystems. (2-0-3) Offered winter semester. Prerequisites: BIO 215 and MTH 122. Credits: 3

**NRM 330 - Environmental Pollution**

Investigation of causes and effects of water, soil and air pollution. Prevention and management of pollution will be discussed and examined from natural and social science perspectives. Design of impact assessment studies, data interpretation and laboratory methods. Topics may include waste disposal, acid deposition, climate change, toxicology, and risk assessment. (2-0-3) Offered winter semester. Prerequisite: CHM 109 or CHM 116. Credits: 3

**NRM 380 - Special Topics in Natural Resources Management**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Credits: 1 to 4

**NRM 386 - Ecological Restoration and Management**

This course will introduce students to ecological restoration and examines the practical methods and techniques used in ecosystem restoration and management. Cross-listed with BIO 386. Course offered fall semester. Prerequisite: BIO 215. Credits: 4

**NRM 395 - GIS Applications in Resource Management**

Explores applications of geographic information systems (GIS) in natural resources management. Students will work on projects and examine several case studies in which GIS is used for the management of natural resources, including watershed analysis, environmental impact of timber sales, habitat loss, and endangered species conservation. (2-0-3) Offered winter semester. Prerequisite: GPY 307 or NRM 250. Credits: 3

**NRM 399 - Readings in Resource Management**

Independent readings on selected topics. Credit and topic must be arranged with the appropriate staff member before registering. (No more than three credits can be applied to the major, none to the minor). Offered every semester. Credits: 1 to 3

**NRM 407 - Natural Resources and Society: Study Abroad**

Natural resources topics related to biodiversity, sustainability, alternative energy, environmental policy and economics, land use, climate change, historical influences, and cultural/societal attitudes conducted within an international context. The society-based experience is combined with readings, lectures, papers, and discussions. Credits: 1 to 4

**NRM 408 - Wildlife Management**

An examination of techniques used in the management, research, and conservation of wildlife species. Introduces the fundamental concepts of wildlife management, including wildlife habitat requirements, evaluation of habitat suitability, interpretation of data analysis techniques, and applied techniques of habitat and population management. Cross-listed with BIO 408. Offered fall semester. Prerequisite: BIO 308 or NRM 308. Credits: 4

**NRM 417 - International Field Studies in Resource Ecology and Management**

Intensive field work related to natural resources ecology, conservation, preservation, and management conducted within an international context. The field-based experience is combined with readings, lectures, papers, and discussions. Credits: 1 to 4

**NRM 420 - Wildland Recreation Management**

Learn about the challenges of managing wildland recreation that both meets the needs of users and preserves the ecological health of ecosystems. Learn techniques to manage dispersed recreation that occurs on public lands and waters and how to limit their impact on visitors and soil, vegetation, water, and wildlife. (3-0-0) Offered fall semester. Credits: 3

**NRM 450 - Applied Spatial Analysis of Natural Resources**

The course focuses on environmental and natural resource applications of computer-based spatial analysis concepts and techniques. Students will analyze contemporary environmental challenges using, for example, advanced geographic information systems (GIS) tools, image interpretation and analysis, simulation modeling, and spatial analysis. Offered fall semester. Prerequisite: NRM 395 or GPY 307. Credits: 3

**NRM 451 - Natural Resource Policy**

Study of how natural resource policy is developed and implemented in the United States. Focuses on public policies toward renewable resources such as forests, biodiversity, land, recreation, and water. Includes foundations of the American legal system, choice of policy instruments, and basic methods of policy analysis. Part of the Sustainability Issue. (4-0-0) Offered fall and winter semesters. Prerequisites: Junior standing and completion of Foundations - Natural Sciences; or permission of instructor. Credits: 3

**NRM 452 - Watershed and Wetland Management**

Theory and application of urban, rural, and wildland hydrology, including the management of watersheds and wetlands to improve water quality, stabilize stream flows, and conserve stream and wetland biota. (3-0-3) Offered fall semester. Prerequisites: MTH 122, NRM 150, NRM 250. Credits: 4

**NRM 462 - Forest Ecosystem Management**

An introduction of traditional and contemporary forestry practices including tree identification, silviculture, and vegetation measurements. Course emphasizes integration of established practices with the concepts of sustainable forestry and ecosystem management. The presentation, discussion, and synthesis of new approaches to the management of forest ecosystems will be especially stressed. (3-0-3) Offered winter semester. Prerequisites: NRM 150, NRM 250. Credits: 4

**NRM 480 - Special Topics in Natural Resources Management**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Credits: 1 to 4

**NRM 481 - Soils and Soil Classification**

Processes of soil formation, the occurrence of soils of the landscape, and soil classification. (3-0-3) Prerequisite: NRM 281. Credits: 4

## Course Listings and Descriptions

### **NRM 486 - Advanced Restoration Ecology**

This course will introduce students to the science of restoration ecology through an examination of underlying theories and contemporary research in ecosystem restoration. Cross-listed with NRM 586, BIO 486, and BIO 586. Course offered winter semester of even-numbered years. Prerequisite: NRM 386 or BIO 386 or permission of instructor. Credits: 3

### **NRM 490 - Internship in Resource Management**

Internships are available in all areas of specialization. Location of placement and credit must be arranged with the appropriate faculty before registration. (No more than five credits in 490 and 499 can be applied to the major; three to the minor.) Offered each semester. Prerequisite: Junior status in resource management. Credits: 1 to 5

### **NRM 495 - Trends in Natural Resource Management (Capstone)**

A comprehensive and integrative analysis of the fundamental assumptions, issues, and problems of natural resources management. Examines the historical roots of natural resource management, identifies factors that caused natural resource management to change, and explores proposals for managing natural resources in the future. (0-4-0) Offered fall and winter semesters. Prerequisites: Senior standing, STA 215, NRM 150, and one of the following: NRM 330, NRM 386, NRM 408, NRM 420, NRM 452, NRM 462. Credits: 4

### **NRM 496 - Trends in Western U.S. Natural Resource Management**

This course provides a comprehensive perspective on the fundamental assumptions, problems, and solutions to natural resources management issues in the Western U.S. We will examine the historical roots of management and explore new paradigms for managing natural resources. Must be taken prior to NRM 497 to fulfill the Capstone requirement. Course offered winter semester. Prerequisites: Senior standing, STA 215, NRM 150, and one of the following: NRM 330, NRM 386, NRM 408, NRM 420, NRM 452, NRM 462. Credits: 2

### **NRM 497 - Field Trip - Issues in Western U.S. Natural Resources Management**

This field trip will provide a broad and comprehensive perspective on natural resource management issues in the Western United States. We will meet with public land management officials, representatives from nongovernment organizations, and private individuals to explore the challenges of managing public land and water resources. Course offered spring/summer semester. Prerequisite: NRM 496 or permission of instructor. Credits: 2

### **NRM 499 - Research in Resource Management**

Research conducted individually with faculty supervision and/or in cooperation with other majors in resource management. Research projects and credit hours must be approved by the appropriate faculty before registration. Limits: Three credits toward major or minor; five credits of NRM 490 plus NRM 499 toward major or three toward minor. Prerequisite: Junior status in resource management. Credits: 1 to 3

### **NRM 552 - Fisheries Management**

An introduction to the principles of fisheries science and management, focusing on the process and tools for managing fish populations and their habitat as well as emphasizing quantitative methods for fisheries assessment. Prerequisite: Graduate standing; or (BIO 362 Fisheries Biology, STA 215 Introductory Applied Statistics, and permission of instructor). Credits: 3

### **NRM 580 - Special Topics in Natural Resources Management**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Credits: 1 to 4

### **NRM 586 - Advanced Restoration Ecology**

This course will introduce students to the science of restoration ecology through an examination of underlying theories and contemporary research in ecosystem restoration. Cross-listed with NRM 486, BIO 486, and BIO 586. Course offered winter semester of even-numbered years. Prerequisite: NRM 386 or BIO 386 or permission of instructor. Credits: 3

### **NRM 680 - Special Topics in Natural Resources Management**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Credits: 1 to 4

### **NRM 691 - Graduate Internship**

Half- to full-time, on-the-job work performed at a sponsoring entity under the supervision of an approved mentor in an area related to natural resources or environmental science. A written internship analysis and a public oral presentation are required. The student will defend the internship analysis in front of the student's graduate committee. Offered each semester. Prerequisites: BIO 610 and successful completion of qualifying exams. Credits: 3 to 9

### **NRM 693 - Graduate Project**

Application of scientific knowledge to a problem in natural resources or environmental science. Projects will be performed under the supervision of an approved mentor from the sponsoring entity. A written report and public oral presentation are required. The student will defend the project report in front of the student's graduate committee. Offered every semester. Prerequisites: BIO 610, successful completion of qualifying exams and completion of the Responsible Conduct of Research Training within last three years. Credits: 3 to 9

### **NRM 695 - Graduate Thesis Research**

Original research related to natural resources or environmental science. Work will be performed under the supervision of the student's graduate committee chair or an approved research mentor. A written thesis and a public oral presentation are required. The student will defend the thesis in front of the student's graduate committee. Offered every semester. Prerequisites: BIO 610, successful completion of qualifying exams and completion of the Responsible Conduct of Research Training within last three years. Credits: 3 to 9

### **NRM 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **NRM 699 - Independent Study**

Independent study in areas related to natural resources or environmental science of special interest to the student. Studies will be supervised by a faculty member approved by the student's graduate committee chair. May be elected for up to a maximum of six credits toward the M.S. in biology. Offered every semester. Prerequisite: Permission of the student's graduate committee chair, instructor, and department chair. Credits: 1 to 3

### **NUR 180 - Special Topics in Nursing**

Readings, lecture, discussion, or lab in specific nursing topics. Credits: 1 to 3

### **NUR 265 - Introduction to Nursing Research and Evidence-based Practice**

Foundation for integration of evidence-based concepts into the provision of nursing care. An introduction to the process of developing research evidence leading to acquisition of skills, knowledge, attitudes necessary for an effective consumer of research. Evidence sources are identified and explored for their contribution to evidence based practice. Offered fall and winter semesters. Prerequisites: Admission to the Kirkhof College of Nursing and STA 215 (may be taken concurrently). Credits: 3

### **NUR 266 - Professional Nursing I**

The key concepts for nursing practice are introduced with an emphasis on communication, health promotion, and health restoration at the individual level. Professional nurse roles of provider of care, coordinator/manager/designer of care, and member of the profession are introduced. Offered fall and winter semesters. Prerequisites: Admission to the Kirkhof College of Nursing and STA 215 (may be taken concurrently). Credits: 4

### **NUR 267 - Clinical Nursing I**

Knowledge from core courses, liberal arts and nursing is used to provide the development of nursing skills and the beginning application in the care of an individual patient. Emphasis is on communication, health promotion,

health restoration, health assessment and physical examination skills. Offered fall and winter semesters. Prerequisites: Admission to the Kirkhof College of Nursing, BMS 310, and NUR 266 (may be taken concurrently). Credits: 4

#### **NUR 280 - Special Topics in Nursing**

Readings, lecture, discussion, or lab in specific nursing topics. Credits: 1 to 3

#### **NUR 311 - Dimensions of Nursing Practice**

This course is one of two transition courses that students in the R.N. to B.S.N. program take for the baccalaureate degree. It focuses on concepts that are client oriented for the baccalaureate-prepared nurse level. Concepts to be emphasized include quality and safety, informatics, nursing roles, social, cultural, and ethical issues in nursing. Course offered spring/summer semester. Prerequisites: Admission to the R.N. to B.S.N. program and/or permission to register. Credits: 2

#### **NUR 312 - Professional Nursing Issues**

This course is one of two transition courses for the R.N. to B.S.N. program. It expands upon knowledge gleaned in the associate degree program, exploring concepts related to professional identity and communication in nursing. Professional identity includes accountability and nursing roles. Communication includes interpersonal and professional communication. Course offered fall semester. Prerequisites: Admission to the R.N. to B.S.N. program and/or permission to register. Credits: 2

#### **NUR 316 - Professional Nursing II**

Professional nurse roles of provider and coordinator/manager/designer of care, and member of a profession are expanded. Emphasis is on health promotion, health restoration and risk reduction for adults/older adults and their families. Offered fall and winter semesters. Prerequisites: NUR 266 and NUR 267. The following courses may be taken concurrently: BMS 305, BMS 311, NUR 265, and NUR 317. Credits: 4

#### **NUR 317 - Clinical Nursing II**

Knowledge from core courses, liberal arts, and nursing is used to formulate clinical judgments for adults and older adults and families. Students collaborate with health team members to further refine skills in clinical reasoning, therapeutic nursing interventions, and communication in various settings. Offered fall and winter semesters. Prerequisites: NUR 266 and NUR 267. The following courses may be taken concurrently: BMS 305, BMS 311, NUR 265, and NUR 316. Credits: 6

#### **NUR 344 - Healthy Aging: A Lifelong Journey**

Healthy aging is a lifelong process. This course will explore factors that affect physical, mental, biological, and spiritual aspects of human aging. Emphasis will be placed on achieving and maintaining optimal health and well-being across the life course. Part of the Health Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

#### **NUR 354 - Living with Life-Limiting Illness**

This course is intended for persons interested in exploring issues surrounding death and dying. Content will explore common physical, psychosocial, spiritual, and culturally-specific needs of the dying as well as ethical and legal considerations surrounding death. Standards of care from the discipline of hospice and palliative care are explored. Part of the Health Issue. (3-0-0) Offered every semester. Prerequisite: Junior status. Credits: 3

#### **NUR 362 - Professional Nursing III - Foundations**

Professional nurse roles of 1) provider, 2) coordinator/manager/designer of care, and 3) member of the profession are expanded further with a focus on the childbearing and childrearing families. Emphasis is on promotion and maintenance of family health, including family as client, to ensure optimal childbearing and childrearing. Course offered fall semester. Prerequisites: NUR 265, NUR 266, and NUR 267. Corequisites: NUR 316, NUR 317, and NUR 363. Credits: 2

#### **NUR 363 - Clinical Nursing III - Foundations**

Knowledge from liberal education and the discipline of nursing is used to inform family centered care for childbearing and childrearing populations. Students collaborate with health team members to further refine skills in clinical reasoning, therapeutic nursing interventions, and communication

through experiences in various clinical settings. Course offered fall semester. Prerequisites: NUR 265, NUR 266, NUR 267. Corequisites: NUR 316, NUR 317, NUR 362. Credits: 3

#### **NUR 366 - Professional Nursing III**

Professional nurse roles of provider and coordinator/manager/designer of care, and member of the profession are expanded further with a focus on the childbearing and childrearing families. Emphasis is on promotion and maintenance of family health to ensure optimal childbearing and childrearing. Offered fall and winter semesters. Prerequisites: BMS 311, NUR 316, and NUR 317. The following courses may be taken concurrently: BIO 355 and NUR 367. Credits: 4

#### **NUR 367 - Clinical Nursing III**

Knowledge from liberal education and the discipline of nursing is used to inform clinical reasoning for childbearing and childrearing families. Students collaborate with health team members to further refine skills in clinical reasoning, therapeutic nursing interventions, and communication through laboratory practice and experiences in various settings. Offered fall and winter semesters. Prerequisites: NUR 316 and NUR 317. The following courses may be taken concurrently: BIO 355 and NUR 366. Credits: 6

#### **NUR 368 - Professional Nursing III-Advanced**

Professional nurse roles of 1) provider of care, 2) coordinator/manager/designer of care, and 3) member of the profession are expanded further with a focus on advanced care for childbearing and childrearing families. Emphasis is on complex health issues during childbearing and childrearing. Course offered winter semester. Prerequisites: NUR 362, NUR 363. Corequisites: NUR 369, 416, NUR 417. Credits: 2

#### **NUR 369 - Clinical Nursing III - Advanced**

Knowledge from liberal education and the discipline of nursing is used to inform clinical reasoning for complex issues in childbearing and childrearing families. Students collaborate with health team members to further refine skills in advanced clinical reasoning, therapeutic nursing interventions and communication through laboratory practice, simulations, and clinical experiences. Course offered winter semester. Prerequisites: NUR 362 and NUR 363. Corequisites: NUR 368, NUR 416, and NUR 417. Credits: 3

#### **NUR 380 - Special Topics in Nursing**

Readings, lecture, discussion, or lab in specific nursing topics. Credits: 1 to 4

#### **NUR 381 - Perioperative Nursing Care**

This course focuses on the roles of the baccalaureate prepared nurse applying the nursing process while caring for individuals/populations undergoing surgical intervention. Course themes include: perioperative health, patient-centered care, quality and safety, communications, and professional identity. Content is informed by nationally accepted guidelines for perioperative nursing practice. Offered fall and winter semesters. Prerequisite: NUR 317 or proof of R.N. licensure. Credits: 2

#### **NUR 399 - Readings in Nursing**

Independent supervised readings on selected topics. Credits and topic must be prearranged with faculty sponsor(s). Credits: 1 to 4

#### **NUR 411 - Community Based Nursing Care**

This course focuses on the role of the baccalaureate prepared nurse in the application of the nursing process while caring for individuals and families in the community. Course concepts include development over the lifespan, group dynamics, systems, nursing roles, interdisciplinary behaviors and professional communication. Course offered spring/summer semester. Prerequisites: NUR 311 and NUR 312. Credits: 4

#### **NUR 412 - Nursing Care for Populations**

This course focuses on the role of the baccalaureate-prepared nurse in assessing, planning, intervening and evaluating health care needs for populations. Concepts such as culture, social justice and vulnerability will be examined as to their effects on population health. Genetics, health promotion and risk reduction will be emphasized. Course offered fall semester. Prerequisites: NUR 311, NUR 312, and NUR 411. Credits: 4

## Course Listings and Descriptions

### **NUR 416 - Professional Nursing IV**

Professional nurse roles of provider and coordinator/manager/designer of care, and member of the profession are integrated. Emphasis is on restoration, maintenance and promotion of health in individuals and families with long term physical and mental health limitations. Community as client will be introduced. Offered fall and winter semesters. Prerequisites: NUR 366 and NUR 367. Corequisites: NUR 417 and IPE 407. Credits: 4

### **NUR 417 - Clinical Nursing IV**

Knowledge from liberal education and the discipline of nursing is used to inform clinical reasoning for individuals, families, groups, and communities with complex mental and physical health issues. Students collaborate with health team members to further refine skills in nursing interventions and communication. Offered fall and winter semesters. Prerequisite: NUR 366. Corequisites: NUR 416 and IPE 407. Credits: 6

### **NUR 426 - Health in Diverse Communities**

Examines role of the professional nurse in addressing health promotion and disease prevention in populations across the lifespan. Health in diverse communities will be explored. Role of the nurse as provider and coordinator of care, and member of a profession in community settings with diverse populations will be emphasized (3-3-0-3). Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester. Credits: 5

### **NUR 455 - Leadership and Nursing Care Management (Capstone)**

This Capstone course examines the role of the professional nurse in the leadership and management of nursing care delivery systems. Issues that impact health care delivery are explored. The clinical experience emphasizes the role of the nurse as coordinator of care and member of a profession. (3-1-0-4) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester. Prerequisite: NUR 426 (may be taken concurrently). Credits: 3

### **NUR 456 - Transformative Nursing Leadership**

This Capstone course expands on the R.N./B.S.N. preparation in the areas of member of the profession and coordinator of care. Through application of key concepts, this course further develops the student's professional identity, understanding of quality and health care systems, and the mechanisms for effective professional communication. Course offered winter semester. Prerequisite: NUR 412. Credits: 4

### **NUR 467 - Professional Nursing V**

Knowledge, skills, attitudes necessary for professional leadership and provision of care for individuals, families, groups, and communities are synthesized. Nursing care at the community level and a clinical immersion experience, which serves as the Capstone activity, facilitates transition into practice as a member of the profession. Offered fall and winter semesters. Prerequisites: NUR 416 and NUR 417. IPE 407 may be taken concurrently. Credits: 10

### **NUR 480 - Special Topics in Nursing**

Readings, lecture, labs, or discussions (or any combination) in specific nursing topics. Prerequisites dependent upon topic selected. May be repeated for credit when content varies. Graded credit/no credit. Credits: 1 to 4

### **NUR 499 - Research in Nursing**

Independent supervised research in special areas of nursing. Credits and topics must be prearranged with faculty sponsor(s). Credits: 1 to 4

### **NUR 500 - Health Assessment Skills for Nurses**

This course is designed to enhance the nurse's knowledge and skills in health histories and physical assessment techniques. The course builds on previous assessment experiences and knowledge. Comparisons between the medical model of assessment and functional health patterns are explored from a nursing perspective. Offered every semester. Prerequisite: R.N. status. Credits: 3

### **NUR 580 - Special Topics in Nursing**

Readings, lecture, discussion, or lab in specific nursing topics. Credits: 1 to 3

### **NUR 581 - Chronic and Terminal Illness: The Palliative/Hospice Model**

Explores the trajectory of dying in America from multiple perspectives and disciplines. Content will be presented from theoretical, socio-cultural, and political frameworks as they apply to care of those with life-limiting disease and palliative and/or hospice care within the U.S. health care system. Ethical, legal and sociocultural dilemmas will be examined. Course offered fall semester. Prerequisite: Postbaccalaureate status or permission of instructor. Credits: 3

### **NUR 582 - Complex Pain and Symptom Management**

Explores common pain and symptom management issues in palliative and end-of-life care including utilization of complex therapies using a patient-centered, interdisciplinary approach. Course offered winter semester. Prerequisite: Postbaccalaureate status or permission of the instructor. Credits: 3

### **NUR 605 - Theoretical Perspectives in Nursing Me**

This course focuses on the philosophical and conceptual foundations of nursing science. Emphasis is on historical evolution of theory development in nursing, as well as the purpose, structure, and function of theory. Credits: 3

### **NUR 606 - Theoretical Perspectives in Nursing II**

This course focuses on the critique and utilization of theory in practice and research. The utility of middle range theories, grand theories and theories from other disciplines is addressed. Prerequisite: NUR 605. Credits: 3

### **NUR 607 - Health Care System, Policy and Politics**

This course focuses on policy decisions related to the organization, financing, and delivery of health care in the global community. It provides a basis for understanding political and social forces that shape nursing practice and health care delivery. Ethical dimensions of public policy formulations and implementation will be highlighted. Prerequisite: Graduate standing or permission. Credits: 3

### **NUR 608 - Leadership Roles in Complex Systems**

In this course, students analyze and evaluate theories and research that influence leadership in complex systems. Leadership is explored in complex system domains. Core competencies and strategies for leadership effectiveness are examined and evaluated. Prerequisites: NUR 607, NUR 606 (may be taken concurrently). Credits: 3

### **NUR 610 - Advanced Assessment**

Students will demonstrate advanced assessment skills (a comprehensive history and physical examination) to detect and differentiate abnormal findings and to generate potential diagnoses. Through case study analysis and use of simulation with standard patients, students will use selected theoretical frameworks to guide clinical decision-making. Offered winter semester. Prerequisites: NUR 628, NUR 676. Credits: 3

### **NUR 611 - Clinical Outcomes Management**

This course introduces role implementation at the point of care from the perspective of the advanced generalist. The course focuses on interdisciplinary illness management, health promotion, and outcome management for individuals and cohorts of patients at the clinical microsystem level. A clinical component supports application of course concepts. Offered fall semester. Prerequisites: NUR 612, NUR 613, and permission of the department. Corequisite: NUR 614. Credits: 4

### **NUR 612 - Quality Improvement and Performance Management in Nursing**

This course introduces the business of quality/performance improvement/management for nursing at the microsystem level of care. Analysis of elements required for robust systems of care, assessment of systems of care, and strategies to both improve/manage the quality/performance of systems are presented. A practicum will focus on application of course concepts. Offered winter semester. Prerequisites: NUR 608, NUR 620, and STA 610. Corequisite: NUR 613. Credits: 4

### **NUR 613 - Nursing Research and Evidence-Based Practice I**

This is the first of a two-part series in research and evidence-based nursing practice. Students will relate research to evidence-based practice and

explore ways to select, read, and critique relevant studies that help to answer nursing problems and explore methods to apply evidence-based practice models. Offered fall semester. Prerequisites: STA 610, NUR 605. Corequisite: NUR 611. Credits: 3

**NUR 614 - Nursing Research and Evidence-Based Practice II**  
Students work with a faculty mentor to finalize the evidence-based protocol developed in NUR 613. Students will include an implementation, evaluation and dissemination process with implications for nursing practice. This two-part course series serves as the culminating scholarly project for the M.S.N. Offered winter semester. Prerequisite: NUR 613. Corequisite: NUR 612. Credits: 1

**NUR 615 - Advanced Generalist Clinical Practicum I**  
This mentored advanced generalist practicum is the first in a two-course sequence of clinical immersion experiences. Students are expected to apply previously acquired knowledge/skills to enact point-of-care leadership behaviors while demonstrating health professions' core competencies of quality improvement, interdisciplinary team care, patient-centered care, evidence-based practice and utilization of informatics. Offered spring/summer semester. Graded credit/no credit. Prerequisites: NUR 612 and NUR 614. Credits: 4

**NUR 616 - Advanced Generalist Clinical Practicum II**  
This mentored advanced generalist practicum is the second in the two-course immersion sequence. Students are expected to apply previously acquired knowledge/skills to enact point-of-care leadership behaviors while demonstrating increased proficiency in health professions' core competencies. Offered fall semester. Graded credit/no credit. Prerequisite: NUR 615. Credits: 4

**NUR 620 - Clinical Pharmacology**  
Explores pharmacological categories of drugs used by practitioners with a variety of patient groups. Selected drugs within categories are presented and compared on parameters such as indications, therapeutic and/or adverse effects, monitoring, doses, and common drug interactions. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered spring/summer semester. Prerequisites: NUR 622 and NUR 623 or BMS 608. Credits: 3

**NUR 622 - Advanced Pathophysiology I**  
This course is the first in a two-course series that describes the scientific concepts in understanding the biology of disease processes. Content areas to be addressed include cellular injury, inflammation, immunity, genetics, tumor biology, altered fluid and pH balance, and endocrine and cardiovascular disease processes. (2-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall and winter semesters. Prerequisite: Graduate standing or permission of instructor. Credits: 3

**NUR 623 - Advanced Pathophysiology II**  
This course is the second in a two-course sequence which describes the scientific concepts underlying bio behavioral diseases. Content areas include disease processes in the following systems: hematologic, renal, neurologic, gastrointestinal, and reproductive. Offered winter semester. Prerequisite: NUR 622 or permission of instructor. Credits: 3

**NUR 625 - Health Issues in Vulnerable Populations**  
This course incorporates epidemiologic methods in addressing health disparities in vulnerable populations. Course content will explore issues in health access and disparity in U.S. populations and examine current trends, societal consequences, contributory cause(s), and potential advance practice nurse roles. Offered every year. Prerequisites: NUR 606, STA 610, NUR 690. Credits: 4

**NUR 628 - Nursing Therapeutics: Mental Health**  
Provides a framework to study the pathophysiology and the therapeutic use of medications in the management of the health care of commonly occurring mental problems. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered spring/summer semester upon demand. Credits: 3

**NUR 629 - Developmental Health: Child/Adolescent**  
Exploration of theoretical concepts and advanced nursing strategies related to health of infants, children, adolescents and families. Provides theoretical base for pediatric advanced practice nursing. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester every third year. Prerequisites: NUR 610, NUR 677. Credits: 3

**NUR 630 - Developmental Health: Adult/Older Adult**  
Exploration of theoretical concepts and advanced nursing strategies related to the health of adults and older adults. Provides the theoretical base for adult/older adult advanced practice nursing. Offered spring/summer semester. Prerequisites: NUR 610, NUR 620, NUR 628, NUR 677, NUR 691; concurrent enrollment: NUR 625. Credits: 3

**NUR 646 - Theories of Health Systems Leadership Part I**  
Application of relevant theory to the human side of the health care organization. Content includes nursing leadership competencies with an emphasis on leadership strategies appropriate to the health care setting. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester, odd-numbered years. Prerequisites: NUR 606, NUR 608, PA 614, PA 632 or permission of the instructor. Credits: 3

**NUR 647 - Theories of Health Systems Leadership Part II**  
Application of selected theories to assess, diagnose, plan, and evaluate leadership strategies for health care systems. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Prerequisites: NUR 646, and NUR 650 or permission of the instructor. Credits: 3

**NUR 650 - Business and Quality in Nursing**  
Provides students in the health systems leadership emphasis area with knowledge and expertise in organizational and systems leadership for optimal business functioning, in sustaining change through the processes of quality improvement, and in assuring that the business of nursing is conducted in a safe, ethical, and efficient manner. Prerequisites: PA 614, PA 632, NUR 606, NUR 607, and NUR 608. Credits: 3

**NUR 676 - Health Perspectives: Mental Health**  
Theoretical concepts related to the health of individuals and families. Focus is on the application of theories to clinical practice of mental health. Students will examine psychosocial theories that provide explanations for individual and family responses that affect health. (2-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall semester. Prerequisite: NUR 605. Credits: 3

**NUR 677 - Practicum I: Mental Health**  
Application of theories and advanced nursing strategies in managing psychiatric-mental health care for individuals. Focus is on the development, implementation, and evaluation of the APN roles. (1-0-0-12) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall semester every third year. Prerequisites: NUR 610, NUR 628 and NUR 676. Credits: 4

**NUR 680 - Special Topics in Nursing**  
Lecture, discussion, and/or clinical laboratory course on topics of special interest to graduate nursing students. Credits: 1 to 6

**NUR 690 - Introduction to Scientific Inquiry**  
Provides an in-depth explanation of the research process in health care. Includes the use of quantitative and qualitative methodology to explore researchable problems. Students use a systematic approach to develop a clinical research proposal. Students will acquire competencies to evaluate the scientific and clinical merit of published research reports. Offered fall and winter semesters. Prerequisite: NUR 605. Credits: 3

**NUR 691 - Evidence-Based Practice in Nursing**  
This course focuses on the review, analysis, synthesis, and application of scientific evidence for nursing and health care. Emphasis is placed on integrative and systematic reviews as tools to achieve evidence-based practice. Consideration is given to the ethical, legal, cultural, and financial

## Course Listings and Descriptions

implications of evidence-based advanced nursing practice. Prerequisites: NUR 606, NUR 690, STA 610. Credits: 3

### **NUR 694 - Thesis Preparation**

Focus on research that students design, implement, and analyze in preparation for completion of a formal thesis. Students must register each semester while designing and initiating their research, completing a minimum of two credits. A maximum of two credits will count toward program requirements. Offered every semester. Prerequisite: NUR 690; prerequisite or corequisite: STA 610. Credits: 1

### **NUR 699 - Readings in Nursing**

Independent supervised reading on selected topics. Credits and topic must be prearranged with faculty. Credits: 1 to 3

### **NUR 702 - Nursing Leadership and Health Services Research**

Examines methods for evaluating the effectiveness, efficiency, and equity of health services. Students will explore approaches to evaluating structure, process, and outcome variables used to address effectiveness, efficiency, and equity issues. Linkages are made between specific health care policies, systems leadership practice, organizational planning, patient outcomes and nursing. Prerequisites: NUR 647 and NUR 691. Corequisite: NUR 625. Credits: 3

### **NUR 703 - Nursing Informatics**

This course provides an in-depth introduction to information systems and technologies that support nursing practice and improve patient care and outcomes. Relevant theories, as well as informatics issues and standards, will be addressed. Tools and strategies for building and managing information system components will be incorporated. Offered fall semester. Prerequisite: Admission to the D.N.P. program or permission of instructor. Credits: 3

### **NUR 707 - Policy for Advanced Practice Nurses**

This course will guide students through specific policy issues related to advanced practice nursing. These topics include reimbursement, prescriptive authority, scope of practice, impact of the Institute of Medicine reports on the role of nursing in health care, and the role of professional nursing organizations in the policy making process. Offered spring/summer semester. Prerequisites: Graduate standing; NUR 607 or permission of instructor. Credits: 3

### **NUR 720 - Primary Health Care: Child/Adolescent**

Application of theories and advanced nursing strategies in the management of primary health care for infants, children, adolescents, and families. Provides the foundation for management of primary health care including common health problems of the identified population. Prerequisites: NUR 629 and NUR 625. Credits: 3

### **NUR 721 - Primary Care Practicum: Child/Adolescent**

Clinical application of knowledge and skills necessary to provide primary health care to infants, children, and adolescents. Focus is on development and implementation of APN role in health promotion, disease prevention, and management of selected common pediatric health problems. Prerequisites: NUR 629, NUR 625; NUR 720 may be taken concurrently. Credits: 4

### **NUR 722 - Management of Chronic Conditions: Child/Adolescent**

Expands the theoretical foundations for management of primary health care to include chronic conditions in children, adolescents, and their families across the health care continuum. Prerequisites: NUR 720, NUR 721. Credits: 3

### **NUR 723 - Chronic Care Practicum: Child/Adolescent**

Clinical application of knowledge and advanced nursing strategies for management of health care needs of children, adolescents, and their families who have chronic conditions and long-term alterations in functional health patterns. Prerequisites: NUR 720, NUR 721; NUR 722 (may be taken concurrently). Credits: 4

### **NUR 724 - Chronic and Complex Care: Child/Adolescent**

This course provides theoretical foundations for management of chronic and complex health dysfunctions of children and adolescents, and related family needs, across the health care delivery system. Offered spring/summer semester. Prerequisites: NUR 722, NUR 723. Credits: 3

### **NUR 725 - Chronic and Complex Care Practicum: Child/Adolescent**

This course prepares students to apply knowledge and advanced nursing strategies in the management of chronic and complex health dysfunctions of children/adolescents, and related family needs, across the health care delivery system. Offered spring/summer semester. Prerequisites: NUR 722, NUR 723, and NUR 724 (may be taken concurrently). Credits: 4

### **NUR 726 - Complex Behavioral Problems: Child/Adolescent**

Intensive study of the enactment of APN roles in managing the health care of infants, children, adolescents, and families throughout the health care system. Management of children/families with complex behavioral issues is addressed. The impact of health systems, policies, and health innovations in selecting appropriate nursing strategies is emphasized. Prerequisites: NUR 724 and NUR 725. Credits: 3

### **NUR 727 - Clinical Immersion I: Child/Adolescent**

Provides opportunity for enactment of the advanced practice role in the implementation of evidence-based strategies in the delivery of health care to children and adolescents. Culmination of clinical knowledge and skills. Offered winter semester. Prerequisites: NUR 725, NUR 726, and concurrent enrollment in NUR 792. Credits: 4

### **NUR 728 - Clinical Immersion II: Child/Adolescent**

Provides opportunity for enactment of the advanced practice role in the evaluation of evidence-based strategies for the delivery of health care to children and adolescents. This course provides a culmination experience for developing clinical knowledge and skills. Offered spring/summer semester. Prerequisites: NUR 727, and concurrent enrollment in NUR 793. Credits: 4

### **NUR 730 - Primary Health Care: Adult/Older Adult**

Application of theories and advanced nursing strategies in health promotion and management of common health problems for adults and older adults. Provides the foundation for providing primary health care for this population. Offered fall semester. Prerequisites: NUR 625, NUR 630. Credits: 3

### **NUR 731 - Primary Care Practicum: Adults/Older Adults**

Clinical application of knowledge and skills necessary to provide primary health care to adults and older adults. Focus is on development and implementation of advanced practice nursing (APN) role in health promotion, disease prevention, and management of selected common adult/older adult health problems. Offered fall semester. Prerequisites: NUR 625, NUR 630. Corequisite: NUR 730. Credits: 4

### **NUR 732 - Management of Chronic Conditions in Adults and Older Adults**

Expands the theoretical foundations for management of primary health care to include chronic conditions in adults/older adults across the health care continuum. Offered winter semester. Prerequisites: NUR 630, NUR 730, NUR 731. Credits: 3

### **NUR 733 - Chronic Care Practicum: Adult/Older Adult**

Clinical application of knowledge and advanced nursing strategies for management of health care needs of adults/older adults with chronic illness and long-term alterations in functional health patterns. Offered winter semester. Prerequisites: NUR 730, NUR 731; and NUR 732 (may be taken concurrently). Credits: 4

### **NUR 734 - Transitions and Complex Care of the Adult/Older Adult**

Provides theoretical foundations for management of complex health dysfunctions of adult/older adults and transitions of care within their social context across the care delivery system. Offered spring/summer semester. Prerequisites: NUR 732, NUR 733. Credits: 3

### **NUR 735 - Transitions and Complex Care Practicum: Adult/Older Adult**

Students apply knowledge and advanced nursing strategies in the management of complex health care needs of adults and older adults, focusing on primary care and transitions of care throughout the care continuum. Offered spring/summer semester. Prerequisites: NUR 732, NUR 733, and NUR 734 (may be taken concurrently). Credits: 4

**NUR 736 - Complex Behavioral Problems: Adult/Older Adult**

Intensive study of enactment of Advance Practice Nursing (APN) roles in managing the health care of adults/older adults throughout the health care system. The impact of health systems, policies, and health innovations in selecting nursing strategies is emphasized. Addresses management of adults/older adults with complex and behavioral issues. Offered fall semester. Prerequisites: NUR 734, NUR 735. Credits: 3

**NUR 737 - Clinical Immersion I: Adult/Older Adult**

Provides opportunity for enactment of the advanced practice role in the implementation of evidence-based strategies in the delivery of health care to adults/older adults. Culmination of clinical knowledge and skills. Prerequisites: NUR 735, NUR 736, and NUR 792 (may be taken concurrently). Credits: 4

**NUR 738 - Clinical Immersion II: Adult/Older Adult**

Provides students the opportunity for enactment of the advanced practice role in the evaluation of evidence-based strategies in the delivery of health care to adults/older adults. Culmination of clinical knowledge and skills. Offered spring/summer semester. Prerequisites: NUR 737; NUR 793 (may be taken concurrently). Credits: 4

**NUR 740 - Health Systems Leadership: Practicum I**

Students apply theories of health system leadership in an agency setting and analyze the administrative structure within the context of the health care system. An organizational assessment and diagnosis are completed, with recommendations for an advanced health systems leadership intervention. Prerequisites: NUR 625, NUR 647, NUR 702, NUR 703, and PA 643. Credits: 6

**NUR 741 - Health Systems Leadership: Practicum II**

A precepted experience is completed with a nurse leader at a healthcare organization or system. Students utilize advanced leadership strategies with the guidance of a nurse leader, addressing an organizational intervention project. During this experience students master the competencies essential to the practice of health systems leadership. Course offered spring/summer semester. Prerequisite: NUR 740. Credits: 6

**NUR 742 - Health Systems Leadership: Practicum III**

Requires intensive enactment of the advanced health system leadership role. Students demonstrate advanced leadership strategies using an advanced nursing leader as a resource. During this experience students master the competencies essential to the practice of systems leadership across health care settings. Prerequisite: NUR 741. Credits: 6

**NUR 792 - Scholarly Inquiry in Nursing Practice I**

This course serves as a preparatory scholarly experience linking practice and scholarship for the D.N.P. student. It requires identification of a project that involves translating evidence into practice; informing and influencing care; and enhancing health outcomes. This course prepares students to complete the scholarly project in NUR 793. Prerequisites: NUR 723 or NUR 733 or NUR 740 (any may be taken concurrently) and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 2

**NUR 793 - Scholarly Inquiry in Nursing Practice II**

This course serves as a culminating scholarly experience linking practice and scholarship for the DNP student. Students will complete a final written project for defense before their scholarly project committee. Offered every semester. Prerequisites: NUR 792 and completion of the Responsible Conduct of Research Training within last three years. Credits: 2

**NUR 796 - Continuation of Doctoral Project or Dissertation Research**

Continuation of work related to the doctoral project or dissertation phase of the graduate student's program. Registration is required after all respective project or dissertation credits are completed and the project or dissertation is not completed. Work will be performed under the supervision of the project advisor or dissertation committee chair. Offered every semester. Prerequisites: Completion of all required project or dissertation credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

**OSH 180 - Special Topics in Occupational Safety and Health**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

**OSH 300 - Introduction to Occupational Safety and Health**

An overview of safety and health concepts (accidents, legal accountability, hazard recognition/remediation, countermeasures, and risk) as they apply in a variety of occupational settings. (3-0-0) Credits: 3

**OSH 310 - Hazard Control**

A study of general and mechanical hazards found in the workplace and methods of controlling them to limit employee exposure. (3-0-0) Prerequisite: Admitted to the OSHM major. Credits: 3

**OSH 316 - Health and Safety Techniques**

Laboratory experience designed to expose students to various monitoring tools used in the development and maintenance of a comprehensive safety program in an occupational setting. (2-0-2). Prerequisite: Admitted to the OSHM major. Credits: 3

**OSH 326 - Principles of Industrial Hygiene**

A study of industrial hygiene methods, measurement, and equipment. Prerequisites: CHM 230 or CHM 232, STA 215; or STA 220 and MTH 201. Admitted to the OSHM major. Credits: 3

**OSH 330 - Principles of Loss Control**

A study of methods, tools, and techniques used to administer loss control programs in occupational settings. (3-0-0) Prerequisite: Admitted to the OSHM major. Credits: 3

**OSH 350 - Behavioral Aspects of Safety**

An examination of various pathways in psychology, their impact on the individual, on safety, and the application of basic psychological principles in the safety profession. (3-0-0) Prerequisite: Admitted to the OSHM major. Credits: 3

**OSH 360 - Motor Fleet Safety**

An analysis of motor fleet safety problems and programs in the United States. The course offers a detailed study of the truck transportation industry, motor carrier responsibilities, federal regulations, and safety supervision programs. Offered winter semester of odd-numbered years. (3-0-0) Prerequisite: Admitted to the OSHM major. Credits: 3

**OSH 370 - Product Safety and Liability**

An analysis of the product safety and liability issues. Emphasis will be on legal requirements of product safety to include design, warranty, warnings, and labels. Landmark litigation providing the basis for case law will be covered. (3-0-0) Offered fall semester of odd-numbered years. Prerequisite: Admitted to the OSHM major. Credits: 3

**OSH 380 - Special Topics in Occupational Safety and Health**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

**OSH 390 - OSH Internship Preparation**

Introduces potential occupational safety and health internship students to the industrial environment and the basic principles of leadership. Helps students develop a better self-understanding through self-assessment and career development theory and prepares students for the internship interview process as well as the internship experience. Course offered fall semester. Prerequisites: OSH 300. Admitted to the OSHM major. Credits: 1

**OSH 400 - Critical Incident Analysis**

An examination of fundamental techniques for conducting a critical incident analysis. Special attention will be given to the concept of accident investigation in occupational settings. (3-0-0) Prerequisite: Admitted to the OSHM major. Credits: 3

**OSH 410 - Ergonomic Safety Engineering**

An examination of various ergonomic engineering and human factors engineering methods used by safety specialists to reduce injury producing work conditions. Topics covered include systems safety analysis, fault tree

## Course Listings and Descriptions

analysis, MORT, as these tools relate to an effective ergonomic program. (3-0-0) Prerequisite: Admitted to the OSHM major. Credits: 3

### **OSH 414 - Environmental Safety and Health Regulations**

A study of laws addressing environmental pollution and hazardous waste management. (3-0-0) Credits: 3

### **OSH 416 - Advanced Industrial Hygiene**

A study of chemical hazards found in the workplace, their toxicological influence, and methods of controlling them to limit employee exposure. Offered winter semester. Prerequisites: OSH 326 and admitted to the OSHM major. Credits: 3

### **OSH 420 - Health Care Facility Safety**

An examination of the critical aspects of protecting the employees, patients and assets in health care settings. Topics include JCAHO, OSHA, EPA and state health care facility regulations, environment of care, emergency and contingency planning, and policy and procedures development. (3-0-0) Offered winter semester of even-numbered years. Prerequisite: Admitted to the OSHM major. Credits: 3

### **OSH 424 - Fire Science**

An examination into key fire science principles and issues in the work environment. Course will examine topics, to include; fundamentals of building design, life safety codes, human behavior and fire, and characteristics and behavior of fire. (3-0-0) Prerequisite: Admitted to the OSHM major. Credits: 3

### **OSH 430 - Construction Safety**

An examination of the practices of managing occupational safety and health programs in the construction industry. The course provides an understanding of how the regulatory and financial responsibilities of accident prevention, health preservation, and loss reduction in the construction industry are met. (3-0-0) Offered fall semester of even-numbered years. Prerequisite: Admitted to the OSHM major. Credits: 3

### **OSH 440 - Safety and Health Program Development**

An examination of the concepts and tools used in safety program development and implementation for a variety of work settings (3-0-0) Prerequisite: Admitted to the OSHM major. Credits: 3

### **OSH 480 - Special Topics in Occupational Safety and Health**

A field study conducted in a selected industry. The student will be expected to identify a cooperating company and conduct an investigation addressing a safety problem, including development of appropriate countermeasures. The study will produce a paper following a modified research format. Prerequisite: Permission of OSH advisor. Credits: 1 to 9

### **OSH 485 - Field Case Study**

A field study conducted in a selected industry. The student will be expected to identify a cooperating company and conduct an investigation addressing a safety or health problem, including development of appropriate countermeasures. The study will produce a paper following a modified research format. Credits repeatable to a maximum of 3 credits. Prerequisite: Permission of OSH advisor. Credits: 1 to 3

### **OSH 490 - Internship in Occupational Safety and Health Management**

A structured opportunity for students to make practical application of classroom theory to an actual work situation. Prerequisites: Permission of intern advisor and admitted to the OSHM major. Credits: 3 to 6

### **OSH 495 - Safety and Health Administration**

An integrative exploration of the administrative function of a comprehensive safety program with emphasis on operations analysis, design, implementation, and evaluation. (3-0-0) Prerequisites: Senior status and admitted to the OSHM major. Credits: 3

### **OSH 499 - Independent Study in Occupational Safety and Health**

An individually designed learning project in the field of occupational safety and health. Prerequisite: Permission of instructor. Credits: 1 to 3

### **OST 502 - Theoretical Foundations in Occupational Therapy**

Introduces the conceptual and scientific theories that underlie occupational therapy interventions. These include theories related to occupational

science, as well as those related to the therapeutic use of occupation. Incorporates an introduction to theory analysis, along with concepts of application and evaluation. Offered fall semester. Prerequisite: Admission to the OT program. Credits: 3

### **OST 503 - Group Occupations in Practice**

Provides basic information about the use of groups in occupational therapy. Two different approaches to group work will be studied. Students will have an opportunity to develop and facilitate a group intervention, selecting an approach, justifying that choice, and describing the value of the group to participating clients. Offered fall and spring/summer semesters. Credits: 3

### **OST 505 - Limitations on Occupation**

This course will examine the impact of inherent and acquired conditions and medical problems on occupational performance components. The course will analyze how the completion of occupational performance areas may be affected as etiology and symptoms are considered. Course will include potential intervention strategies for covered conditions. Offered fall semester. Prerequisite: Admission to OT program. Credits: 3

### **OST 551 - Meaningful Living Through Occupation**

Provides foundational concepts for understanding the value of occupation in human life. Reviews common health care concepts and human development from the perspective of occupation and time use. Examines health care knowledge in relation to daily activities and performance contexts, considering the needs of individuals, groups/families and communities/populations. (0-3-0) Offered fall semester. Corequisite: OST 552. Credits: 3

### **OST 552 - Meaningful Living Laboratory**

Laboratory designed to complement the Meaningful Living through Occupation course. Course will include opportunities for students to have experiential practice with the concepts that are presented in its companion course. Activities will include using problem-based learning, observations, interviews and application of common occupational therapy practices. Offered fall and winter semesters. Corequisite: OST 551. Credits: 3

### **OST 553 - Level I Fieldwork (Part 1)**

This experience is designed to provide students familiarity with a variety of clients, diagnoses, age ranges, and contexts; and to see the roles or potential roles of OT. It provides the opportunity to observe the OT process and interact with clients, which complements the didactic experience. (0-2-8) Offered fall semester. Credits: 2

### **OST 555 - Professional Socialization in Occupational Therapy**

Addresses the theories and issues of professional socialization, the process of taking on the identity of an occupational therapist, and internalizing professional norms. Content will include the role of the professional association, personal responsibility to the profession in the forms of advocacy, education, leadership and research, and responsibility to society. Offered fall semester. Prerequisite: Admission to the occupational therapy program. Credits: 3

### **OST 557 - Research Design in Occupational Therapy**

Course will focus on several qualitative and quantitative research designs used in studies in the field of occupational therapy. The most common designs will be selected, with intent to focus on most appropriate designs using mixed qualitative and quantitative methods together in a single research study. Offered spring/summer and fall semesters. Credits: 2

### **OST 558 - Mental Health Services in Occupational Therapy**

This course will address the nature of occupational therapy intervention with clients having mental health diagnoses. The content will include approaches to use with different diagnoses, client and therapist safety, ethics related to mental health treatment, settings for mental health treatment, referrals, and documentation. Offered fall and spring/summer semesters. Credits: 3

### **OST 559 - Mental Health Laboratory**

This is the coordinating laboratory course for OST 558 - Mental Health Services in Occupational Therapy. In this course, students will practice activities and interventions that are used with clients having mental health

diagnoses. Activities will include ADLs, small and moderate sized crafts, prevocational activities, and appropriate play/leisure occupations. Offered spring/summer and winter semesters. Credits: 1

#### **OST 561 - Child and Adolescent Practice**

Theoretical and practice concepts, assessment and intervention methods are developed for OT services at individual, group, and population levels for children and adolescents. Students learn to identify barriers to occupational performance at all levels and address barriers through selecting and conducting assessments, designing interventions, conducting advocacy, research, education and documentation (0-3-0) Offered winter semester. Prerequisite: OST 560. Corequisites: OST 562 and OST 563. Credits: 3

#### **OST 562 - Child and Adolescent Laboratory**

Laboratory sessions to experience and practice OT assessments and interventions learned in concurrent occupational opportunities course (0-0-4) Offered winter semester. Prerequisite: OST 560. Corequisites: OST 561 and OST 563. Credits: 2

#### **OST 563 - Level I Fieldwork (Part 2)**

This experience is designed to provide students familiarity with the child and adolescent population and the associated diagnoses and contexts. It provides the opportunity to observe the OT process, interact with clients, and to see the role of an OT in a specific setting, which complements the didactic experience. Offered winter semester. Prerequisite: OST 553. Corequisites: OST 561 and OST 562. Credits: 1

#### **OST 564 - Occupational Therapy Research Proposal**

This course will focus on development of a research proposal including three chapters, an introduction, a focused literature review, and methodology. Students will review successful proposals and have an opportunity to submit drafts before final proposal is due. Successful proposal defense and HRRC approval required to complete course. Offered winter semester. Prerequisites: Admission to the OT program and STA 610. Credits: 2

#### **OST 565 - Occupational Therapy Services Administration**

This course stresses understanding and applying concepts of evidence-based practice to management and leadership in occupational therapy. Includes study of organizational behaviors, structures, systems, leadership theories, ethics, evaluation, and quality assurance. Focuses on competencies needed for administrative roles and responsibilities. Prerequisites: OST 551, OST 552, OST 553. Credits: 3

#### **OST 568 - Occupational Therapy Research Implementation and Analysis**

Designed for students to carry out HRRC approved research under the direction of a qualified faculty member. Students will collect data through survey, interview, or other methodology in the first part of course, and follow with appropriate quantitative or qualitative analysis of the data in second part of course. Offered spring/summer semester. Prerequisite: OST 564. Credits: 1

#### **OST 571 - Adult Practice**

Theoretical and practice concepts, assessment and intervention methods are developed for OT services at individual, group and population levels for adults. Students learn to identify barriers to occupational performance at all levels and address barriers through selecting and conducting assessments, designing interventions, conducting advocacy, research, education, and documentation. (0-3-0) Offered spring/summer semester. Prerequisite: OST 563. Corequisites: OST 572 and OST 573. Credits: 3

#### **OST 572 - Adult Laboratory**

Laboratory sessions to experience and practice OT assessments and interventions learned in the concurrent Adult Practice course. Offered spring/summer semester. Prerequisite: OST 563. Corequisites: OST 571 and OST 573. Credits: 3

#### **OST 573 - Level I Fieldwork (Part 3)**

This is the third of four Level I Fieldwork experiences in the curriculum. It is designed to provide students familiarity with the adult population, and the associated diagnoses and contexts which complements the didactic

experience. Offered spring/summer semester. Prerequisite: OST 563. Credits: 1

#### **OST 651 - Older Adult Practice**

Theoretical and practice concepts, assessment and intervention methods are developed for OT services at individual, group, and populations levels for older adults. Students learn to identify barriers to occupational performance at all levels and address barriers through selecting and conducting assessments, designing interventions, conducting advocacy, research, education and documentation. (0-3-0) Course offered fall semester. Prerequisite: OST 573. Corequisites: OST 652 and OST 653. Credits: 3

#### **OST 652 - Older Adult Laboratory**

Laboratory sessions to experience and practice OT assessments and interventions learned in the concurrent Older Adult Practice course. Offered fall semester. Prerequisites: OST 571, OST 572, and OST 573. Credits: 3

#### **OST 653 - Level I Fieldwork (Part 4)**

This course is designed to provide students familiarity with the older adult population, and the associated diagnoses and contexts. Opportunities are provided to observe and participate in the OT process, interact with clients, and see the role of an OT in various settings, which complements the didactic experience. Offered fall semester. Prerequisite: OST 573. Credits: 1

#### **OST 660 - Level II Fieldwork (Part 1)**

The first half of the final practice experience in the curriculum. Designed to assist students in making the student/therapist transition, it is completed in a practice setting supervised by an experienced OTR. Experience includes a variety of diagnoses and age ranges to complement the didactic experience. (0-0-40) Offered winter semester. Credits: 9

#### **OST 661 - Level II Fieldwork (Part 2)**

The continuation of the final practice experience in the curriculum. Implemented in the same way as the first half, the experience includes another variety of diagnoses and age ranges. This experience may be more focused or may represent the specific request of a student. (0-0-4) Offered spring/summer semester. Prerequisite: OST 660. Credits: 9

#### **OST 680 - Special Topics in Occupational Therapy**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Prerequisite: Admitted to OT program. Credits: 1 to 6

#### **OST 693 - Occupational Therapy Research Project**

The final course of the four-course research sequence, this course focuses on the organization and synthesis of the results of the research project. Following analysis of results, students report these and then discuss findings as related to occupational therapy theory, practice, and education in a document suitable for publication. Offered spring/summer semester. Prerequisites: STA 610, OST 564 and completion of the Responsible Conduct of Research Training within last three years. Credits: 2

#### **OST 695 - Occupational Therapy Master's Thesis**

This final course in the individual thesis, focuses on synthesis/discussion of the results of the completed study. Results are compiled, and the completed thesis is condensed into a publishable article format. Students identify a suitable journal and submit the final document, prior to Level II fieldwork. Offered spring/summer semester. Prerequisites: STA 610, OST 564 and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

#### **OST 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

## Course Listings and Descriptions

### OST 698 - Professional Issues Seminar

The occupational therapy curriculum Capstone. Students will present a poster of their completed research and a professional portfolio of their work. Includes seminar discussions on leadership, education, research, professional advocacy, and ethics, as experienced in fieldwork, and in preparation for future employment. Course offered spring/summer semester. Prerequisite: OST 660. Corequisite: OST 661. Credits: 1

### OST 699 - Independent Study in Occupational Therapy

Students will complete a reading project or other approved activity building upon identified student interest that is approved by the department chair. Tangible final product must be completed according to a written agreement developed by the student and the instructor, and signed by both individuals. Offered fall, winter, and spring/summer semesters. Prerequisite: Good standing in the OT program. Credits: 1 to 3

### PA 209 - Introduction to Urban and Regional Planning

An introductory course for people interested in careers in planning and public administration. The course explores the relationship between the goals of a community and the techniques needed to implement long term and sustainable strategies. Cross-listed with GPY 209. Offered fall semester. Credits: 3

### PA 270 - Public and Nonprofit Administration

A survey of what is involved in the administration of public and nonprofit entities. How to hire, evaluate, and reward the right people, developing and carrying out public policies, preparing and interpreting budgets, dealing with various pressure groups and governmental agencies, and organizing human resources to carry out the public's business honestly and effectively. Several case studies will be used. Fulfills Foundations - Social and Behavioral Sciences. Offered every semester. Credits: 3

### PA 300 - Research Methods

This course involves an examination of basic investigatory methods in public administration. Focus is on logic, theory, and ethics of research; the formulation and testing of hypotheses; research designs and sampling procedures; data collection and analysis; and the communication of findings. Prerequisites: STA 215, junior standing, and PA major. Credits: 3

### PA 307 - Local Politics and Administration

Comparative study of government systems, rural and urban. Students specialize in their own governments. Cross-listed with GPY 308. Offered every semester. Credits: 3

### PA 310 - Politics and Health Policy

Explores contemporary issues in health policy and politics. The course will present the historical context, institutions, participants, and issues that structure health policy. Cross-listed with PLS 310. Course offered fall semester. Prerequisite: PLS 102, PA 270, or junior standing. Credits: 3

### PA 311 - Public Sector Information Technology

Examines the use of computer applications to consume, manage, analyze, and disseminate public information, improve worker productivity and achieve agency mission. Attention is given to improving students' technical acumen and to examining important public/nonprofit sector IT issues. Offered winter semester. Credits: 3

### PA 312 - Urban and Regional Environmental Planning

An introduction to the urban planning strategies that help towns and cities to preserve, restore, and even capitalize on their natural resources. This course investigates threats to clean air, water and healthy ecosystems in our communities and examines solutions in the form of governmental policies, green designs and urban inventiveness. Cross-listed with GPY 312. Offered winter semester of odd-numbered years. Credits: 3

### PA 313 - Land Use Planning

This course deals with the fundamental concepts, principles, strategies, and tools of city and regional land use planning. The focus is on the real-world and sustainable land use planning process and implementation. Cross-listed with GPY 310. Offered winter semester of odd-numbered years. Credits: 3

### PA 314 - Land Use and Planning Law

This course surveys federal and Michigan statutes relevant to planning. It provides a background of federal and Michigan statutory land use controls. Awareness and understanding of these statutes is essential when executing existing land use and planning policies or when altering or proposing new land use and planning policies. Cross-listed with GPY 314. Offered winter semester of even-numbered years. Credits: 3

### PA 316 - Introduction to Transportation Planning

This course is an introduction to transportation planning. It explores the planning, land use, and policy implications of city and regional transportation as it relates it to urbanism, energy use, public health and safety, sustainability and economic development. Cross-listed with GPY 316. Offered winter semester of odd-numbered years. Credits: 3

### PA 324 - Urbanization

Examines the process of urbanization, its impact on various cultures, and its long-term sustainability. Considers the rapid urbanization in the developing countries and the dynamic growth of global urban systems, emphasizing the evolution of cities over time, space, and vastly different social, political, and cultural environments. Fulfills Cultures - World Perspectives. Part of the Sustainability Issue. Cross-listed with GPY 324. Offered spring/summer semester. Prerequisite: Junior standing. Credits: 3

### PA 330 - Health Care Financing

Explores the complexity of the financing of health care in the U.S. with emphasis on its impact on the delivery of services. Offered winter semester. Credits: 3

### PA 335 - Grant Writing

Provides instruction in writing grants, evaluating grant proposals, and in researching and cultivating funding sources. Students will gain an understanding of the link between organizational mission and program development by preparing a full proposal to meet a real-life community need. Offered fall semester. Credits: 3

### PA 360 - Voluntarism and the Nonprofit Sector

A survey of voluntarism and the nonprofit sector in America. Historical development, policy questions, funding issues and trends of major subsectors (religion, education, health, social services, and the arts) are examined. The sector's interdependence with government and business and its basis in philanthropy and democracy are interwoven throughout the topics. Offered fall and winter semesters. Credits: 3

### PA 365 - GIS for Economic and Business Decision Making

Explores the use of geographic information systems (GIS) technology in economic and business decision-making, including market area analysis, geodemographic segmentation, site selection, routing, customer profiling, sales territory management, and location strategies. Emphasis on hands-on activities. Problem-based learning approach. Part of the Information, Innovation, and Technology Issue. Cross-listed with MKT 365 and GPY 365. Prerequisite: Junior standing. Credits: 3

### PA 372 - International and Comparative Administration

An examination of administrative structures in selected countries; the relationship of administrative structures to political, economic, and cultural systems; comparative administration and developmental models. Case studies from the U.S., Europe, Latin America, and Asia may be used. Offered on sufficient demand. Part of the Globalization Issue. Prerequisite: Junior standing. Credits: 3

### PA 375 - Public Budgeting and Finance Administration

The content, tools, and techniques of budgeting from the perspectives of the manager, legislator, and citizen. A survey of revenue raising methods and administration. Applicable to public jurisdictions and nonprofit agencies of all sizes. Includes accounting principles essential to public management. Offered fall and winter semesters. Credits: 3

### PA 376 - Public Personnel Policy and Administration

Managing the human resources of government and nonprofit agencies. An examination of public personnel functions (recruitment, training, employee relations, remuneration, conduct, and organization) and special issues such as collective bargaining and equal opportunity employment. Offered fall and winter semesters. Credits: 3

**PA 380 - Special Topics in Public and Nonprofit Administration**

Consideration of selected topics not ordinarily dealt with in other courses. Topics to be determined by faculty interest and student request. Offered on sufficient demand. Credits: 1 to 3

**PA 385 - GIS in Urban and Regional Analysis**

Focus on applications of Geographic Information Systems (GIS) techniques in urban and regional analysis. Using a hands-on approach, students will explore how to use GIS techniques and large data sets to analyze economic, demographic and social change in the knowledge-based economy. Part of the Information, Innovation, and Technology Issue. Cross-listed with ECO 385 and GPY 385. Offered fall semester. Prerequisite: Junior standing. Credits: 3

**PA 390 - Leadership Dynamics**

Examines and applies leadership issues, concepts, and situations that are evident in various community and public or nonprofit organizational contexts. Offered once a year. Credits: 3

**PA 395 - Emergency Management**

Students develop crisis/emergency management and preparedness skills for themselves, for disaster volunteers, for workplaces, and for government agencies. Students study a comprehensive approach to emergency planning, response, and recovery, with roles for federal, state, and local governments, nonprofit agencies, and private sector organizations. Course offered winter semester. Credits: 3

**PA 399 - Independent Readings in Public Administration**

Independent, supervised readings on selected topics that are not dealt with in depth in another course. Offered every semester. Prerequisite: Permit only. Graded credit/no credit. Credits: 1 to 3

**PA 410 - Landscape Analysis**

Landscape analysis is a broad interdisciplinary study that includes concepts and methods of sustainable physical/human geography, ecology, planning, and architecture. It includes the biophysical and societal causes and consequences of landscape heterogeneity, processes, and evolution. Conceptual and theoretical core of this course links natural sciences with related human disciplines. Part of the Sustainability Issue. Cross-listed with GPY 410 and ENS 410. Offered fall semester. Prerequisite: Junior standing. Credits: 3

**PA 420 - Organization Theory and Dynamics**

An exploration of the various theories that inform the structures of organizations and the resulting dynamics of accommodation, direction, control, permission, and ethical dilemmas that are set in place within and between the public structures of our society. Offered fall and winter semesters. Credits: 3

**PA 449 - Policy Research and Evaluation**

This course uses a policy studies framework to examine systematically the nature, causes, and effects of alternative public policies, with an emphasis on implementation. Offered fall and winter semesters. Prerequisite: Senior standing or permission of instructor. Credits: 3

**PA 480 - Special Topics in Public Administration**

Consideration of selected topics not ordinarily dealt with in other courses. Topics to be determined by faculty interest and student request. Offered on sufficient demand. Credits: 1 to 9

**PA 490 - Public Administration Internship**

Supervised internship in a local or state agency, program, or legislative body. The purpose of the internship is to allow the student to apply academic knowledge of professional skills to a work situation. Offered every semester. Prerequisite: Permit only. Graded credit/no credit. Credits: 3

**PA 491 - Public Administration Internship II**

A second internship, to be taken concurrently with 490 when field experience warrants it, or may be taken after 490 by those taking an additional fieldwork experience. Offered every semester. Prerequisite: Permit only. Graded credit/no credit. Credits: 3

**PA 495 - Community Analysis (Capstone)**

Basic analytical concepts, including group dynamic skills, housing and land use surveys, historic district analysis, and neighborhood identification. Offered every semester. Prerequisite: Senior standing. Credits: 3

**PA 499 - Independent Study and Research in Public Administration**

Independent research in the student's area of interest, supervised by public administration faculty and culminating in a written and oral report. Offered every semester. Prerequisite: Permit only. Graded credit/no credit. Credits: 1 to 3

**PA 520 - Foundations of Public Service**

This course includes: a history of ideas about public service; a definition and analysis of the governmental sector, the nonprofit sector, and their intersection; a study of classic and contemporary debates within the public service field; and an examination of how public-serving organizations adapt to changing environments. Offered fall and winter semesters. Credits: 3

**PA 535 - Grant Writing**

Instruction in finding grant sources, writing grants, developing grant budgets and evaluating grant proposals. As part of this course, students will be expected to write and submit at least one actual grant proposal. Offered once a year. Credits: 3

**PA 550 - Public Administration Workshop**

Advanced-level workshop directed toward public sector professionals focusing on specific public sector problems and policies. Format and scheduling are flexible and may include weekend sessions. Topics will vary and prerequisites may be established. Offered on sufficient demand. Graded credit/no credit. Credits: .5 to 3

**PA 551 - Public Administration Workshop**

Advanced-level workshop directed toward public sector professionals focusing on specific public sector problems and policies. Format and scheduling are flexible and may include weekend sessions. Topics will vary and prerequisites may be established. Offered on sufficient demand. Graded credit/no credit. Prerequisite: Admission to the M.P.A. program or permit. Credits: 1 to 3

**PA 552 - Public Administration Workshop**

Advanced-level workshop directed toward public sector professionals focusing on specific public sector problems and policies. Format and scheduling are flexible and may include weekend sessions. Topics will vary and prerequisites may be established. Offered on sufficient demand. Graded credit/no credit. Prerequisite: Admission to the M.P.A. program or permit. Credits: 1 to 3

**PA 553 - Public Administration Workshop**

Advanced-level workshops directed toward public sector professionals focusing on specific public sector problems and policies. Format and scheduling are flexible and may include weekend sessions. Topics will vary and prerequisites may be established. Offered on sufficient demand. Graded credit/no credit. Prerequisite: Admission to the M.P.A. program or permit. Credits: 1 to 3

**PA 554 - Philanthropic Topics, Trends and Thought Leaders Workshop**

These workshops provide students with timely, interesting, and diverse content that complements learning in their graduate courses and exposes them with the topics, trends and thought leadership currently engaging the Johnson Center for Philanthropy. Through the workshops, students have the opportunity to interact with both local and visiting practitioners and thought leaders. Offered fall and winter semesters. Prerequisite: Admission to a graduate program or as a nondegree-seeking graduate student. Credits: .5 to 3

**PA 611 - Research Methods**

An advanced survey of the most important and frequently used methods and techniques of research and analysis used by administrators and planners. Course also will familiarize students with the use of computers

## Course Listings and Descriptions

for such research and analysis. Emphasizes the application of research and analysis in public administration. Offered each semester. Prerequisite: PA 520 or PA 630 or PA 660 (may be taken concurrently). Credits: 3

### **PA 612 - Human Resources in Organizations**

An accelerated survey of policies and issues in human resource management in public and nonprofit contexts including the utilization of volunteers. Focus is on human values, behavior, ethics, and human interactions in organizations. Offered spring/summer and winter semesters. Prerequisite: Admission to a master's program in the School of Public, Nonprofit, and Health Administration. Credits: 3

### **PA 614 - Organization Theory**

Explores the various theories of organizations. Focus is on the process of structural development and the impact each structure has on individuals and groups. Offered fall and winter semesters. Prerequisite: PA 520 or PA 630 or PA 660 (may be taken concurrently). Credits: 3

### **PA 615 - Public Financial Administration**

Practices and problems of public fiscal management with special attention to budgetary concepts and analytical techniques: the budget as an instrument of planning and control; organizing to ensure fiscal accountability; the public economy; financial decision-making; planning, programming, and budgeting systems; and allocation of scarce government resources in government and nonprofit agencies and programs. Offered fall semester. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

### **PA 616 - Public Policy Analysis**

An exploration of theories advanced to explain policy formation; examination of how needs are identified, communicated to policy-makers, evaluated and converted into formal policy, and implemented by administrative actions. Emphasis is on policy analysis in the public sector. Offered winter semester. Prerequisites: PA 520 or PA 630; and PA 611. Credits: 3

### **PA 619 - Public Management Seminar**

Examines the structure and dynamics of organizations; problems of financing, staffing, and program implementation; administrative reform and reorganization; qualitative and quantitative methods for managerial decision-making; goal-directed processes and effective planning. Uses a case study approach emphasizing management problems. Offered fall and winter semesters. Prerequisite: Completion of 30 credit hours in M.P.A. or M.H.A. program. Credits: 3

### **PA 620 - Metropolitan Politics and Administration**

Examines theories and practice of metropolitan politics and administration, including studies of intergovernmental relations, suburbia and the multi-centered metropolis, economic development and managing metropolitan services. Structures of politics and power, both formal and informal, are investigated. Offered spring/summer and fall semesters. Prerequisite: PA 520 (may be taken concurrently). Credits: 3

### **PA 621 - Administrative and Regulatory Law**

An intensive study of administrative and regulatory law as it relates to the public sector. Requirements for, and limits on, the exercise of power by elected and appointed official and liability of public managers are covered. Offered fall semester. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

### **PA 630 - Health Administration and Service**

Overview of the current management, organization, and delivery of U.S. health care. Current management and organization theories are compared in relation to the health care system. Major system components are defined and studied. Included are discussions of staffing, dealing with internal and external constituencies, and identification of hospital types. Offered every other year. Credits: 3

### **PA 631 - U.S. Health Policy and Politics**

Examines public policy-making in the health care sector since 1900. Emphasizes policy, the process of government regulation, and the character of health settings at the federal, state, and local levels; with attention to the constitutional foundations, legislative policies, and

bureaucratic implementation features of the system in a political context. Offered fall semester. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

### **PA 632 - Health Services Financial Management**

Provides detailed understanding of the health services financial framework for decision-making. Microcomputer applications that serve to facilitate operational and financial planning and analysis, third party reimbursement, regulation, cost containment, rate settings, operating budgets, capital budgets, project budgeting, cash budgeting, and financial feasibility. Offered winter semester. Prerequisite: PA 611. Credits: 3

### **PA 633 - Health Economics**

Examines the principles and application of economic analysis in the health industry. Provides insights offered by economic analysis of relevant data specific to health issues and problems such as failures of the market system, large gaps in access, cost containment, regulation, and extensive growth of private insurance and government programs. Cross-listed with ECO 643. Offered winter semester. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

### **PA 634 - Health Care Law and Ethics**

Examines current and historical legal and ethical issues impacting health administration, including malpractice and other liability issues, licensing and regulation, professional ethics, contracts and property, insurance, corporate, taxation, antitrust, fraud and abuse, medical staff, confidentiality, health care access, peer review, ethics committees, legal and ethical aspects of patient care decision-making and consent. Offered winter semester. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

### **PA 635 - Hospital Organization and Management**

Discussions of various types of hospitals. Study of their organization and management, including clinical, support and administrative functions, analysis of special operational problems, and administrative ethics. Requirements of the Joint Commission of Accreditation of Hospitals and other accrediting agencies are emphasized. Offered on sufficient demand. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

### **PA 636 - Health Care Quality Improvement**

This course focuses on methods and tools used to manage quality in a variety of health care settings, including hospitals, clinics, physician practices, managed care, and long-term care. It addresses developments in health care quality assurance and improvement, data sources and analysis tools, staffing and management, accreditation, and public relations. Course offered winter semester. Prerequisites: PA 611, PA 612, PA 630, PA 631. Credits: 3

### **PA 637 - Ambulatory Care Organization and Management**

Study of the organizational and administrative aspects of ambulatory health services delivery. Focus on delivery strategies and organizational models and the operational issues of financial control, personnel, regulation, and evaluation. Includes identification and discussions of various types of outpatient services. Offered fall semester. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

### **PA 638 - Long-Term Care Organization and Management**

Overview of organization and management of long-term care continuum, including nursing homes, hospices, psychiatric institutions, and non-institutional alternatives - such as - home health care and adult day care. Examines principles in the management of institutional and non-institutional facilities for the chronically, terminally, or mentally ill and the disabled elderly. Offered winter semester. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

### **PA 639 - Community Benefits Assessment and Management**

Covers community assessment, program planning, and program management techniques with an emphasis on health. Community relations and coordination will be addressed. Prepares students for IRS, grant planning, and reporting. Course offered fall semester. Prerequisite: PA 611 (for M.H.A. and M.P.N.L. students). STA 610 (for M.P.H. students). Credits: 3

**PA 640 - Marketing Health and Human Services**

Explores and applies marketing and public relations concepts to a variety of health and human service functions. Included are the integration of marketing and public relations planning and programs in organizations. Focuses on social and ethical issues of promoting wellness and health care, and communication with the community and media. Offered on sufficient demand. Prerequisite: PA 520 or PA 630 or PA 660 (may be taken concurrently). Credits: 3

**PA 641 - Economic and Community Development**

Describes and evaluates ways to coordinate the efforts of public agencies, private businesses, and nonprofit organizations to address planning, economic development, and employment issues more comprehensively. Included in this analysis are public and private programs basic to economic development; state and federal enabling legislation and regulations; local ordinance and public/private partnership alternatives. Offered winter semester. Prerequisite: PA 520 or PA 630 (may be taken concurrently). Credits: 3

**PA 642 - Conflict Management**

Provides an overview of theories of social conflict. Develops an understanding of the conceptual issues involving conflict and conflict management on many levels in diverse settings. Introduces specific dispute resolution skills such as negotiation and mediation. Offered on sufficient demand. Prerequisite: Admission to the M.P.A. or M.H.A. program. Credits: 3

**PA 643 - Strategic Management and Planning**

Planning as a decision-making process, methods for defining goals in public and private planning programs, role of planning in policy formulation, planning for human environment relationships. Offered fall and winter semesters. Prerequisite: PA 520 or PA 630 or PA 660 (may be taken concurrently). Credits: 3

**PA 644 - GIS in the Public Service**

Examines the management and application of geographic information systems (GIS) in the public and nonprofit sectors. Lectures and readings emphasize the organizational, managerial, and ethical issues of interagency/intergovernmental GIS projects. Hands-on lab instruction provides training in desktop GIS software. Offered fall semester. Prerequisite: Admission to the M.P.A. or M.H.A. program. Credits: 3

**PA 645 - Aging in Society: Concepts, Controversies, and Challenges for Public Service Administrators**

This course explores population aging, the longevity revolution, and their impacts on individuals and society. Covers critical challenges and controversies for communities and society and reviews social policies and programs serving the growing older adult population. Special attention to the ethical, economic, workforce, and policy issues for public servants. Offered fall semester. Credits: 3

**PA 646 - Managerial Epidemiology for Health Administrators**

This course provides future health administrators with a firm grounding in the history and purpose of public health, population health and the extensive variety of programming for improving population health. It also provides a grounding in managerial epidemiology. Offered fall semester. Credits: 3

**PA 650 - Health Administration, Services, and Policy**

This is an overview of current USA healthcare organizational leadership, types, and trends including comparison of current management, organization theories, and global health systems. Health care public policy-making is analyzed and described emphasizing the historical, philosophical, and political aspects of public policy including policy development, analysis, and constituent advocacy. Course offered fall semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

**PA 660 - Philanthropy and the Nonprofit Sector: History and Ethics**

A comprehensive survey of philanthropic traditions and practices in the nonprofit sector, its history, philosophy, character, governance, and legal status. Emphasis on the role and tradition of philanthropy and voluntarism in America and on the special fundraising, resource development and

ethical practices of the sector. Prerequisite: Admission to the M.P.A., M.H.A., or M.P.N.L. programs. Credits: 3

**PA 661 - Nonprofit Management: Practices**

Explores the assumptions and practice of nonprofit organization management. Examines how these issues differ in different types of nonprofits. Topics include issues of public accountability, ethics, evaluating organizational effectiveness, personnel motivation, board and staff relationships, volunteers, and the meaning of service. Offered winter semester. Prerequisites: PA 660 and (PA 520 or PA 630). Credits: 3

**PA 662 - Nonprofit Financial Management**

This course will examine nonprofit finance and accounting from the management perspective. Topics include financial policies and internal controls, financial statement presentation and analysis, audit and tax reporting, and budgeting. Offered winter semester. Prerequisite: PA 520 or PA 660. Credits: 3

**PA 663 - Nonprofit Organizations, Advocacy and Public Policy**

An introduction to the public policy making process as it applies to nonprofit organizations. Explores how nonprofit organizations both shape and are shaped by public policy. Focus is on the intersection of nonprofit and government actions and services. Offered fall semester. Prerequisites: PA 660; PA 520 or PA 630. Credits: 3

**PA 664 - Program Evaluation**

Program evaluation is an important component of management and quality improvement. This course draws from the leading scholars in evaluation to establish a foundation of knowledge in program evaluation and evaluation capacity building. Offered fall semester. Prerequisites: PA 611 and PA 614. Credits: 3

**PA 665 - Nonprofit and Foundation Boards, Trustees and Governance**

Examines perspectives on, models for, and functions of board governance and the way governance and management are intertwined in the operation and leadership of foundations and nonprofit organizations. Explores specific functions of trustees within their legal, ethical, and fiduciary obligations. Offered every other year. Prerequisites: PA 520 and PA 660 or PA 630 (may be taken concurrently). Credits: 3

**PA 666 - Foundations and Strategic Grantmaking**

This course explores the implementation of strategic grantmaking and the application of theories of change by charitable foundations, nonprofit organizations, and governments as they aim to achieve measurable community impacts. Through field journal readings, case studies, and visiting practitioner presentations, students will gain practical knowledge in the evaluation of grant applications, the role of foundation program officers, and the effective execution of grantmaking strategies. Offered winter semester. Prerequisites: PA 660 and PA 667. Credits: 3

**PA 667 - Fund Development**

This course will examine fund development in theory, process and implementation within nonprofit organizations. The course is designed and taught primarily from the development manager's perspective; however, the course will also briefly cover development from the grantmaking perspective. Offered fall and winter semesters. Prerequisites: PA 660 and PA 661 (PA 661 may be taken concurrently). Credits: 3

**PA 669 - Leadership Capstone**

Leadership has many meanings and many different theories. This class will explore the concept of leadership in a theoretical and practical sense. We will challenge typical assumptions of leadership and explore leadership theories and practice in nonprofit organizational settings. Offered fall and winter semesters. Prerequisites: PA 660 and PA 661. Must complete 30 credits in the M.P.N.L. before enrolling in this course. Credits: 3

**PA 670 - International NGO Management**

Theory and cases in international nongovernmental organizations (INGO) management. Analysis of various types and various roles played by INGOs. Relationship between INGOs and other actors in international development such as multilateral and bilateral donors, host governments, local NGOs and local communities. Resource generation and management. Assessment and improvement of INGO performance.

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Offered winter and spring/summer semesters. Prerequisite: PA 520 or permission. Credits: 3

### **PA 671 - Building Sustainable Communities**

Provides an overview of ecological, energy, climatic and consumption issues impacting local communities. Through a multidisciplinary approach, students study the relationship among society, organizations, and the natural environment. Students examine how local governments and nonprofit organizations develop sustainable built landscapes, educate about sustainable best practices, and foster green economic development. Offered fall semester. Prerequisite: Admission into the sustainability certificate or M.P.A. programs. Credits: 3

### **PA 674 - Health Advocacy and Built Environment in Public Administration**

This course explores the relationship between advocacy and the built environment and its influence on community health, in the fields of public health and urban planning. This course will examine such issues as theories and concepts of behavior and design, health disparities, social capital, physical activity, transportation, and food systems. Course offered winter semester. Prerequisite: Admission into the Master of Public Health program, or PA 520, or PA 630. Credits: 3

### **PA 680 - Special Topics in Public and Nonprofit Administration**

A seminar for the study of important topics not ordinarily covered in other courses. Course may be taken more than once when the topic is different. Offered on sufficient demand. Prerequisite: Admission to the M.P.A. or M.H.A. program. Credits: 1 to 3

### **PA 690 - Public Administration Internship I**

Open to preservice students and those without public service employment experiences. Students will be given the opportunity to test and apply classroom knowledge to an actual professional position in a public agency or nonprofit organization. Graded credit/no credit. Offered every semester. Prerequisite: Admission to the M.P.A. or M.H.A. program and permit. Credits: 3

### **PA 691 - Public Administration Internship II**

A second internship. May be taken concurrently with PA 690 when field experience warrants it, or may be taken after PA 690 by those taking an additional fieldwork experience. Offered every semester. Prerequisites: PA 690 and permit. Graded credit/no credit. Credits: 3

### **PA 693 - Research Project**

Course requires preparation of an extensive research and writing assignment under faculty supervision. Offered on sufficient demand. Graded C/NC. Prerequisites: Faculty approval of research proposal and completion of the Responsible Conduct of Research Training within last three years. Credits: 3 or 6

### **PA 699 - Directed Readings**

A research or reading project, program proposal, or other approved activity that builds in the student's area of specialization. Offered fall and winter semesters. Prerequisite: Permission of advisor. Graded credit/no credit. Credits: 3

### **PAS 501 - Clinical Applications I**

This is the first of four sequential courses designed to facilitate the development of medical history taking, physical examination skills, patient communication, clinical problem solving, clinical procedures, and ethical/legal considerations for the physician assistant. This first course focuses on history taking and physical examination in the healthy adult. Offered fall semester and other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Corequisite: PAS 561. Credits: 2

### **PAS 502 - Clinical Applications II**

This is the second of four sequential courses designed to facilitate the development of medical history taking, physical examination skills, patient communication, clinical problem solving, clinical procedures, and ethical/legal considerations for the physician assistant. Focus is on physical examination skills and procedures that coincide with topics in Clinical Medicine I. Offered winter semester and other semesters as

determined by the program director. Prerequisite: Admission to the PAS program. Corequisite: PAS 562. Credits: 1

### **PAS 503 - Clinical Applications III**

This is the third of four sequential courses designed to facilitate the development of medical history taking, physical examination skills, patient communication, clinical problem solving, clinical procedures, and ethical/legal considerations for the physician assistant. Focus is on physical examination skills and procedures that coincide with topics in Clinical Medicine II. Offered spring/summer and other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Corequisite: PAS 563. Credits: 1

### **PAS 504 - Clinical Applications IV**

This is the fourth of four sequential courses designed to facilitate the development of medical history taking, physical examination skills, patient communication, clinical problem solving, clinical procedures, and ethical/legal considerations for the physician assistant. Focus is on physical examination skills and procedures that coincide with topics in Clinical Medicine III. Offered fall semester. Prerequisite: Admission to the PAS program. Corequisite: PAS 564. Credits: 1

### **PAS 511 - Foundations of Clinical Medicine**

Designed as an introduction to clinical medicine topics, this course will lay the foundation for future clinical medicine courses by helping the student understand and apply fundamental concepts to patient care. Topics presented include historical medicine, epidemiology, oncology, infectious disease, laboratory studies, imaging, preventative, and genetic principles. Offered fall or other semesters as approved by the director. Prerequisite: Admission into the PAS program. Credits: 4

### **PAS 512 - Clinical Medicine I**

This course is the first of a three-course sequence that provides students with a systematic approach to the etiology, epidemiology, manifestations, laboratory and diagnostic studies, prognosis and treatment of disease. This course will focus but is not limited to the hematological, cardiovascular, pulmonary, gastrointestinal, and renal systems. Offered winter semester and other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 6

### **PAS 513 - Clinical Medicine II**

This course is the second of a three-course sequence that provides students with a systematic approach to the etiology, epidemiology, manifestations, laboratory and diagnostic studies, prognosis and treatment of specific diseases. This course will focus but is not limited to the dermatologic, endocrine, neurologic, psychiatric, musculoskeletal, and rheumatologic systems. Offered spring/summer and other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 6

### **PAS 514 - Clinical Medicine III**

This course is the third of a three-course sequence that provides students with a systematic approach to the etiology, epidemiology, manifestations, laboratory and diagnostic studies, prognosis and treatment of specific diseases. This course will focus on but is not limited to women's health, pediatrics, ENT/ophthalmology/allergy, surgery, and emergency medicine. Offered fall or other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 6

### **PAS 521 - Medical Physiology**

This course is designed for graduate students to learn and gain knowledge in the physiological principles. These concepts are essential for further progress in understanding mechanisms of disease and body systems. This understanding is essential for clinical medicine. Weekly problem solving discussions will emphasize clinical application of physiologic concepts. Offered fall and other semesters as determined by the program director. Prerequisite: Admission into the PAS program or permission of instructor. Credits: 3

### **PAS 522 - Clinical Pathophysiology I**

This is the first of three pathophysiology courses offered concurrently with the clinical medicine series. Pathophysiology at the molecular, cellular, organ, and total body levels will be applied in each organ system. Systems covered include, but are not limited to, hematologic, cardiovascular,

pulmonary, gastrointestinal, and renal. Offered winter or other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 523 - Clinical Pathophysiology II**

This is the second of three pathophysiology courses offered concurrently with the clinical medicine series. Pathophysiology at the molecular, cellular, organ, and total body levels will be discussed in each body system. Systems covered include, but are not limited to, dermatologic, endocrine, neurologic, psychiatric, and musculoskeletal/rheumatologic. Offered spring/summer or other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 524 - Clinical Pathophysiology III**

This is the third of three pathophysiology courses offered concurrently with the clinical medicine series. Pathophysiology at the molecular, cellular, organ, and total body levels will be discussed in each body system. Systems covered include, but are not limited to, women's health, pediatrics, ENT/ophthalmology/allergy, and multisystem disorders. Offered fall or other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 3

### **PAS 532 - Practical Therapeutics I**

This is the first course in a series of three clinical pharmacology courses taught in a systems-based approach with the clinical medicine series. The course explores clinical implications of pharmacology for these topics (but not limited to) hematologic, cardiovascular, pulmonary, gastrointestinal, and renal. Offered winter or other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 2

### **PAS 533 - Practical Therapeutics II**

This is the second course in a series of three clinical pharmacology courses taught in a systems-based approach with the clinical medicine series. The course explores clinical implications of pharmacology for these topics (but not limited to) dermatologic, endocrine, neurologic, psychiatric, and musculoskeletal/rheumatologic. Offered spring/summer or other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 2

### **PAS 534 - Practical Therapeutics III**

This is the third course in a series of three clinical pharmacology courses taught in a systems-based approach with the clinical medicine series. The course explores clinical implications of pharmacology focusing on but not limited to these areas, women's health, pediatrics, surgery, ENT/ophthalmology/allergy, and emergency medicine. Offered fall or other semesters as determined by the program director. Prerequisite: Admission to the PAS program. Credits: 2

### **PAS 542 - Clinical Problem Solving Sessions I**

Designed for first-year physician assistant studies (PAS) students, this laboratory course is the first of three labs for development of PAS students' clinical problem-solving and decision-making skills. Using problem-based learning methods, this course corresponds with modules of PAS clinical medicine and exposes students to an array of clinical health care issues. Offered winter semester, or as approved by the program director. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 543 - Clinical Problem Solving Sessions II**

Developed for first year physician assistant studies (PAS) students, this laboratory course is the second of three courses for development of PAS students' clinical problem-solving and decision-making skills. Using problem-based learning methods, this course supplements the modules of PAS clinical medicine and exposes students to an array of clinical health care issues. Offered spring/summer, or as approved by the program director. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 544 - Clinical Problem Solving Sessions III**

Specifically for physician assistant studies (PAS) students, this laboratory course will facilitate the development of PAS students' clinical problem-solving and decision-making skills. Utilizing problem based learning methods, this course encompasses all of the modules of the PAS clinical medicine series through active learning for an array of clinical health care issues. Offered fall, or as approved by the program director. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 551 - Physician Assistant Profession Issues I**

Designed for first-year graduate physician assistant studies (PAS) students, this introductory course is the first of two professional issues courses to develop PAS students' awareness and professional attributes. Professional history, certification, PA professional organizations, and other health delivery topics will be discussed. Offered fall, or as approved by the program director. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 554 - Physician Assistant Profession Issues II**

Designed for second-year physician assistant studies (PAS) students, this course is the second of two professional issues courses to develop PAS students' skills in office and professional procedures prior to clerkships. Socioeconomic issues, billing and coding, risk management, and other legal issues in the PA profession will be explored. Offered fall, or as approved by the program director. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 561 - Clinical Applications Lab I**

The first in a four-part lab series focused on the development of history and physical examination skills. The lab will focus on well patients, and occasionally special patient populations (pregnant female, pediatric, and the geriatric population). The topics will correspond with PAS 501 lecture material. Offered fall semester. Prerequisite: Admission to the PAS program. Corequisite: PAS 501. Credits: 1

### **PAS 562 - Clinical Applications Lab II**

The second in a four-part lab series on history, physical examination, and procedures. This lab will focus on advanced history and physical examination techniques in the ill population. The topics will correspond with PAS 502 lecture material. Clinical problem solving will be utilized. Offered winter semester. Prerequisite: Admission to the PAS program. Corequisite: PAS 502. Credits: 1

### **PAS 563 - Clinical Applications Lab III**

The third in a four-part lab series on history, physical examination, and procedures. The focus of this course will be on advanced history taking, and physical examination techniques in the ill population. The topics will correspond with PAS 503 lecture material. Offered spring/summer semester. Prerequisite: Admission to the PAS program. Corequisite: PAS 503. Credits: 1

### **PAS 564 - Clinical Applications Lab IV**

Final in a four-part lab series on history, physical examination, and procedures. Focus of this lab will be advanced history taking, and physical examination techniques in the ill, pediatric, female, and surgical patients. Some review, also learning new advanced physical exam tests in correspondence with PAS 504 lecture material. Offered fall semester. Prerequisite: Admission to the PAS program. Corequisite: PAS 504. Credits: 1

### **PAS 572 - Hospital Community Experience I**

The first course in a three-part series. This course is designed to expose students to a variety of health care related hospital and community experiences. Learning opportunities may include, but are not limited to, long-term care, clinical job shadowing, public health, research, and virtual and simulated patient experiences. Offered winter semester. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 573 - Hospital Community Experience II**

The second in a three-part series. Designed to provide students with continued exposure to a variety of health care related hospital and community experiences. Learning opportunities may include, but are not limited to, long-term care, clinical job shadowing, public health, research, and virtual and simulated patient experiences. Offered spring/summer semester. Prerequisite: Admission to the PAS program. Credits: 1

### **PAS 574 - Hospital Community Experience III**

The third in a three-part series. Designed to provide students with continued exposure to a variety of health care related hospital and community experiences. Learning opportunities may include, but are not limited to, long-term care, clinical job shadowing, public health, research, and virtual and simulated patient experiences. Offered fall semester. Prerequisite: Admission to the PAS program. Credits: 1

## Course Listings and Descriptions

### **PAS 580 - Special Topics in Physician Assistant Studies**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 500-level courses. May be repeated for credit when the content varies. Prerequisites: Variable depending upon the semester in which the special topics course is utilized; admission to the PAS program. Credits: 1 to 3

### **PAS 582 - Evidence-Based Medicine I**

This course introduces students to evidence-based medicine and research design concepts, while emphasizing the examination of the best available evidence as a basis for clinical decision-making. Students will develop the skills to perform medical literature searches yielding evidence-based results. Methods for appraising the medical literature will be emphasized. Offered winter semester. Prerequisite: Admission to the physician assistant studies program. Credits: 3

### **PAS 583 - Evidence-Based Medicine II**

This course builds upon the prerequisite evidence-based medicine (EBM) course (PAS 582) through continued implementation of the EBM strategies introduced in PAS 582. In PAS 583, the students will use concepts introduced in PAS 582 and apply them to help solve clinical problems. Methods for appraising the medical literature will be emphasized. Offered spring/summer semester. Prerequisite: PAS 582. Credits: 2

### **PAS 584 - Evidence-Based Medicine III**

This course builds upon the prerequisite evidence-based medicine (EBM) courses (PAS 582 and PAS 583) through continued implementation of the EBM strategies introduced. In PAS 584, the students will use concepts introduced in PAS 582/3 and apply them to help solve clinical problems. Methods for appraising the medical literature will be emphasized. Offered fall semester. Prerequisites: PAS 582 and PAS 583. Credits: 2

### **PAS 605 - Research in Medicine**

This course investigates the theories, paradigms, and steps necessary to select and approach a research problem. A continued emphasis (from PAS 506) on critical analysis of research articles, designing and writing research proposals, and further refinement of the research process. Offered winter semester. Prerequisite: PAS 506. Credits: 2

### **PAS 610 - Clinical Rotations I**

First course to transition students from didactic to clinical training. Students will be assigned to a combination of clinical rotations selected from: family practice, internal medicine, OB/GYN, geriatric medicine, pediatrics, psychiatric medicine, emergency medicine, surgery, rural medicine, underserved medicine, and clinical electives. (4-3-45) Offered winter semester, other semesters with director approval. Prerequisite: Successful completion of all professional didactic coursework. Credits: 12

### **PAS 620 - Clinical Rotations II**

Second course to transition students from didactic to clinical training. Students will be assigned to a combination of clinical rotations selected from family practice, internal medicine, OB/GYN, geriatric medicine, pediatrics, psychiatric medicine, emergency medicine, surgery, rural medicine, underserved medicine, and clinical electives. (4-3-45) Offered spring/summer semester, other semesters with director approval. Prerequisite: Successful completion of all professional didactic coursework. Credits: 12

### **PAS 630 - Clinical Rotations III**

Third course to transition students from didactic to clinical training. Students will be assigned to a combination of clinical rotations selected from family practice, internal medicine, OB/GYN, geriatric medicine, pediatrics, psychiatric medicine, emergency medicine, surgery, rural medicine, underserved medicine, and clinical electives. (4-3-45) Offered fall semester, other semesters with director approval. Prerequisite: Successful completion of all professional didactic coursework. Credits: 12

### **PAS 680 - Special Topics in Physician Assistant Studies**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 600-level courses. May be repeated for credit when the content varies. Prerequisites: Variable depending upon the semester in which the special topics course is utilized; admission to the PAS program. Credits: 1 to 3

### **PAS 688 - Physician Assistant Research I**

First of two courses in which a group of students defines a problem within physician assistant studies. Applications of foundational concepts and methodology used in research are addressed. Coursework involves literature review, research design and proposals. Group research will be guided by appropriate faculty. Prerequisites: PAS 610 and good standing in the PAS professional programs. Credits: 1

### **PAS 690 - Master's Thesis Proposal**

The individual student will select a significant and original research question pertinent to the physician assistant profession. Coursework involves literature review, research design, and submission of a research proposal with the guidance of a faculty committee. Prerequisites: PAS 610 and good standing in the PAS professional program. Credits: 1

### **PAS 693 - Physician Assistant Research II**

Second of two courses in which a group of students defines a problem within physician assistant studies. Students complete research studies initiated in PAS 688. Coursework involves data collections, analysis and interpretation. Students will present written and oral reports discussing pertinent findings. Research studies will be guided by appropriate faculty. Prerequisites: PAS 688, good standing in one of the PAS professional programs and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **PAS 695 - Master's Thesis**

Continuation of research activity developed in PAS 690. The individual student will conduct a significant and original proposed study. Coursework involves data collection, analysis and interpretation. The student will present written and oral reports discussing pertinent findings. Research will be guided by a faculty committee. Prerequisites: PAS 690, good standing in the PAS professional program and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **PAS 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **PAS 699 - Independent Study - Physician Assistant Studies**

Students will complete a reading project or other approved activity building upon identified student interest that is approved by the department chair. Tangible final product must be completed according to a written agreement developed by the student and the instructor, and signed by both individuals. Prerequisite: Good standing in the PAS professional program. Credits: 1 to 3

### **PED 200 - Rhythms and Dance K-12**

The study of the essential experiences needed for the development of rhythmic movement competency in elementary and secondary school students, including the design and implementation of appropriate learning experiences to provide for the acquisition of rhythmic movement. Credits: 3

### **PED 202 - Adapted Physical Education and Recreation**

Fundamental concepts of adjustment and development of individuals with disabilities, recreation for individuals with disabilities. (1-1-0) Credits: 2

### **PED 204 - Theory and Organization of Intramurals**

Philosophy, organization, finances, facilities, awards, and rules of intramural sports. Practical experience to be gained in working in the college intramural program. (1-1-0) Credits: 2

### **PED 206 - Self-Health and Wellness**

Designed to provide students with knowledge and skills to assess their personal health status, reduce risk behaviors and outline a plan for personal health improvement. Theories and models of health and wellness

are explored. Students will analyze the physical, spiritual, emotional, social, intellectual, and environmental selves. Credits: 2

**PED 210 - Tumbling and Gymnastics, K-12**

The study of skills and teaching techniques for teaching tumbling, gymnastics, and associated motor skills development activities in the K-12 physical education curriculum. Credits: 3

**PED 214 - Lifeguarding**

Skills and techniques of lifeguarding and emergency water safety. American Red Cross certifications are received by students successfully completing the requirements in lifeguarding, first aid, and CPR for the professional rescuer. Students must pass the prerequisite American Red Cross lifeguarding swim skills pretest. Offered winter semester. Credits: 2

**PED 215 - Water Safety Instruction**

Prepares students for water safety instruction certification. Includes skill improvements and techniques of teaching swimming and lifesaving. American Red Cross certification possible upon successful completion. (2-1-0) Credits: 3

**PED 218 - Officiating Seasonal Sports**

Theory, skills, and practice of officiating seasonal sports: fall-football, basketball, volleyball; winter-wrestling, baseball, and softball. A study of rules and procedures used in sports officiating as prescribed by the Michigan High School Athletic Association. (1-1-0) Credits: 2

**PED 220 - Individual Sports K-12**

The study of individual and lifetime sport skills and techniques for teaching those skills in the K-12 physical education curriculum. Credits: 3

**PED 225 - Introduction to Sport Leadership**

This course provides an overview of the diverse leadership opportunities in the sports industry. The student will be provided information about the structure and function of sport organizations, trends in the industry, professional preparation, and career opportunities. Course is offered each semester. Prerequisite: WRT 150. Credits: 3

**PED 230 - Team Sports K-12**

Techniques and procedures for teaching and coaching soccer, speedball, team handball, lacrosse, field hockey, and other selected team sports. Credits: 3

**PED 240 - Methods for Teaching Fitness**

Methods and materials for designing and implementing fitness instruction and assessment in the K-12 school setting. Topics include effects of physical activity and inactivity, current fitness assessment procedures, principles and guidelines for developing health related and skill related fitness, and providing a safe learning environment. Offered fall and winter semesters. Credits: 3

**PED 250 - Baseball Coaching Theory**

Intense and comprehensive theory oriented break courses, including current skills development methodology and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Credits: 2

**PED 251 - Basketball Coaching Theory**

Intense and comprehensive theory oriented break courses, including current skills development methodology and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Credits: 2

**PED 252 - Football Coaching Theory**

Intense and comprehensive theory oriented break courses, including current skills development methodology and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Credits: 2

**PED 254 - Track and Field Coaching Theory**

Intense and comprehensive theoretically oriented course, that includes current skills development, methodology, and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Offered winter semester. Credits: 2

**PED 255 - Volleyball Coaching Theory**

Intense and comprehensive theory oriented break courses, including current skills development methodology and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Credits: 2

**PED 257 - Coaching Theory Course**

Intense and comprehensive theory oriented break courses, including current skills development methodology and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Credits: 2

**PED 258 - Softball Coaching Theory**

Intense and comprehensive theory oriented break courses, including current skills development methodology and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Credits: 2

**PED 260 - Soccer Coaching Theory**

Intense and comprehensive theoretically oriented course, including current skills development, methodology, and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Offered winter semester. Credits: 2

**PED 262 - Ice Hockey Coaching Theory**

Intense and comprehensive theoretically oriented course, including current skills development, methodology, and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Offered winter semester. Credits: 2

**PED 263 - Cross Country Coaching Theory**

Intense and comprehensive theoretically oriented course, including current skills development, methodology, and coaching technique, concurrent with the history of the sport, official rules, legal regulations, safety, strategy, playing dynamics, and coaching fundamentals. Offered fall semester. Credits: 2

**PED 265 - Teaching Health in Elementary Schools**

This course provides the knowledge and skills necessary for teaching health education content in elementary schools. Particular attention is given to curriculum sequence, resource materials, and learning activities. The course is required of all elementary education students. Offered every semester. Credits: 2

**PED 266 - Move-Dance-Learn! PE and Dance for Elementary Education**

Provides knowledge and skills for elementary classroom teachers to utilize best practices in physical education and dance to enhance their teaching. Focuses on developmentally appropriate elementary physical education and dance content and instruction, curriculum resources, classroom management, and cross-curricular integration. Required of all elementary education students. Offered fall, winter, and spring/summer semesters. Credits: 2

**PED 270 - SHE: Curriculum and Program Evaluation**

This course provides an overview of curriculum content and evaluation/assessment techniques appropriate for implementing school health education programs. Emphasis will be placed on the analysis of curriculum content, relationships between content and National and State standards and appropriate techniques for program evaluation and assessment of pupil performance. Credits: 3

**PED 272 - Reproductive Health Education**

An overview of curriculum content and information appropriate for implementing sexuality education courses in secondary schools. Emphasis will be placed on research based sexuality education including: puberty, HIV/AIDS, education, curriculum planning, current sex education laws, educational resources, and developing a safe classroom environment. Offered fall and spring/summer semesters. Credits: 2

**PED 280 - Special Topics in Physical Education**

Lecture, discussion, laboratory, or field study on a topic related to physical education. Credits: 1 to 3

## Course Listings and Descriptions

### **PED 301 - Methods of Teaching Health Education**

This course addresses personal, community, and school health, with special emphasis on teaching these aspects of health. A requirement for the school health education minor. (2-1-0) Credits: 3

### **PED 306 - Teaching Physical Education - Elementary**

The theory and practice of teaching as an elementary physical education specialist. Emphasis on meeting the developmental needs of the elementary child. Curriculum construction, teaching/learning plans, assessment and evaluation, methods, activities, and materials unique to the elementary physical education program. (2-1-0) Credits: 3

### **PED 307 - Teaching Physical Education - Secondary**

Theory and practice of teaching methodology for the physical educator. Emphasis on problem solving collaboration, and traditional approaches to learning. Unit planning, daily lesson plans, teaching aids, and materials for the physical education program. Must be taken before teacher assisting. (2-1-0) Credits: 3

### **PED 315 - Sport in Society**

PED 315 is designed for nonPED majors and minors. Students explore social aspects in contemporary sport via examination of sport entertainment media and through participation in a corequisite sport course experience. Does not count toward the PED major or minor experience. Corequisite: A Movement Science Department FIT 100-level individual sport or team sport activity course. Credits: 2

### **PED 345 - Disability, Sport and Physical Activity**

This course is designed to explore the issues related to persons with disabilities and their participation in physical activity. Topics will include risks and benefits of physical activity, legal issues related to participation, the historical context of disability sport, inclusion versus segregation and opportunities for activity across the lifespan. This course will require students to synthesize and apply content information. Students will work independently and in groups to better understand how individuals with disabilities participate in sport and physical activity. Part of the Identity Issue. Course offered fall semester. Prerequisite: Junior standing. Credits: 3

### **PED 355 - Current Topics in Coaching**

A study of contemporary coaching issues related to the implementation of scientific coaching principles. Topics include the development of an effective coaching philosophy, growth and development, sports medicine, psychology, instructional techniques, and sports management issues. Offered fall semester. Prerequisite: MOV 201. Credits: 3

### **PED 356 - Current Topics in Sport Leadership**

Students will examine contemporary issues in sport leadership as they relate to ethics in sport, social responsibility, stakeholder identification, decision-making, communication, sport governance, and other diverse aspects of the profession. Offered fall and winter semesters. Prerequisites: MOV 202; and PED 225 with a grade of C or better. Credits: 3

### **PED 360 - Practicum in Sport Coaching**

Supervised, part-time work experience in a school, university, community, or business setting involving observation and assistance to a sport coaching professional. This experience is directed and evaluated by a faculty member and on-site professional. Course offered each semester. Prerequisites: MOV 217, MOV 218, PED 355, and instructor permit. Credits: 3

### **PED 376 - Sport Facility and Event Management**

This course examines the principles of facility operations and event management in the industry of sport management. This class provides students with an in-depth investigation of the unique challenges and opportunities that are routinely faced by a business manager in the context of events at sport and entertainment venues. Course offered fall semester. Credits: 3

### **PED 380 - Special Topics in Physical Education**

Study of special problems in physical education upon consultation with advisor and approval of department chair. Offered on demand. Credits: 1 to 3

### **PED 390 - Practicum in Sport Management**

Supervised observation of and assistance to sport manager in professional setting. Students will reflect on practical knowledge in classroom meetings. Student performance is directed and evaluated by faculty member in consultation with on-site professional. Offered every semester. Prerequisites: MOV 102 or equivalent, PED 356, and permission of the instructor. Credits: 3

### **PED 399 - Independent Readings**

Special studies in physical education upon consultation with faculty advisor and approval of department chair. Credits: 1 to 3

### **PED 401 - Organization and Administration of Physical Education and Sport (Capstone)**

Develops a thorough and fundamental base for the administrative principles in physical education and athletics programming, including the administrative framework, fiscal management, facilities management, curriculum and program development, scheduling, supervision, public relations, policies and procedures, guidelines, evaluations, time management, safety, and ethics. SWS course. (2-1-0) Prerequisites: PED 307 (may be taken concurrently) and senior standing. Credits: 3

### **PED 480 - Special Topics in Physical Education**

Lecture, discussion, laboratory, or field study on a topic related to physical education. Credits: 1 to 3

### **PED 490 - Internship in Sport Management**

Culminating experience designed to provide management training in a sport related organization. Internship is a structured experience that will support career goals, and supplement material taught in courses. Offered fall and winter semesters. Prerequisite: PED 390. Corequisite: PED 495. Credits: 6 to 12

### **PED 495 - Administration in Sport Leadership**

Develops a thorough and fundamental knowledge of administrative principles in sport leadership including organizational behavior, leadership philosophy and ethics, human resource management, workplace culture, interpersonal and team communication, governance and policy development, technology, professional presentations, and time management. SWS course. Capstone course. Offered every semester. Prerequisites: Senior status and PED 390. Corequisite: PED 490. Credits: 3

### **PED 499 - Independent Study and Research**

Special studies in physical education upon consultation with advisor and approval of department chair. Credits: 1 to 3

### **PED 580 - Special Topics in Physical Education**

Lecture, discussion, laboratory, or field study on a topic related to physical education. Credits: 1 to 3

### **PED 680 - Special Topics in Physical Education**

Lecture, discussion, laboratory, or field study on a topic related to physical education. Credits: 1 to 3

### **PH 500 - Introduction to Public Health**

A survey of the basic principles of public health practice, including an introduction to the infrastructure of public health, the analytical tools employed by public health practitioners, health promotion and prevention of disease and injury, quality in public health, and legal and ethical concerns. Course offered fall semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

### **PH 505 - Social and Behavioral Public Health**

This course examines the broad foundation in public health theory and tools for its application within the larger scope of public health research and practice. The course will provide an understanding of how both social and behavioral theory is essential in the creation of effective intervention approaches. Course offered winter semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

### **PH 510 - Public Health Epidemiology**

Basic concepts of epidemiology including measurement of disease occurrence and intervention strategies within a public health/community

context. This course will introduce students to study designs commonly utilized in public health as well as their application to evaluation and policy. Course offered fall semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 520 - Environmental and Occupational Health**

Presents basic concepts of environmental health and occupational health. Students will explore the biological, chemical, and physical factors from the environment (community and occupational) that impact the health of the public at a global and local level. Topics covered include air and water quality and industrial hygiene. Course offered winter semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 525 - Quantitative Research Methods in Public Health**

Focuses on data collection and management, study design, selection of study subjects, evaluation of bias, confounding, interaction for randomized trials, prospective and retrospective cohort studies, and case-control studies. Course offered winter semester. Prerequisites: PH 510 and admission into the Master of Public Health program. Credits: 3

#### **PH 530 - Qualitative Research Methods in Public Health**

Provides students with an understanding of the characteristics of qualitative research by utilizing methods to gain insight into health problems. Students will gain experience in various qualitative methods, techniques and software. Offered fall semester. Prerequisite: Acceptance into the Master of Public Health or clinical dietetics program. Credits: 3

#### **PH 540 - Public Health Law and Ethics**

This course investigates elements of legal and ethical theories in public health. Students will use a case study approach to scrutinize ethical and legal issues in public practice, administration, and research. Course offered spring/summer semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 580 - Special Topics in Public Health**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of public health. Prerequisites: Variable. Credits: 1 to 9

#### **PH 600 - Advanced Quantitative Research Methods in Public Health**

Focus on advanced epidemiology and statistical methods used in clinical and public health research. This course will focus on analysis of categorical data, survival data, and longitudinal data with an emphasis on the interpretation and application of results obtained. Course offered winter semester. Prerequisite: PH 525. Credits: 3

#### **PH 602 - Chronic Disease Epidemiology**

Promotes a research based approach to the prevention and management of chronic diseases from a public health standpoint. This course will educate students on the determinants of chronic diseases in populations and will emphasize interventions that have effectively reduced morbidity and mortality associated with chronic diseases. Course offered spring/summer semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 603 - Epidemiology of Aging**

Introduces the epidemiology of aging and age-related disorders from a public health perspective with a specific focus on epidemiologic methods and their application to the study of function and disease in older adults. Course offered spring/summer semester. Prerequisite: PH 602. Credits: 3

#### **PH 604 - Women's and Children's Epidemiology**

Provides students with a broad understanding of the influences on health and disease among women and children, including reproductive issues, infant, child, and maternal morbidity and mortality, abnormal growth and development, and early life factors. Course offered fall semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 605 - Pharmacoepidemiology**

Introduces the basic concepts of pharmacoepidemiology from a public health perspective with a specific focus on epidemiologic methods and their application to pharmacoepidemiologic studies. Course offered spring/summer semester. Prerequisite: PH 510. Credits: 3

#### **PH 606 - Environmental and Occupational Epidemiology**

Environmental and occupational epidemiology will introduce students to the epidemiologic methods utilized in studying health effects of environmental and occupational agents. This course will also provide students with an understanding of how these agents affect both the health of workers as well as the health of the community. Course offered spring/summer semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 608 - Infectious Disease Epidemiology**

Will introduce students to the principles, concepts, and methods of conducting an epidemiologic investigation; including epidemiologic study designs and laboratory methods used in infectious disease research. This course will also provide students with a broad understanding of public health surveillance for infectious diseases. Course offered spring/summer semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 610 - Cancer Epidemiology**

Will promote a research based approach to the understanding of cancer etiology. This course will provide students with a broad understanding of the prevalence of cancer, ranging from the distribution of susceptibility markers, cancer screening, and related health services in a population setting to cancer control and prevention programs. Course offered fall semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 612 - Public Health Genetics**

Application of advances in genetics and molecular biotechnology to improve public health and prevent disease. This course provides an introduction to the field of genomics, integrating findings from genetic epidemiology and genetic screening, with the goal of preventing disease at the population level. Course offered winter semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 613 - Psychiatric Epidemiology**

Introduces the epidemiology of psychiatric disorders from a public health perspective with a specific focus on epidemiologic methods and their application to the study of mental disorders of childhood, adulthood, and late adult life. Course offered winter semester. Prerequisites: PH 602 and PH 612. Credits: 3

#### **PH 620 - Health Education**

Focuses on the design of effective learning programs to include specification of objectives, selection and organization of learning activities, and program assessment. Moves between theoretical bases for program development and application examinations. Course offered spring/summer semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 621 - Introduction to Urban Health Studies**

Urban settings have unique assets and problems that are often different from traditional health demands. This course students will develop the skill set needed to understand and improve the health of those residing in urban environments. Course offered fall semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 622 - Health Behavior and Promotion**

Provides students background on health-related behavior theories and health status, to develop and evaluate educational activities designed to improve individual and community health and quality of life. Course offered spring/summer semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

#### **PH 623 - Food, Health, and Justice**

This course provides students with an introduction to the urban food movement. Concepts such as access to food, quality of food, affordability of food, and food related policies are explored through both traditional and nontraditional learning opportunities, leaving students with a unique perspective of food in the urban environment. Course offered winter semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

## Course Listings and Descriptions

### **PH 625 - Urban Health Field Studies**

The Urban Health Field Study course will provide students an opportunity to couple their knowledge of the urban environment with interdisciplinary research in an urban community setting. Course offered winter semester. Prerequisite: PH 621. Credits: 3

### **PH 626 - Health Advocacy and Literacy**

This course examines public health patient advocacy and health literacy methods and provides an understanding of the relationship between how literacy and advocacy effect the overall health of the population. Course offered fall semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

### **PH 627 - Public Health Interest Groups**

This course provides a critical assessment of the impact that public health interest groups have on the American political system and public health policy. Public health interest groups will be categorized and explored as to goals, functionality and impact on health policy. Course offered spring/summer semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

### **PH 628 - Health Program Evaluation**

Presents methods for the identification of population based needs for public health intervention, development of programs to meet those needs, and evaluation of the effectiveness of these public health interventions. It integrates several knowledge and skill areas including: research methods, epidemiology, biostatistics, proposal writing, and health disparities. Course offered winter semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

### **PH 629 - Advocacy Strategies in Public Health**

This course provides students with the opportunity to critique and analyze case studies from a variety of both successful and unsuccessful public health advocacy examples. There will be an emphasis on how online environments and social media tools contribute to public health advocacy debates and campaigns. Course offered winter semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

### **PH 630 - Health and Disease Disparities in Diverse Communities**

Presents patterns, causes, and possible solutions to health disparities. The course will identify the role of race, ethnicity, and socioeconomic status in health research and access and utilization of health services. Course offered winter semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

### **PH 631 - Critical Issues in Public Health Advocacy and Policy**

This course provides students with the skills to analyze and evaluate current controversial topics in public health and challenges the student to develop problem solving, communication, influence and collaborative skills to effect public policy. Course offered spring/summer semester. Prerequisites: PH 500, PH 505, PH 510, and PH 520. Credits: 3

### **PH 632 - Public Health Social Campaigning and Distribution**

Analysis of the components and applications of public health social campaigning and distribution: theoretical foundations; research methods; strategy development; program design and implementation; material pretesting; and ethics. Course offered winter semester. Prerequisite: Admission to the Master of Public Health program. Credits: 3

### **PH 633 - Public Health and Environmental Impact Assessment**

The course will emphasize related concepts, theory, assessment methods, and integration and evaluation of models to examine contamination due to air, water, and soil pollution. Course offered spring/summer semester. Prerequisite: PH 520. Credits: 3

### **PH 634 - Environmental Justice**

This course addresses the unequal burdens of environmental contamination and health disparities affecting marginalized communities across the US and internationally. Environmental health/justice theories and illness and disease related to environmental atrocities will be discussed. Course offered spring/summer semester. Prerequisite: PH 520. Credits: 3

### **PH 645 - Global Environmental and Occupational Health**

This course addresses environmental and occupational health in respect to developed, emerging, and less developed countries. Students are educated from an international perspective to analyze global trends in core areas of environment-human interaction with emphasis on vulnerable populations. Course offered fall semester. Prerequisite: PH 520. Credits: 3

### **PH 680 - Special Topics in Public Health**

Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of public health. Prerequisites: Variable. Credits: 1 to 9

### **PH 688 - Public Health Practicum**

The public health practicum experience provides a comprehensive and integrated application of the curriculum that allows students to demonstrate professional competency in public health in a practice setting. Offered each semester. Prerequisites: All core public health courses must be complete prior to enrolling in the practicum course and be in good standing within the public health program. The core curriculum includes: PA 630, 631, PH 500, 505, 510, 520, 525, 530, 535, 540, STA 610. Credits: 3

### **PH 689 - Public Health Practicum in a Global Setting**

Students will complete a global public health experience by pursuing their practicum in an international setting building upon identified student interest that is approved by the program coordinator. Tangible final product must be completed according to a written agreement developed by the student and the instructor. Offered each semester. Prerequisites: All core public health courses must be complete prior to enrolling in the practicum course and be in good standing within the public health program. The core curriculum includes: PA 630, 631, PH 500, 505, 510, 520, 525, 530, 535, 540, STA 610. Credits: 3

### **PH 693 - Public Health Master's Project**

Guided research project development in public health. This course may be taken in sections and be repeated for up to three credits. Course offered each semester. Prerequisites: Students must complete the core curriculum prior to enrollment and complete the Responsible Conduct of Research Training within the last three years. Credits: 1 to 3

### **PH 695 - Public Health Master's Thesis**

The individual student will select a significant and original research question pertinent to the public health profession and will complete 6 continuous credits to complete the thesis. Offered each semester. Prerequisites: Good standing in the public health program, completion of the core curriculum, approval of the program director, and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

### **PH 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **PHI 101 - Introduction to Philosophy**

Inquiry into different perspectives on reality, reason, experience, and human excellence. Intensive reading of at least one classical text and its implications for life in the present. Fulfills Foundations - Philosophy and Literature. Offered fall and winter semesters. Credits: 3

### **PHI 102 - Ethics**

What is good? What is evil? Are there objective standards for right and wrong? What are these objective standards? How can they be applied to important contemporary moral problems? This course considers the answers philosophers give to these and related questions. Fulfills Foundations - Philosophy and Literature. Offered fall and winter semesters. Credits: 3

**PHI 103 - Logic**

What does it mean to think clearly and correctly? What rules govern classification and definition? What is the nature of propositions? What are the rules for correct reasoning? How can we improve our reasoning skills? This course addresses these questions with the help of a standard textbook in classical logic. Fulfills Foundations - Mathematical Sciences. Offered fall and winter semesters. Prerequisite: MTH 110 or equivalent. Credits: 3

**PHI 203 - Intermediate Logic**

A thorough introduction to classical quantificational logic. This course develops the syntax and semantics of the language of quantificational logic, assesses its relation to English, and introduces proof methods for, and some of meta-logic of, quantificational logic. The course also introduces some extensions of, or alternatives to, classical quantificational logic. Offered fall semester, even-numbered years. Prerequisite: PHI 103, or CIS 160, or CIS 162, or MTH 110, or MTH 122, or MTH 201. Credits: 3

**PHI 210 - Eastern Philosophy**

Because the world is getting smaller, the scope of our knowledge and vision must expand. This course introduces students to major philosophies of the East, such as Hinduism, Buddhism, Confucianism, and Daoism, through the study of classic texts. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Credits: 3

**PHI 220 - Aesthetics**

An inquiry into the nature, criteria, and significance of the fine arts and/or artistic creation and response. Fulfills Foundations - Arts. Offered fall and winter semesters. Credits: 3

**PHI 230 - American Philosophy**

Focuses on the history and context of American philosophy, from the precolonial indigenous wisdom traditions to contemporary philosophers. Special emphasis on American Pragmatism as a distinctively American philosophical movement, and on the issues of race as a common theme in American philosophy. Fulfills Cultures - U.S. Diversity. Offered fall semester, odd-numbered years. Credits: 3

**PHI 240 - Middle Eastern Philosophy**

This course introduces students to Middle Eastern philosophy from the medieval period through the contemporary era. The course will give students a thorough understanding of what Middle Eastern philosophy is, what makes it unique, and how both medieval and modern thinkers tackle philosophical problems of their day. Fulfills Cultures - World Perspectives. Offered winter semester, even-numbered years. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

**PHI 250 - Existentialism**

An investigation of a major philosophical and literary movement in the 19th and 20th century. Important existentialists include Dostoevsky, Kierkegaard, Nietzsche, Heidegger, Sartre, and Camus. Topics include authenticity, freedom, consciousness, commitment, our relations to others and God, how emotions provide insights unavailable to reason, and the limits of philosophy. Fulfills Cultures - World Perspectives. Offered fall semester. Credits: 3

**PHI 300 - Theories of Human Nature**

Survey of philosophical, scientific, and religious conceptions of the human being, from past and present and from various cultures. Issues include meaning of life, destiny of humanity, relations between humans, human development and evolution, relations of humans to their creator/origins and to their environments and methodologies for investigating human nature. Part of the Identity Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**PHI 306 - Wisdom of the East: Asian Philosophy**

Study of one or more Hindu, Buddhist, Confucian, or Taoist philosophers (The Buddha, Nagarjuna, Lao Zi, Zhuangzi, Confucius, etc.) Topics: human nature, society and individual, moral practice, suffering and liberation, religiosity. Fulfills Cultures - World Perspectives. Repeatable for credit, if content differs. Offered winter semester. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

**PHI 311 - Ancient Great Philosophers**

A study of one or several ancient great philosophers, such as the preSocratics, Plato, Aristotle, and Lucretius. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. Cross-listed with CLA 311. May be repeated for credit if content varies. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

**PHI 312 - Medieval Great Philosophers**

A study of one or several medieval great philosophers, such as: Plotinus, Augustine, Thomas Aquinas, and Maimonides. Focus will be on the philosophers' writings, but attention will also be given to context and tradition. May be repeated for credit, if content differs. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

**PHI 313 - Early Modern Great Philosophers**

A study of one or several modern great philosophers, up to Kant, such as Descartes, Spinoza, Leibniz, Berkeley, Hume, and Kant. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. May be repeated for credit if content differs. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

**PHI 314 - Late Modern Great Philosophers**

A study of one or several later modern great philosophers beginning with Kant, such as Fichte, Schelling, Hegel, Kierkegaard, Nietzsche, and Marx. Focus will be on the philosopher's writings, but attention will also be given to context and tradition. Course may be repeated if content differs. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

**PHI 315 - Recent Great Philosophers**

A study of one or several recent great philosophers, such as James, Wittgenstein, Heidegger, Dewey, Arendt, Merleau-Ponty, Peirce, Whitehead. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. May be repeated for credit if content varies. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

**PHI 320 - Social and Political Philosophy: Liberty and Justice**

Analyzes the intellectual appropriation of the concept of freedom over time. Emphasis will be given to the dynamic interaction between freedom and social control in classics of Western philosophy from ancient times to modernity. Authors include Plato, Epicurus, Aristotle, Aurelius, Augustine, Hobbes, Rousseau, and Marx. Part of Human Rights Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**PHI 325 - Ethics in Professional Life**

Examination of ethical principles and practice in business, medicine, education, law, and government. This course aims at providing students with the intellectual framework for an ethical analysis of situations which arise within various professions. Also seeks to foster mutual understanding across professional lines. Part of the Human Rights Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**PHI 330 - Law, Philosophy, and Society**

Laws create and preserve rights. We will explore the nature, formation and interpretation of laws. What are they? Where do they come from? And how do we tell what they mean? We will also consider specific issues such as equality and affirmative action, and punishment and the death penalty. Part of the Human Rights Issue. Offered fall semester, even-numbered years. Prerequisite: Junior standing. Credits: 3

**PHI 335 - Philosophy and Democracy**

Explores the idea of democracy within the context of a major philosophical tradition. Investigates the concept of democracy in such areas as social and political thought, educational theory, aesthetics, ethics, metaphysics, philosophy of science and philosophy of religion. Offered fall semester, even-numbered years. Credits: 3

**PHI 341 - Philosophy of Death and Dying**

A philosophical exploration of ethical, religious, and metaphysical questions about death and dying, such as care for the dying, euthanasia, suicide, life after death. What is a human being? The meaning of life?

## Course Listings and Descriptions

Our place in the universe? Classical and contemporary writings, East and West, will be examined. Offered fall semester. Credits: 3

### **PHI 343 - Philosophy of Religion**

Does God exist? Is there a life after death? How did evil enter the world? Is there any place for reason in religion, or is religious faith only a matter of subjective experience? Questions like these will be considered, as well as the answers that have been given to them by some important religious philosophers. Part of the Identity Issue. Prerequisites: Junior standing and prior work in philosophy or permission of instructor. Credits: 3

### **PHI 345 - Philosophy of Mind**

Introduction to theories about mind, brain, and consciousness, their development and interrelations in the species and individual. Topics include the social construction of consciousness; subjectivity; altered states of consciousness, "higher states of consciousness," and the unconscious; relations between mind, consciousness, and brain; consciousness and language and consciousness and machines. Offered fall semester of even-numbered years. Credits: 3

### **PHI 350 - Philosophy of History**

The course first compares classical cyclical with Judeo-Christian views of history. It then follows the rise of ideas of progress, of historicism, and of Marxism. Students study primary texts from philosophers of history such as Plato, Augustine, Vico, Hegel, and Marx, and at least one contemporary philosopher of history. Offered fall semester, odd-numbered years. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

### **PHI 360 - Philosophy of Science**

Scientific knowledge is compared with that acquired in other disciplines. Topics common to the physical, biological, and social sciences, such as discovery, explanation, confirmation, the nature of scientific models and laws, are also considered. Offered fall semester, even-numbered years. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

### **PHI 370 - Sex Matters: Feminist Philosophy in the Contemporary World**

Sex and gender are central to our identity. The course explores these concepts within the intersection of race, class, sexualities, and ethnicities. Philosophical analyses will be used to investigate how gendered biases infuse the structures of thought and action such that sex is a central component of our lives. Part of the Identity Issue. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **PHI 375 - Community Working Classics I**

A political philosophy/service learning seminar that involves students in community organizing and teaching as well as the study of classic texts in philosophy. Careful analysis of the relationship between theory and practice in a philosophical education. Offered fall semester. Prerequisite: Permission of instructor. Credits: 4

### **PHI 380 - Special Topics in Philosophy**

A variable topics course on a problem, theme, or figure of importance to the practice of philosophy in the present. Offered as needed. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

### **PHI 399 - Independent Readings**

Reading on a topic or a philosopher, arranged both as to credit and content with a member of the department. Offered fall and winter semesters. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 1 to 4

### **PHI 440 - Epistemology**

What is knowledge? What is the relation of knower to known? How is knowledge distinguished from belief? What are the nature and ground of certainty? Varieties of objectivism and subjectivism, ancient and modern, will be considered. Offered winter semester. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

### **PHI 450 - Metaphysics**

A study of representative metaphysical systems and problems through the writings of the classical, medieval, modern and recent periods. Topics

studied include being, substance, causation, essence, matter, form, space, time, relation, etc. Some attention to nonwestern metaphysical thought. Offered fall semester, odd-numbered years. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

### **PHI 460 - Value Theory**

This course is dedicated to some of the most fundamental questions about value: What is value? Where does it come from? How many kinds of it are there? and What are the relationships between the different kinds of value? Readings will be drawn from classical and contemporary philosophical literature. Offered winter semester, odd-numbered years. Prerequisite: Prior work in philosophy or permission of instructor. Credits: 3

### **PHI 470 - Philosophy of Language**

A survey course in the philosophy of language. Topics include theories of meaning, truth, and reference; meaning and interpretation; semantics vs. pragmatics; speech acts; language and thought; knowledge of language. Offered winter semester of even-numbered years. Prerequisite: One philosophy course or permission of the instructor. Credits: 3

### **PHI 480 - Special Topics in Philosophy**

According to the needs of the students, seminars in historical and systematic studies in areas, philosophers, and movements, of which the following are examples: Aristotle, Thomas, Hume, Kant, Hegel, Hellenistic philosophy, philosophy of history, advanced logic, advanced ethics, theory of knowledge, philosophy of science, advanced political philosophy, and philosophy of education. Credits: 3

### **PHI 495 - Reality, Knowledge, and Value (Capstone)**

The purpose is, by a review of basic presuppositions about knowledge, reality, and value, to make clear what unites and what separates the main traditions in people's search for wisdom. Offered fall and winter semesters. Prerequisites: Major or minor in philosophy and senior standing. Credits: 3

### **PHY 105 - Descriptive Astronomy**

A general survey of astronomy topics including: the motion of celestial objects, light and telescopes, information about the solar system, its formation and stellar evolution. The class includes lecture, laboratory, and night observations. Fulfills Foundations - Physical Sciences with a lab. Credits: 3

### **PHY 180 - Special Topics in Physics**

Exploration at the introductory level of topics not addressed at the same level in other physics courses. Credits: 1 to 4

### **PHY 200 - Physics for the Life Sciences**

Physics topics particularly applicable to occupations in safety, health science, biology, medicine, and industry. A practical survey of physics also applicable to humanities and nonscience majors. Includes a laboratory. Background course for making decisions about science and technology. Mechanics, fluids, sound, heat, basic electricity, light optics, nuclear radiation. (3-1-2) Offered every semester. Prerequisite: MTH 110 or MTH 122 or MTH 201. Credits: 4

### **PHY 201 - Inquiry: The Mechanical and Thermal World**

Course stresses understanding physical science to allow one to explain concepts to others, whatever the audience. Focus is on the development of fundamental concepts, reasoning and critical thinking skills through discovery learning and Socratic dialogue in the laboratory setting. Topics include mass, volume, density, buoyancy, heat, temperature, electric circuits. (Ideal for students preparing for careers in education.) Fulfills Foundations - Physical Sciences with a lab. (0-0-6). Offered fall semester. Credits: 4

### **PHY 202 - Physics for K-8 Teachers, Motion, Energy, and Forces**

A study of motion, its descriptions, and causes. Includes energy models and force models. Develops the ability to explain concepts to a range of audiences. Course is intended for integrated science majors. Content reflects national and Michigan science education standards. Course offered fall semester. Credits: 2

**PHY 203 - Physics for K-8 Teachers, Light, Sound, and Electromagnetism**

Introduction to sound, light, electricity and magnetism. Includes electric and magnetic forces, simple electric circuits, ray models of light and wave models of sound. Develops the ability to explain concepts to a range of audiences. Course is intended for integrated science majors. Content reflects national and Michigan science standards. Course offered winter semester. Credits: 2

**PHY 205 - Astronomy for K-8 Pre-Service Teachers**

Introduction to astronomy. Includes origin, evolution, characteristics, and motion of objects in the solar system, galaxy, and universe. Course is intended for integrated science majors. Course is not intended for science majors or minors. Content reflects national and Michigan science standards. Offered fall and winter semesters. Credits: 2

**PHY 210 - Math Topics in Physics**

A course in kinematics and mechanics designed to meet the needs of a student who has already completed the first half of a standard one-year noncalculus course in general physics, and who needs credit in the first half of a standard one-year calculus-based physics course. (1-0-0) Offered fall semester. Prerequisites: PHY 220 and MTH 201 (MTH 202 recommended as a corequisite). Credits: 1

**PHY 211 - Math Topics in Physics II**

A course in thermodynamics, electricity and magnetism, and optics designed to meet needs of students who have already completed the second half of a standard one-year noncalculus course in general physics, and who need credit in the second half of a standard one-year calculus based course. (1-0-0) Offered winter semester. Prerequisites: PHY 221, PHY 230 or equivalent, and MTH 202. Credits: 1

**PHY 220 - General Physics I**

The first half of a two-semester noncalculus sequence with a laboratory; recommended for life science majors. Kinematics, vectors, Newtonian mechanics, gravity, work, conservation of energy and momentum, fluids, and properties of matter. Fulfills Foundations - Physical Sciences with a lab. (2-2-3). Offered fall, winter, and spring/summer semesters. Prerequisites: MTH 122 and MTH 123. Credits: 5

**PHY 221 - General Physics II**

The second half of a standard one-year noncalculus sequence with a laboratory; recommended for life science majors. Electricity and magnetism, fields, simple electrical circuits, light and optics, introduction to quantum and nuclear phenomena. (2-2-3) Offered fall, winter and spring/summer semesters. Prerequisite: PHY 220. Credits: 5

**PHY 230 - Principles of Physics I**

The first course in a two-course calculus-based sequence for students of science, mathematics, and engineering with a laboratory. Topics include vectors, kinematics, dynamics, work, conservation of energy, linear and angular momentum, gravitation, mechanical waves and oscillations, and sound. Fulfills Foundations - Physical Sciences with a lab. Offered fall, winter and spring/summer semesters. Prerequisite: MTH 201 (MTH 202 is recommended as a corequisite). Credits: 5

**PHY 231 - Principles of Physics II**

The second course in a two-semester sequence for students of science and engineering, with a laboratory. Topics include thermodynamics, Coulomb's law, electric fields and potential energy, Gauss's law, circuits, electrical waves and oscillations, Maxwell's equations, and optics. Offered fall, winter, and spring/summer semesters. Prerequisites: PHY 230 and MTH 202. Credits: 5

**PHY 234 - Engineering Physics**

A second course in calculus-based physics designed for engineering majors. Topics covered include electromagnetic theory, optics, atomic and nuclear physics. Course content emphasizes areas of physics not covered in depth by the engineering curriculum while minimizing areas of overlap. (3-0-2) Offered fall semester. Prerequisites: PHY 230 and MTH 202. Credits: 4

**PHY 280 - Special Topics in Physics**

Exploration at a moderate level of topics not addressed at the same level in other physics courses. Credits: 1 to 4

**PHY 302 - Introduction to Modern Physics**

A course in modern physics for students in science, math and engineering, with a laboratory. Special relativity, particle-like properties of radiation, wave-like properties of matter, atomic models, and the Schrödinger equation with applications. (3-0-3). Offered fall and winter semesters. Prerequisite: PHY 231. Credits: 4

**PHY 306 - Physics of Sports**

An investigation of how the world around us behaves and the physics behind various sporting activities. Why does a curveball curve? Why do swimmers spend so much time on their form? Course will include hands-on experiments as well as a research project. (3-0-0). Offered fall and winter semesters. Prerequisite: Completion of science general education foundation course requirements. Credits: 3

**PHY 309 - Experimental Methods in Physics**

Course consists of four modules: instrumentation, statistics pertaining to physics, electronics, and an introduction to machine shop methods. Course culminates in a final project that includes the design, implementation, analysis, and written and oral report of an experiment geared toward student interest. (2-0-4) Offered fall semester. Prerequisites: PHY 302 and a Supplemental Writing Skills course. Credits: 4

**PHY 311 - Advanced Laboratory II**

Experimental laboratory activities related to physics at the intermediate level. The experiments assigned are dependent on student interest and goals. (0-0-6) Offered winter semester. Prerequisites: PHY 309 and a Supplemental Writing Skills course. Credits: 2

**PHY 320 - Optics**

Geometric optics, including intermediate study of reflection and refraction. Physical optics, including intermediate study of interference and diffraction. Includes lasers and other applications. Offered fall of odd-numbered years. Prerequisite: PHY 231. Credits: 3

**PHY 330 - Intermediate Mechanics**

An intermediate-level study of Newtonian classical mechanics for students in science, math and engineering. Newton's laws of motion, conservation laws, and applications, including conservative and nonconservative forces, velocity-dependent forces, work and energy, linear oscillations, central forces, and noninertial reference frames. Offered fall semester. Prerequisites: PHY 230; and either MTH 302 or MTH 304; or permission of the instructor. Credits: 4

**PHY 340 - Electromagnetic Fields**

An intermediate-level study of electricity and magnetism for students in science, math and engineering. Vector calculus, electrostatic and magnetostatic fields in vacuum and in matter, Maxwell's equations and applications. Offered winter semester. Prerequisites: PHY 231 and MTH 302 or MTH 304. Credits: 4

**PHY 350 - Introduction to Quantum Mechanics**

An introduction to quantum physics for students in science, math and engineering. Vector spaces, orbital and spin angular momentum, time-independent and time-dependent Schrödinger equation, operators, eigenvectors and eigenvalues. Applications include tunneling, the hydrogen atom, and the simple harmonic oscillator. Offered fall semester. Prerequisites: PHY 302 and MTH 302 or MTH 304 (MTH 300 recommended). Credits: 4

**PHY 360 - Statistical Thermodynamics**

Basic concepts of heat, thermodynamics and statistical physics for students of applied and theoretical physics. Temperature, equations of state, laws of thermodynamics, properties and behavior of pure substances, ideal gases, and mixtures. Introduction to statistical physics including statistical ensembles, probability, kinetic theory, heat capacity, and ideal gas velocity distributions. (4-0-0) Offered winter semester. Prerequisite: PHY 231. Credits: 4

## Course Listings and Descriptions

### PHY 370 - Solid State Physics

A first course on the physics of solids. Topics may include crystal structure and x-ray diffraction; lattice vibrations and phonons; free electron Fermi gas; energy bands; properties of metals, semiconductors, and insulators; superconductivity; magnetism and magnetic materials. Offered winter semester of odd-numbered years. Prerequisites: PHY 302 and MTH 302 or MTH 304. Credits: 3

### PHY 380 - Special Topics in Physics

Lecture, discussion, and/or laboratory in specific areas of physics. Topics will reflect the special interests of the students and/or the instructor. Prerequisite: Permission of instructor. Credits: 1 to 4

### PHY 399 - Readings in Physics

Independent supervised readings on selected topics. Offered fall and winter semesters. Prerequisite: Permission of instructor. Credits: 1 to 4

### PHY 430 - Advanced Mechanics

Study of classical mechanics at an advanced mathematical level. Systems of particles, rotating coordinate systems, generalized coordinates, virtual work, Lagrange's and Hamilton's equations. Offered winter semester of even-numbered years. Prerequisites: PHY 330 and MTH 300. Credits: 3

### PHY 440 - Advanced Electricity and Magnetism

Study of Maxwell's equations at an advanced mathematical level. Electromagnetic wave propagation in free space and in materials. Reflection and refraction of electromagnetic waves, waveguides and coaxial lines, electromagnetic radiation. Offered fall semester. Prerequisites: PHY 340 and MTH 300. Credits: 3

### PHY 450 - Quantum Mechanics

Addition of angular momenta, scattering, approximation methods. Pauli principle, applications to transitions, molecular and solids. Offered winter semester of odd-numbered years. Prerequisites: PHY 350 and MTH 300. Credits: 3

### PHY 475 - General Relativity

A comprehensive treatment of special relativity including the notion of four vectors on Minkowski space time. An introduction to curved space time including Geodesics and classic tests of General Relativity. Applications include Black Hole Physics, Cosmology, Einstein's equations and more. Course offered winter semester. Prerequisites: MTH 304, PHY 302, and PHY 330. Credits: 3

### PHY 480 - Special Topics in Physics

Exploration at the advanced undergraduate level of topics not addressed at the same level in other physics courses. Credits: 1 to 4

### PHY 485 - Senior Physics Project (Capstone)

An independent investigation of theoretical or experimental physics. The nature and scope of the project are determined by the student in consultation with the instructor. Normally this project is carried out during the entire senior year-one hour credit during the fall semester and two hours credit during the winter semester. A written technical report is required. All seniors meet each week to discuss their projects with each other and their supervisor. Open only to senior physics students in good standing. (1-0-4) Offered fall semester. Credits: 1

### PHY 486 - Senior Physics Project (Capstone)

Continuation of student's work in PHY 485. Both an oral report and a final written technical report are required. (1-0-8) Offered winter semester. Prerequisite: PHY 485. Credits: 2

### PHY 499 - Research in Physics

Investigation of current ideas in physics for upper class students majoring in physics. Content determined by the student in conference with tutor. Completion of a substantial paper based upon the work. Offered fall and winter semesters. Prerequisites: 25 credits in physics and permission of the department chair. Credits: 1 to 4

### PHY 670 - Modern Physics with Computer Visualization

Uses visual quantum mechanics instructional units to integrate interactive computer programs with hands-on, minds-on activities to learn modern physics and quantum principles. Visualization techniques will replace higher level mathematics. The important historical experiments done

at the turn of the century will also be reproduced and studied. (2-0-2) Offered fall semester of odd-numbered years. Prerequisites: PHY 220 and PHY 221 or equivalent. Credits: 3

### PHY 680 - Special Topics in Physics

Exploration at the advanced level of topics not addressed at the same level in other physics courses. Credits: 1 to 4

### PLS 102 - American Government and Politics

A prerequisite to all courses listed in the subfield of American Government and Politics. Examines American political values, governmental functions, political processes, policy issues, and decision-making processes. Fulfills Foundations - Social and Behavioral Sciences. Offered every semester. Credits: 3

### PLS 103 - Issues in World Politics

Analysis and discussion of contemporary issues in world politics as a vehicle for introducing core concepts in comparative politics, such as democracy, dictatorship, civil society, power, nationalism, political economy, social policy, identity politics, and development. Students will gain basic familiarity with the institutions, actors, and processes that influence world politics. Fulfills Foundations - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Offered every semester. Credits: 3

### PLS 105 - Introduction to Human Rights

Introduction to the historical and conceptual development of human rights as moral, legal, and cultural constraints on the behavior of states in relation to their citizens. Analysis is theoretical, exploring philosophical arguments surrounding the historical development of human rights and their current role in legal, cultural, literary and political products. Fulfills Foundations - Philosophy and Literature. Cross-listed with HRT 105. Offered fall and winter semesters. Credits: 3

### PLS 180 - Special Topics in Political Science

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 3

### PLS 202 - American Election Campaigns

An examination of the strategies and tactics of American election campaigns. Particular focus on the role of the mass media and computer technology as instruments of campaign communication and persuasion. Offered fall semester of even-numbered years. Prerequisite: PLS 102 or junior standing. Credits: 3

### PLS 203 - State Politics

Examines the relationship between the states and the national government (federalism), state political institutions, and the politics and policies that characterize contemporary state governing. Emphasizes devolution (the shift of responsibility from the national government to the states), the relationship between governing and the economy, and Michigan politics and policy. Offered fall semester. Prerequisite: PLS 102 or junior standing. Credits: 3

### PLS 205 - The Policy Process

An introduction to the study of public policy. Examines the politics of the policy-making process in the United States. Students will gain an understanding of how issues emerge and ultimately become policies, how politics shapes public policies, and how these policies affect people's lives. Offered winter semester. Prerequisite: PLS 102 or junior standing. Credits: 3

### PLS 206 - American Constitutional Foundations

Integrates the perspectives of political science and constitutional law to examine the principles and institutional structures of the American political system. Analyzes political and constitutional sources of presidential, congressional, state and national power. Investigates federalism, voting, parties, interest groups, civil rights, and civil liberties. Primarily for social studies majors. Offered every semester. Credits: 3

### PLS 211 - International Relations

This introductory course in international relations examines interactions among states and nonstate actors in the international environment. Class

focuses on military, economic, ethnic, and religious conflict. Topics include power, organizations, nationalism, and economic integration. Major IR theories are exemplified by current topics, such as terrorism, poverty, trafficking, and climate change. Fulfills one of the Foundation - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Offered every semester. Credits: 3

**PLS 212 - Great Decisions**

Defining moments in international relations and foreign policy decision-making are used to illustrate the impact of leaders, institutions, and public opinion on foreign policy. Students attend the "Great Decisions" lecture series and hear high-ranking foreign policy analysts discuss controversial issues in contemporary world affairs. Offered winter semester. Credits: 3

**PLS 221 - Government and Politics of Western Europe**

A comparative analysis of government and politics in France, Germany, Italy, the United Kingdom, and other European countries. Topics include political participation, parties and elections, interest groups, political economy, social welfare policy, and the European Union. Offered fall semester. Credits: 3

**PLS 231 - Classical Political Thought**

Survey of selected classical political theorists, including Plato, Aristotle, Cicero, Aquinas, and Machiavelli. Emphasis on the concepts of justice, human nature, and the state. Offered fall semester. Credits: 3

**PLS 232 - Modern Political Thought**

Survey of selected modern political theorists, including Hobbes, Locke, Rousseau, Mill, and Marx. Emphasis on the concepts of the role of government, nature of justice, human nature, property, and political change. Offered fall and winter semesters. Credits: 3

**PLS 240 - The Holocaust**

Investigates the psychological, social, political, historical, cultural, and economic sources of human aggression and cooperation by focusing on the Nazi destruction of European Jews in World War II. Cross-listed with HNR 231. Offered winter semester. Credits: 3

**PLS 281 - Comparative Political Systems: Canada**

An analysis of the socioeconomic factors which influence the political processes, through a comparison of the political system in the United States with Canada. Fulfills Cultures - World Perspectives. Offered fall semester of even-numbered years. Credits: 3

**PLS 283 - Chinese Politics and U.S.-China Relations**

A historical and thematic survey of Chinese politics by examining the patterns and dynamics of its political, economic, and social developments, as well as its interaction with the United States. Fulfills Cultures - World Perspectives. Offered fall semester. Credits: 3

**PLS 284 - Latin American Politics**

The course analyzes the socioeconomic factors that influence political processes in Latin American countries, combining themes and case studies. Topics include theories of development, the historical role played by various political actors, and the current nature of development, inequality, democracy, and the politics of gender and race relations in the region. Fulfills Cultures - World Perspectives. Offered fall semester. Credits: 3

**PLS 300 - Political Analysis**

Empirical analysis of domestic and international political issues. Topics include data collection strategies and problems, statistical techniques for analyzing small and large data sets, as well as other formal methods of political analysis. Offered fall and winter semesters. Prerequisite: STA 215. Credits: 3

**PLS 301 - Poverty, Inequality, and U.S. Public Policy**

This course examines poverty and inequality in the United States. Topics include definitions of poverty and inequality, historical trends, and policy responses. Diverse perspectives, including international comparisons, will be presented, and students will explore various dimensions of inequality through small group activities. Part of the Identity Issue. Offered winter semester. Prerequisite: Junior standing. Credits: 3

**PLS 302 - Women, Politics, and Public Policy**

This course explores the ways that gender influences government and policy decisions. Students will explore many gendered issues and the relevant policy responses. Topics include domestic violence, reproductive policies, divorce and the family, marriage and the family, poverty, class, and compensation. Cross-listed with WGS 302. Offered winter semester. Prerequisite: PLS 102 or junior standing. Credits: 3

**PLS 303 - Introduction to U.S. Environmental Policy**

This course examines the decision-making processes to cope with modern environmental problems. The course focuses on both domestic and international environmental issues with special attention to interests, ideas, and institutions. Part of the Sustainability Issue. Cross-listed with ENS 303. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**PLS 304 - Political Parties and Interest Groups**

A theoretical examination of the roles that these two different types of groups play in politics and an empirical examination of what they do and how they do it. Although the primary focus is on the U.S. political system, some comparative material will be presented. Offered winter semester. Prerequisite: PLS 102 or junior standing. Credits: 3

**PLS 305 - Congress and the Presidency**

An examination of the interrelationships among the modern President, Congress, and the federal bureaucracy, stressing contemporary forces and personalities affecting the relationship. Offered fall semester. Prerequisite: PLS 102 or junior standing. Credits: 3

**PLS 306 - American Constitutional Law I**

This course examines the constitutional foundations of the power relationship between the federal government and the states, among the three branches of the federal government, and between the government and the individual, with special emphasis given to the role of the Supreme Court in a democratic political system. Offered fall semester. Prerequisite: PLS 102 or junior standing. Credits: 3

**PLS 307 - American Constitutional Law II**

Civil liberties and civil rights. Constitutional principles, theories of constitutional interpretation, Supreme Court rulings, political consequences of rulings, and political and legal factors that influence Supreme Court decisions, especially civil rights decisions. Offered winter semester. Prerequisite: PLS 102 or junior standing. Credits: 3

**PLS 308 - American Judicial Politics**

Examines the American judicial system. Both state and federal courts are considered, with emphasis on the structure and procedure of these institutions as well as the political processes and behaviors that are such an important part of the contemporary judiciary. Offered winter semester. Prerequisite: PLS 102 or junior standing. Credits: 3

**PLS 310 - Politics and Health Policy**

Explores contemporary issues in health policy and politics. The course will present the historical context, institutions, participants, and issues that structure health policy. Cross-listed with PA 310. Course offered fall semester. Prerequisite: PLS 102, PA 270, or junior standing. Credits: 3

**PLS 311 - International Conflict and Conflict Resolution**

Analysis of the causes of war and conditions for peace. Topics also include peacekeeping operations and the outcomes and ethics of war. Offered fall and winter semesters. Prerequisite: PLS 211 or junior standing. Credits: 3

**PLS 312 - U.S. Foreign Policy**

Survey of factors and forces that shape the making and implementation of U.S. foreign and defense policy. Emphasis on the perceptions of decision-makers, the impact of the policy-making process on decisions, and actual policies made since World War II. Offered fall and winter semesters. Prerequisite: PLS 102 or PLS 211 or junior standing. Credits: 3

**PLS 313 - International Organization**

Analysis of the major global and regional institutions that promote order and cooperation in the international system, including the United Nations, World Bank, European Union, and NATO. Explores the theory and

## Course Listings and Descriptions

practice of government and nongovernment organizations in addressing issues such as poverty, human rights, and the environment. Offered winter semester of even-numbered years. Prerequisite: PLS 211 or junior standing. Credits: 3

### **PLS 314 - International Law**

A study of the general principles of international law with emphasis on the role of law in political and economic relations of nations. Offered winter semester of odd-numbered years. Prerequisite: PLS 211 or junior standing. Credits: 3

### **PLS 315 - International Political Economy**

Analysis of the politics of international economic relations, with an emphasis on globalization, regional integration, trade, foreign investment, debt, and foreign aid. Offered fall and winter semesters. Prerequisite: One of PLS 211, ECO 200, ECO 210, or ECO 211. Credits: 3

### **PLS 316 - Human Rights in International Politics**

An analysis of human rights as an increasingly influential principle in international relations, and the friction between sovereignty and international standards of behavior. Topics covered within class may include the theoretical origins of human rights, international norms, international law, sovereignty, interventionism, particularly viewed through historical and contemporary human rights cases. Cross-listed with HRT 316. Offered fall semester. Prerequisite: PLS 103 or PLS 211 or junior standing. Credits: 3

### **PLS 319 - African Politics**

A study of social and economic forces that shape the political processes in Africa through a combination of individual cases and general themes. Topics include colonization, regional integration, democratic transitions, state collapse and violence, politics of ethnicity, religion, gender and class, civil society, development, and Africa's role in world affairs. Fulfills Cultures - World Perspectives. Part of the Globalization Issue. Cross-listed with AAA 319. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **PLS 320 - Comparative Politics of the Middle East**

This course presents a survey of current Middle East comparative politics. Students will be introduced to the most salient political issues in the Middle East. It will focus on examining the region's political institutions, actors, regime types, gender politics, political economy, civil society organizations, and political processes. Course offered fall semester. Credits: 3

### **PLS 321 - The European Union**

An examination of politics and policies in the European Union that includes participation in an international political simulation. Students spend three days in Indianapolis in April to take part in the Midwest Model EU. Topics include integration theory, institutional reform, enlargement, and economic, social, environmental, and security policies. Offered winter semester of odd-numbered years. Prerequisite: PLS 221 or permission of instructor. Credits: 3

### **PLS 325 - Human Rights and Democracy in Russia and the Post Communist World**

A comparative analysis of the intersection of human rights and political regimes in Russia, the former Soviet Union, and postcommunist Europe. Emphasis will be placed on the different levels of state repression and protections as well as civil, political, social and economic rights across the broader postcommunist region. Course offered winter semester. Prerequisite: PLS 103 or junior standing. Credits: 3

### **PLS 327 - Politics of Developing Countries**

An examination of government and political economy in developing countries. Topics include nation and state building, authoritarianism and democratization, and contemporary policy issues, including population growth, urbanization, hunger, and economic structural adjustment. Offered winter semester. Prerequisite: PLS 103 or junior standing. Credits: 3

### **PLS 330 - Religion and Politics in America**

Explores the interaction of politics and religion in the United States. Surveys the political beliefs, behaviors, and organizations within major religious traditions. Other topics include the role of religion in crafting

public policy, the politics of church and state, and general theories of religion and public life. Offered fall and winter semesters. Prerequisite: PLS 102 or junior standing. Credits: 3

### **PLS 333 - Contemporary Political Thought**

An examination of political thought from roughly the beginning of the 20<sup>th</sup> century to present. Schools of thought under study may include pragmatism, neoconservatism, critical theory, poststructuralism, philosophical hermeneutics, feminism, neoliberalism, and communitarianism. Offered winter semester. Prerequisite: PLS 231 or 232 or junior standing. Credits: 3

### **PLS 334 - Sex, Power, and Politics**

Explores the ways that gender identity and sexual orientation matter politically, intersect with race and class issues, and impact human flourishing. Examines these issues from a philosophical perspective, sets them in historical and contemporary political contexts, and investigates the role public policy and social norms play in the process. Part of the Identity Issue. Cross-listed with WGS 334. Course offered winter semester. Prerequisite: Junior standing. Credits: 3

### **PLS 335 - Theory of Human Rights**

Critical examination of theories of human rights, with emphasis on classical ethical and political thought and the development of modern rights theory. Assessment of arguments both supporting and denying human rights, and applications to contemporary issues of slavery and trafficking, torture, genocide, and rights of women and sexual minorities. Cross-listed with HRT 335. Offered fall semester. Prerequisite: PLS 105 or HNR 263. Credits: 3

### **PLS 337 - U.S. Political Thought**

An examination of U.S. political thought from the colonial period to the present. Readings may include Federalist and Antifederalist papers, and works by Thoreau, Emerson, Cady Stanton, Anthony, Calhoun, DuBois, Dewey, Addams, King, and Malcolm X. Special attention is paid to political ideas emerging from the struggles for equal rights for all citizens. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **PLS 338 - Citizenship**

Citizenship addresses a core political issue, defining membership in a political community. Course studies classic statements about citizenship, the approach to citizenship taken historically in the U.S., a nation of immigrants, and several different contemporary visions of ethically appropriate citizenship. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **PLS 339 - Democracy and the Authoritarian Challenge**

Comparative examination of theories of democratization and resilience of authoritarianism. Explores regime definitions, theoretical debates of democracy and dictatorship, factors associated with democratic deepening, and the consequences for human rights protection. Includes contemporary case studies from Africa, East and South Asia, Europe and Eurasia, Latin America, and the Middle East. Part of the Human Rights Issue. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **PLS 340 - Mass Media and American Politics**

An examination of the role of the mass media in American politics, including the news media as a political institution, the news media as policy makers, media influence on political leaders, and media impact on public opinion. Offered fall and winter semesters. Prerequisite: PLS 102 or junior standing. Credits: 3

### **PLS 341 - Elections and Voting Behavior**

An empirical analysis of the electoral systems through which citizens in democracies select leaders and influence public policy and factors that influence how and whether people vote; considers major recent changes in the United States' electoral system and alternatives to it. Offered winter semester. Prerequisites: PLS 102, STA 215, and PLS 300. Credits: 3

### **PLS 350 - Comparative Public Opinion**

This course examines the methodology and application of international survey research in the comparative analysis of public opinion. The primary emphasis is the comparison of mass politics in the United States of America to other advanced industrial democracies. Subjects

studied include electoral behavior, civic involvement, political attitudes, and ideologies. Course offered fall and winter semesters. Prerequisites: STA 215 and PLS 300; or permission of the instructor. Credits: 3

**PLS 380 - Special Topics in Political Science**

The study of special and interesting problems, domestic and/or international, will be scheduled from time to time. Offered on sufficient demand. Credits: 3

**PLS 399 - Readings in Political Science**

Independent advanced readings on selected topics. Offered fall and winter semester. Prerequisites: Previous coursework in the area of interest and permission of the instructor supervising the reading. A maximum of six credits in PLS 399 and PLS 499 and no more than nine credits in PLS 399, PLS 499, and PLS 490 may be taken. Graded credit/no credit. Credits: 1 to 3

**PLS 490 - Internship**

Supervised field experience with a legislative office, executive agency, political campaign organization, interest group, lobbying organization, legal office, or international organization. The purpose is to allow the student to apply academic knowledge to a work experience. Offered every semester. Prerequisites: Junior standing and permission of sponsoring instructor. A maximum of six credits in PLS 490 and no more than nine credits in PLS 399, PLS 499, and PLS 490 may be taken. Graded credit/no credit. Credits: 2 to 6

**PLS 495 - Seminar in the Study of Politics (Capstone)**

Review of the political science discipline; consideration of special problems in the study of politics (subject to be announced at least one term in advance). Research paper, readings, and discussions. Offered fall and winter semesters. Prerequisites: Senior standing in political science. Credits: 3

**PLS 499 - Independent Research**

Supervised individual research in an area of interest to the student which culminates in a research paper and oral report. Offered fall and winter semester. Prerequisites: Junior standing and permission of the instructor supervising the research. A maximum of six credits in PLS 399 and PLS 499 and no more than nine credits in PLS 399, PLS 499, and PLS 490 may be taken. Graded credit/no credit. Credits: 2 to 6

**POL 101 - Elementary Polish I**

An introduction to the language with emphasis on listening, speaking, reading, and writing. Complementary taped material available in the language laboratory. Not for credit for students with prior college Polish or more than two semesters of high school Polish. Offered fall semester. Credits: 4

**POL 102 - Elementary Polish II**

Continuation of POL 101 with emphasis on listening, speaking, reading, and writing. Complementary taped material is available in the language lab. Offered winter semester. Prerequisite: POL 101 with C (not C-) or better, or permission of instructor. Credits: 4

**POL 180 - Special Topics in Polish**

Readings, lectures, and/or discussions in special topics not normally covered by other courses in the program. Credits: 1 to 4

**POL 201 - Intermediate Polish I**

Continuation of POL 102. Continued study of grammar and vocabulary. Special emphasis on oral and reading practice based on literary texts; review of grammar supplemented with taped materials in the language laboratory. Conducted almost exclusively in Polish, with extensive use of authentic materials: literature, newspapers, videos, tapes, and the Internet. Offered fall semester. Prerequisite: POL 102 with C (not C-) or better, or permission of instructor. Credits: 4

**POL 202 - Intermediate Polish II**

Continuation of POL 201. The course enhances students' competency in the Polish language (listening, speaking, reading, writing) and culture skills, with an emphasis on real-life communication. Conducted almost exclusively in Polish, with extensive use of authentic materials: literature, newspapers, videos, tapes, and the Internet. Fulfills Cultures -

World Perspectives. Prerequisite: POL 201 with C (not C-) or better, or permission of instructor. Credits: 4

**POL 380 - Special Topics in Polish**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 6

**PSM 650 - Ethics and Professionalism in Applied Science**

Ethical and professional issues and problems facing practicing scientists. Emphasizes the role of scientists in public and private sectors, their responsibilities, and emerging ethical and professional issues. Offered every semester. Prerequisite: Admission to a professional science master's (PSM) program. Credits: 3

**PSM 662 - Seminar in Professional Science Practice**

A seminar course designed to broaden the student's professional foundation in the practice of applied sciences following industry "best practices." Project management practice; intellectual property and proprietary issues; industrial policies and procedures; and governmental regulatory issues are examined. Focus on team building, networking, and communication and presentation skills. Offered fall and spring/summer semesters. Prerequisite: 18 credit hours completed in one of the three PSM M.S. programs: M.S. in cell and molecular biology; biotechnology emphasis; M.S. in biostatistics; M.S. in medical and bioinformatics. Credits: 2

**PSM 691 - Internship**

Full-time or part-time, on-the-job work performed at a sponsoring entity while under the supervision of an approved mentor in an area related to applied sciences. Offered every semester. Prerequisites: Satisfactory completion of PSM common course requirements and completion or enrollment in PSM 662. Credits: 1 to 9

**PSY 101 - Introductory Psychology**

General survey of psychology, the scientific study of behavior and experience, including overt actions and mental activity. Covers how psychologists think and act as scientists and how the study of its subject matter may be integrated at the biological, psychological, and social levels of analysis. Fulfills Foundations - Social and Behavioral Sciences. Offered every academic year. Credits: 3

**PSY 300 - Research Methods in Psychology**

Examination of basic research methods in psychology. Emphasis on the logic of psychological research, the formulation and testing of hypotheses, research design, sampling procedures, data collection and analysis, and the ethics of conducting research. Offered every academic year. Prerequisites: PSY 101; STA 215 or STA 312. Credits: 3

**PSY 301 - Child Development**

Explores the development of the child from conception to adolescence in the home, school, and society. Interactions among physical, cognitive, personality, and social developments are considered. Practical implications for child development of theories and research on these topics will be emphasized. Field observation required. Offered every academic year. Prerequisite: PSY 101. Credits: 3

**PSY 302 - Psychology of Adjustment**

Psychological principles involved in individual adjustment to oneself and the sociocultural environment. Attention is also given to coping with stress and to the prevention of maladjustment. Offered occasionally. Prerequisite: PSY 101. Credits: 3

**PSY 303 - Psychopathology**

The study of a wide range of psychological disorders that affect people, especially adults. The detailed analysis of the symptoms, effects, etiology, and treatments of selective psychological disorders. Offered every academic year. Prerequisite: PSY 101. Credits: 3

**PSY 304 - The Psychology and Education of the Exceptional Child**

Study of exceptional children and their problems. Emphasis on understanding the nature and extent of problems of various types of exceptionalities and on possible ways of dealing with them. Offered every academic year. Prerequisites: PSY 101; PSY 301 or PSY 364. Credits: 3

## Course Listings and Descriptions

### **PSY 305 - Infant and Early Childhood Development**

Examines the development of the child from conception through age five. Theories and research in the areas of biological, perceptual, physical, cognitive, social, and emotional development, as well as their interrelationships, will be presented and discussed. Field observation required. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 310 - Behavior Modification**

Study of the application of learning principles, techniques, and procedures to the understanding and treatment of human psychological problems in a wide range of settings. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 311 - Controversial Issues in Psychology**

Develops the skills of critical thinking (analyzing the arguments of other people and forming one's own reasoned judgments) about controversial issues. Skills are applied to selected psychological issues, such as "Is intelligence inherited?" and "Can suicide be rational?" Offered every academic year. Credits: 3

### **PSY 315 - Psychology of Sex Differences**

A critical examination of the psychological research regarding purported mental, emotional, and behavioral differences between women and men, theories of the development of gender identity, and the etiology of differences. Issues discussed will include the construction of difference and the cultural and ideological uses of the rhetorics of difference. Cross-listed with WGS 315. Offered every academic year. Credits: 3

### **PSY 316 - The Psychology of Human Intimacy and Sexuality**

A comparative analysis of sexual practices, reproductive strategies, and intimate relationships using competing viewpoints (e.g., cultural psychology and evolutionary psychology). Topics may include comparing dating and cohabiting; married and gay and lesbian couples; factors in relationship stability and divorce; and the social control of sexuality and reproduction. Cross-listed with WGS 316. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 324 - Developmental Psychopathology**

Examination of a wide range of childhood and adolescent disorders using developmental theory and research to inform issues related to classification, assessment, and intervention. Explores the biological basis of behavior and the role of broader systems (e.g., family, school, community) in the development and alleviation of psychopathology. Offered every academic year. Prerequisites: PSY 101; PSY 301 or PSY 364. Credits: 3

### **PSY 325 - Educational Psychology**

Study of psychological principles applied to classroom instruction, including development, nature and conditions of learning, motivation, individual differences, home and school adjustment, evaluation, and test construction. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 326 - Intellectual/Developmental Disabilities**

An overview of historical perspectives, current practices, and lifespan issues for individuals with intellectual and developmental disabilities. The course covers diagnostic and assessment practices, etiology, prevention and intervention strategies. Offered every academic year. Prerequisites: PSY 101; PSY 301 or PSY 364. Credits: 3

### **PSY 330 - Foundations of Behavioral Neuroscience**

This course provides an introduction to behavioral neuroscience, the scientific study of the interaction between biological processes and behavior. Topics covered include the basic structure of the nervous system, research methods in behavioral neuroscience, psychopharmacology, neural mechanisms involved in sensory and perceptual processes, and psychiatric disorders. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 331 - Adolescent Development**

Adolescence seen as a developmental stage; an examination of the complexities of the adolescent experience, the development of identity, intellect, and relationships with the adult world. An examination of historical and cultural variables as well as consideration of problem behaviors. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 349 - Psychology Applied to Media**

Focuses on two major content areas in the analysis of media: (1) study of the ways in which humans receive and interpret visual and auditory information (an understanding of perception will be emphasized in projects and analyses of media materials), and (2) study of communication theory in media as it relates to persuasion, attitude, and opinion change. Offered every academic year. Credits: 3

### **PSY 355 - Psychology and Culture**

Exploration of the interaction between ecological and cultural variables and psychological processes. Topics include cultural influences on perception and cognition, personality, cognitive and social development, social relations, interpersonal and intergroup behavior, and psychopathology. Fulfills Cultures - World Perspectives. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 357 - Psychology of Language**

Psychology of language is a discipline that focuses on psychology's insights into human language. Topics include biological bases of language; human language and other communication systems; lexical, sentence, and discourse processing; speech production and perception; acquisition of spoken and written language; bilingualism; and the relationship between language and thought. Offered every academic year. Credits: 3

### **PSY 360 - Social Psychology: Psychology's View**

Relation of the individual to the social environment with emphasis on personality development and role behavior. Analysis of interpersonal behavior with reference to problems of conformity and influence. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 361 - Perception**

Study of how humans organize and interpret stimulation arising from objects in the environment. Review of theory, methodology, and research findings will be emphasized. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 362 - Environmental Psychology**

Study of the relationships between the physical environment, natural and human-made, and the behavior of human beings. The course focuses on the perceptual, cognitive, and motivational aspects of the human-environmental interaction. Offered occasionally. Credits: 3

### **PSY 364 - Life Span Developmental Psychology**

A survey of theories and research on human development from conception through death. Physical, perceptual, cognitive, personality, social, and emotional changes are reviewed and their interrelationships discussed. Does not satisfy the requirements for teacher certification. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 365 - Cognition**

Study of methodology and research findings concerning human and animal information processing. Includes a review of literature pertinent to subject and task variables as they relate to attention, memory, and decision behavior during thinking. Laboratory. Offered every academic year. Prerequisite: PSY 101. Credits: 3

### **PSY 366 - Perspectives on Aging**

This course examines the perception of the elderly from a multidisciplinary perspective. It is first approached from historical and philosophical perspectives, and then from a psychological perspective using contemporary empirical studies. Offered every academic year. Prerequisite: PSY 101 or PHI 101. Credits: 3

### **PSY 367 - Health Psychology**

Explores the relationships among psychology, health, and illness and behavioral medicine. Considers important contemporary health issues from biopsychological and psychosocial perspectives and the role of psychology in health promotion. Part of the Health Issue. Offered every academic year. Prerequisites: PSY 101 and junior standing. Credits: 3

### **PSY 368 - Psychology of Physical Disabilities**

Examines the effect of physical disabilities on body-image, self-concept, emotions, and interpersonal functioning. Various approaches to the

psychological rehabilitation of the disabled person will be compared and evaluated. Offered occasionally. Prerequisite: PSY 101. Credits: 3

#### **PSY 370 - Cognitive Neuroscience**

Explores the neuroscience of cognitive processes, including mechanisms of attention, memory, language, knowledge, and executive control. This course considers contemporary theories and evidence from methods such as functional neuroimaging, neuropsychological impairment, cognitive electrophysiology, and analysis of behavioral performance. Offered every academic year. Prerequisites: Completion of PSY101 and junior standing. Credits: 3

#### **PSY 375 - Comparative Psychology**

Study of the relationship between human and animal behavior. Includes discussion of mind in nonhumans, the sociobiology debate, natural selection and human behavior, including language and sexual behavior, and implications for child development and schooling. Includes zoo or field observations. Lecture and field study. Offered every academic year. Prerequisite: PSY 101. Credits: 3

#### **PSY 380 - Special Topics in Psychology**

Consideration of selected topics not ordinarily dealt with in other courses. Topics to be determined by faculty interest and student request. Consult class schedule for specific topics. Can be repeated, but no more than six credits in 380 can be applied toward a psychology major. Offered occasionally. Prerequisites: Variable. Credits: 1 to 4

#### **PSY 381 - Group Dynamics**

Contemporary concepts, hypotheses, and research in small-group theory. Students will study the ways groups affect the behavior, thinking, motivation, and adjustment of individuals as well as the effect of an individual's characteristics on groups. Principles will be applied to particular kinds of groups, including therapy groups and family groups. Offered every academic year. Prerequisite: PSY 101 or SOC 101. Credits: 3

#### **PSY 385 - Psychology of Religion**

A systematic study of psychological theories and empirical data on religious phenomena. Consideration will be given to various definitions of religious belief; the psychological explanations of religious behavior; the dynamics of religious thought, the relationships between religion, positive mental health, and psychopathology; and the social functions served by religion. Offered every academic year. Prerequisite: PSY 101. Credits: 3

#### **PSY 386 - Study Abroad**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Offered occasionally. Credits: 1 to 3

#### **PSY 399 - Independent Readings**

Independent readings in a selected topic encountered in a previous course or not covered in any existing course. Courses in the existing curriculum are not ordinarily offered as independent study. Students may not apply more than six credits (singly or combined) of 399 and 499 toward a major in psychology. Offered every academic year. Prerequisites: PSY 101 and permission of instructor. Credits: 1 to 3

#### **PSY 400 - Advanced Research in Psychology**

Research in designated areas (e.g., perception, cognition, social, developmental, etc.). See current schedule of classes for areas offered. Original research project required. Formal presentations of research proposals and project reports, following APA style, required. Offered every academic year. Prerequisites: PSY 101, PSY 300, and course in relevant content area. Credits: 3

#### **PSY 405 - History and Systems**

A systematic historical coverage of the theoretical foundations of psychology. The contributions of the major schools of psychology as well as the influence of related areas will be emphasized. Offered every academic year. Prerequisites: PSY 101 and PSY 300. Credits: 3

#### **PSY 410 - Tests and Measurements**

A survey of test construction principles and psychological-educational measurement. The principles of normative data, reliability, and validity

are emphasized. Issues involving the appropriate and ethical use of tests are also explored. Some commonly used tests are reviewed and evaluated according to these principles. Cross-listed with PSY 510. Offered every academic year. Prerequisites: PSY 101; STA 215 or STA 312. Credits: 3

#### **PSY 420 - Theories of Personality**

Critical exploration of major contemporary theories of personality and related research. Relative merits of each approach will be discussed with special emphasis on questions of structure, dynamics, and development of individuality. Offered every academic year. Prerequisite: PSY 101. Credits: 3

#### **PSY 431 - Introduction to Neuropsychology**

The physiology, organization, and functions of the human brain will be examined. Current problems and findings in sleep and dreaming, memory, consciousness, learning, and perception will be explored. Offered upon sufficient demand. Prerequisites: PSY 101; and one of PSY 300, BMS 301, CJ 300, PLS 300, NUR 435, or SW 430. Credits: 3

#### **PSY 432 - Psychopharmacology**

Study of the effects of drugs on the brain and behavior. The course introduces students to the principle of neurotransmission in the brain, how the neurotransmission becomes disturbed in the psychological/behavioral disorder, psychopharmacologic treatments of psychological/behavioral disorders, and the actions of psychoactive drugs on the brain and behavior. Cross-listed with PSY 532. Offered every academic year. Prerequisites: PSY 101; and one of PSY 300, BMS 301, CJ 300, PLS 300, NUR 435, or SW 430. Credits: 3

#### **PSY 435 - Advanced Neuroscience and Behavior**

This course emphasizes the study of bodily structures, processes, and mechanisms related to various aspects of the organism's interactions with the environment. Topics covered include neurophysiological correlates of cognition, memory, motivation, emotion, attention, and sensory processes. Offered occasionally. Prerequisite: PSY 330. Credits: 3

#### **PSY 445 - Industrial/Organizational Psychology**

The application of psychological facts and principles to business and industry. Topics include selection, placement, and evaluation of employees, work motivation, job satisfaction, leadership and management, organization and behavior, and organization development. Offered occasionally. Prerequisite: PSY 101. Credits: 3

#### **PSY 452 - Counseling: Theories and Applications**

Survey of varying theoretical viewpoints: psychodynamic, behavioral, humanistic, eclectic. Analysis of and experiential exposure to techniques and methods of application in a variety of settings, such as public school activities, personal and vocational counseling, social work, public service activities, personnel work, etc. Offered every academic year. Prerequisites: PSY 101 and PSY 303. Credits: 3

#### **PSY 490 - Practicum**

Up to 20 hours a week commitment working in a psychologically relevant capacity at a human service agency. Daily log and prearranged tutorials required. Six credit total course limit. Graded credit/no credit. Offered every academic year. Prerequisites: PSY 101 and permission of instructor. Credits: 1 to 6

#### **PSY 492 - Advanced General: The Capstone**

Survey of major viewpoints on research findings in contemporary scientific psychology. Emphasis on integration of those viewpoints and their relations to other disciplines, such as biology, medicine, social sciences, philosophy. Offered every academic year. Prerequisites: Senior standing and a major in psychology or behavioral neuroscience or behavioral science. Credits: 3

#### **PSY 499 - Independent Study and Research**

Independent study and research in an area of mutual interest to the student and faculty member. Students may not apply more than six credit hours (singly or combined) of PSY 399 and PSY 499 toward a major in psychology. Offered every academic year. Prerequisites: PSY 101 and permission of instructor. Credits: 1 to 4

## Course Listings and Descriptions

### **PSY 500 - Introduction to School Psychology**

This course will present an introduction to the theory, role, and function of school psychology as an academic and scientific discipline, as well as a professional field. Emphasis will be placed on understanding a behaviorally oriented, intervention-focused, and empirically driven view of school psychology. Course offered each academic year. Prerequisite: Admission to the school psychology program or instructor's approval. Credits: 3

### **PSY 510 - Tests and Measurements**

A survey of test construction principles and psychological-educational measurement. The principles of normative data, reliability, and validity are emphasized. Issues involving the appropriate and ethical use of tests are also explored. Some commonly used tests are reviewed and evaluated according to these principles. Cross-listed with PSY 410. Offered every academic year. Prerequisite: Admission to the school psychology graduate program. Credits: 3

### **PSY 522 - Applied Behavior Analysis I (ABA): Foundational Principles**

Students will explore the foundational theories, principles, and practices of applied behavior analysis. Students will gain an understanding of factors that govern behavior, processes for measuring behavior, and methods for minimizing behavioral problems and improving learning and performance. Ethics and conduct associated with applied behavior analysis will be reviewed. Offered each academic year. Prerequisite: Admission to the school psychology program or instructor's approval. Credits: 3

### **PSY 523 - Applied Behavior Analysis II: Application to Behavior Change**

Students will explore the applications of behavior analytic principles in changing behavior. Selection and application of strategies to different contexts, populations, and age groups will be discussed along with effective communication and collaboration with other professionals and families. Ethical considerations and strategies will be highlighted. Offered each academic year. Prerequisite: PSY 522. Credits: 3

### **PSY 524 - Developmental Psychopathology**

This course examines research on etiology, diagnosis, and intervention for children with psychopathology, with the major focus of the course emphasizing disorders that are observed in applied settings. Students will become familiar with school and community based prevention and intervention strategies to address difficulties of children in their environments. Offered each academic year. Prerequisite: Admission to the school psychology program or instructor permission. Credits: 3

### **PSY 525 - Behavior Analysis Applied to Autism Spectrum Disorders and Developmental Disorders**

Students will learn assessment and intervention strategies for working with individuals with autism spectrum disorders and developmental disorders from a behavior analytic perspective. Evidence based practices, strategies for collaborating with other professions and families, and ethical issues will be presented. Offered spring/summer semester. Prerequisite: Admission to the school psychology program or instructor's approval. Credits: 3

### **PSY 527 - Ethics and Diversity in Professional Practice**

Introduction to the ethical and professional delivery of psychological and educational services to a diverse group of clients. This course will introduce the ethical guidelines of major psychological professional organizations, and the application of those principles to a variety of situations. Offered every academic year. Prerequisite: Admission to the graduate program in school psychology, or to the graduate certificate program in applied behavior analysis, or instructor approval. Credits: 3

### **PSY 532 - Psychopharmacology**

Study of the effects of drugs on the brain and behavior. The course introduces students to the principle of neurotransmission in the brain, how the neurotransmission becomes disturbed in the psychological/behavioral disorder, psychopharmacologic treatments of psychological/behavioral

disorders, and the actions of psychoactive drugs on the brain and behavior. Course is cross-listed with PSY 432. Offered every academic year. Prerequisite: Admission to the school psychology program or instructor permission. Credits: 3

### **PSY 540 - Characteristics of Autism**

The course provides an introduction to the characteristics and etiology of autism spectrum disorder. Students will learn about the history of autism, diagnostic criteria and common characteristics, etiology, an overview of current interventions, and current controversies in the field. Offered on sufficient demand. Prerequisite: Permit only. Credits: 3

### **PSY 542 - Behavior Support for Autism**

The course will focus on behavior support for students with autism spectrum disorder emphasizing the use of current research to develop strategies that impact underlying causes of behavior. Topics include assessment, data-based decision-making, behavior support plans, and progress monitoring. The unique needs of students with autism will be addressed. Offered on sufficient demand. Prerequisite: Permit only. Credits: 3

### **PSY 550 - Research in Applied Settings**

This course focuses on behavioral research and methodologies to evaluate interventions based on single-subject and group experimental designs in applied settings. Students will use single case study methodologies and group designs to assess various dimensions of behavior and to evaluate the effects of treatment interventions on those behaviors. Course offered spring/summer semester. Prerequisite: Admission to the school psychology graduate program or instructor's approval. Credits: 3

### **PSY 580 - Special Topics in Psychology**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 500-level courses. May be repeated for credit when the content varies. Offered occasionally. Credits: 1 to 9

### **PSY 590 - Applied Behavior Analysis Practicum**

The Applied Behavior Analysis (ABA) practicum is designed to meet the supervision requirements for the Board Certified Behavior Analyst (BCBA) certification. The course addresses principles, strategies, and ethical considerations related to the practice of behavior analysis. Students will use behavioral assessment and intervention, collect and submit data, and evaluate progress. Course offered every semester. Prerequisites: Instructor approval and enrollment in or completion of an approved course sequence in applied behavior analysis. Credits: 1 to 3

### **PSY 622 - Educational Assessment**

An introduction to a conceptual framework for assessing and evaluating a wide range of academic concerns within a problem-solving approach, a variety of assessment techniques, and methods for selecting assessment techniques with high treatment utility. Students will become proficient in administering and interpreting a range of assessment devices. Course offered each academic year. Prerequisite: Admission to the school psychology graduate program or instructor approval. Corequisite: PSY 642. Credits: 3

### **PSY 623 - Intellectual Assessment**

This course will provide a theoretical and practical foundation in intellectual assessment techniques including selecting assessments, interpreting assessments, and integrating results from various measures. Students will become proficient in administering and interpreting a range of intellectual assessments for children. Students will learn ethical standards as they relate to intellectual assessment. Course offered each academic year. Prerequisites: PSY 510 and admission to the school psychology program. Corequisite: PSY 642. Credits: 3

### **PSY 624 - Behavioral Assessment and Intervention**

This course provides an introduction to the theoretical foundations and practical applications of behavioral assessment and intervention. The focus is on evidence based assessment and intervention strategies that lead to socially significant, durable outcomes for students, educators, and families. The course uses functional behavior assessment as a framework

for understanding behavior. Course offered each academic year.

Prerequisite: Admission to the school psychology program or instructor's approval. Credits: 3

#### **PSY 642 - Assessment Practicum**

Students provide school psychological services in a school under the supervision of a practicing psychologist. Students will be actively involved, with increasing independence, in the administration, scoring, and interpretation of a variety of behavioral, educational, and intellectual assessment tools. Course offered each academic year. Corequisite: PSY 622 or PSY 623. Credits: 1

#### **PSY 644 - Clinical Practicum**

Students collaborate with licensed professionals in clinical settings (e.g., hospitals, clinics, group treatment programs, etc.). Students will be actively involved, under appropriate supervision, in the process of assessment, data collection, and intervention administration, in ways that are appropriate to the setting and needs of the children and families being served. Course offered each academic year. Corequisite: PSY 524. Credits: 1

#### **PSY 654 - School-based Intervention and Consultation**

An overview of the theories and processes of psychological and educational consultation at the individual and systems level. Students will learn and apply consultation skills within a problem-solving model of service delivery. Students will learn to attend to cultural factors, values, and community context during consultation. Course offered each academic year. Prerequisite: Admission to the school psychology graduate program or instructor's approval. Credits: 3

#### **PSY 668 - Health Profession Disability Psychology**

This course assists students in the health professions in understanding psychosocial issues relevant to physical disabilities. It emphasizes key psychological factors that influence coping with physical disability and ways in which an understanding of psychosocial issues can increase the efficacy of a standard therapeutic regimen and facilitate adaptation and coping. Offered spring/summer semester. Prerequisite: Permission of the respective program directors or the psychology department chair. Credits: 3

#### **PSY 675 - School Psychology Practicum**

Students provide school psychological services in a school under the supervision of a licensed school psychologist. Students will be actively involved in assessment, consultation, prevention, and intervention. A weekly seminar is required. Course offered each academic year. Prerequisite: Admission to the school psychology program. Credits: 3

#### **PSY 680 - Special Topics in Psychology**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 600-level courses. May be repeated for credit when the content varies. Offered occasionally. Credits: 1 to 9

#### **PSY 685 - School Psychology Internship**

The final supervised clinical experience. Under the supervision of a school psychologist, students will work with teachers, families, and students from K-12 schools. Students will engage in different aspects of the practice of school psychology including case management, assessment, prevention and intervention, and consultation. Course offered each academic year. Prerequisites: Admission to the school psychology program and instructor's approval. Credits: 1 to 5 Credits: 3

#### **PSY 693 - Master's Project**

Students complete a master's level project that requires them to demonstrate and apply skills learned in the school psychology program. This project may involve conducting a single-subject design research study, analyzing existing data from a school program, and/or completing a program review and data report for a school building/district. Course offered each academic year. Prerequisites: Admission to the school psychology program and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

#### **PSY 699 - Independent Study**

Students complete an in-depth study of a topic related to the field of School Psychology. Offered occasionally. Prerequisites: Admission to the school psychology program and faculty approval. Credits: 1 to 3

#### **PT 510 - Lifespan Motor Development**

A lifespan view of motor development. Included will be basic principles of motor control and in-depth coverage of motor development. Key body system's development will be related to function throughout the lifespan. Offered spring/summer semester. Prerequisites: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

#### **PT 511 - Foundations in Physical Therapy Examination**

Introduction to clinical measurement theory, basic examination techniques, interviewing, chart review, clinical documentation, and systems review in physical therapy. Addresses basic examination techniques for the musculoskeletal, neuromuscular, cardiopulmonary, and integumentary systems. Incorporates simulated clinical experiences. Offered fall semester. Prerequisite: Admission to physical therapy program. Credits: 3

#### **PT 512 - Introduction to Evidence Based Practice in Physical Therapy**

Provides an introduction to evidence-based practice in physical therapy. Critical thinking skills and the ability to concisely summarize thought in written form are emphasized. Assigned readings will provide the opportunity to examine varied types of research utilized in physical therapy. Offered fall semester. Prerequisite: Admission to the D.P.T. program. Credits: 1

#### **PT 513 - Clinical Science I**

Study of physiological responses to pathology of the endocrine, hepatic, immune, integumentary, gastrointestinal, renal, and reproductive systems, including mechanisms basic to inflammation, neoplasia, tissue repair and regeneration, and pain across the four major systems of PT practice. Systems screening, physical therapy practice patterns, and medical management, including pharmacotherapy is emphasized. Offered fall semester. Prerequisite: Admission to physical therapy program. Credits: 2

#### **PT 515 - Professional Topics I**

Introduces the roles of physical therapists in a changing health care system, and the following professional topics: APTA; Guide to PT Practice; ethics, conduct and informed consent; communication; diversity; involvement of the patient; systems perspectives; documentation; reimbursement; and literature. Offered fall semester. Prerequisite: Admission to physical therapy program. Credits: 1

#### **PT 517 - Kinesiology and Biomechanics I**

The study of functional musculoskeletal anatomy, including arthrokinematics, osteokinematics, muscular actions and control, and kinesiological concepts that govern motion concerns. Course content will focus on normal human motion; pathological human motion will be introduced. Students will use living subject models for surface anatomy palpation and functional analysis of movement patterns. Offered fall semester. Prerequisite: Admission to physical therapy program. Credits: 3

#### **PT 521 - Musculoskeletal Examination**

Diagnostic procedures for patients with a variety of musculoskeletal conditions that affect the upper and lower extremities, and spine. Includes: patient screening for medical disease, physical examination for impairments and functional limitations, clinical decision-making, and referral strategies. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 4

#### **PT 522 - Musculoskeletal Interventions**

Students will learn the basic, evidence-based intervention and establishment of prognosis skills for musculoskeletal extremity and spinal pathologies. An eclectic approach to patient management is presented so that manual and therapeutic exercise techniques may be applied clinically. Basic issues of injury prevention and wellness will be addressed. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 4

## Course Listings and Descriptions

### **PT 523 - Clinical Science II**

Study of pathology associated with the musculoskeletal system due to disease conditions and trauma across the lifespan. Topics also include principles in diagnostic imaging, orthopedic surgical and medical management, and pharmacology, where appropriate. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 3

### **PT 526 - Clinical Seminar I**

Students will be exposed to an array of clinical issues associated with decision-making on patients with primary musculoskeletal disorders. Issues such as reimbursement, access to the clinician, effective communication, confidentiality, cultural diversity, and effective utilization of community resources will be explored as the student becomes involved in total case management. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

### **PT 528 - Kinesiology and Biomechanics II**

Rigid and deformable body mechanical principles will be used to understand normal human function and pathomechanics related to dysfunction. Application of principles to understand examination, evaluation, diagnosis, prognosis, and intervention for impairments, functional limitations, and disability will be emphasized. Methods of kinematic, kinetic and electromyographic investigation will be introduced. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 3

### **PT 580 - Special Topics in Physical Therapy**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 500-level courses. May be repeated for credit when the content varies. Prerequisites: Variable depending upon the semester in which the special topics course is utilized; admission to the D.P.T. program. Credits: 1 to 3

### **PT 610 - Research in Physical Therapy**

This course reviews methods, designs, and analyses commonly used in physical therapy research (from PT 512 and STA 610). Emphasis is placed on critical appraisal of research reports with new emphasis on the design and writing of research proposals. Students begin to explore a research topic with a faculty mentor. Prerequisites: PT 512 and good standing in PT program. Credits: 2

### **PT 631 - Cardiopulmonary Physical Therapy I**

The physiologic and pathophysiologic basis for physical therapy management of individuals with secondary cardiovascular and pulmonary dysfunction as seen in general physical therapy practice. Emphasis is placed on assessment and interpretation of physiologic responses during therapeutic activities and on associated clinical decision-making. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

### **PT 632 - Integumentary Practice Management**

Examination, evaluation, and multiple interventions for acute and chronic integumentary pathologies in various patient populations. Interventions will include wound cleansing, debridement, contemporary uses of dressings and products, mechanical and thermal modalities. A multisystems approach for wound prevention and wound treatment will be presented. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

### **PT 634 - Clinical Seminar II**

Clinical issues pertaining to physical therapy management of medically complex patients and clients are introduced through case-oriented presentations and advanced study. Students explore treatment strategies in response to changes in physiology, and consider the broader perspectives of the family, the health care system and the community. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 1

### **PT 636 - Clinical Education I**

One five-week full-time clinical experience in physical therapy practice settings followed by weekly discussion. Emphasis is on managing patients/clients with musculoskeletal impairments and related functional limitations. Offered spring/summer semester. Prerequisite: PT faculty recommendation. Graded credit/no credit. Credits: 4

### **PT 641 - Neuromuscular Examination**

Addresses examination procedures used by physical therapists in managing neuromuscular dysfunction resulting from injury to the nervous system. The evidence supporting examination procedures is addressed. Evaluation of examination findings and differential diagnosis are emphasized. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 4

### **PT 642 - Interventions in Neuromuscular Physical Therapy**

This course provides foundation in theoretical basis and techniques of neurologic rehabilitation, based on principles of motor control and learning and evidence-based practice. Students learn to design a comprehensive plan of care and apply interventions targeted to the remediation of disabilities, functional limitations, and impairments in clients with neurologic diagnoses. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 4

### **PT 643 - Clinical Science III**

Health care management of neurological clients. Orthopedic concerns of these populations will be included. Health care management will include physical therapy diagnosis and prognosis, medical management and pharmacological management of the previously listed groups. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 3

### **PT 644 - Clinical Seminar III**

Provides students insight into complex case management issues in neurologic physical therapy practice. Case-based discussion and active clinical experiences facilitate students to analyze from a system-based perspective factors that influence the development of a plan of care for neurologic patients. Emphasis on effective advocacy for clients and health promotion behaviors. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

### **PT 647 - Cardiopulmonary Physical Therapy II**

Students integrate physiologic and pathophysiologic principles in physical therapy management of individuals with primary cardiovascular and pulmonary dysfunction seen in specific practice settings. Knowledge of medical and surgical interventions, diagnostic testing, and cardiopulmonary physical therapy tests and measures are applied to clinical decision-making. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

### **PT 651 - Spinal Exam and Intervention**

Students will learn the basic, evidence-based examination, evaluation, intervention, and prognosis skills for musculoskeletal spinal pathologies. An eclectic approach to patient management is presented so that manual and nonmanual based therapeutic approaches may be applied clinically. Issues of injury prevention, including basic workplace and ergonomic issues will be addressed. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 4

### **PT 654 - Applied Geriatric Practice**

An in-depth study of the geriatric population and geriatric physical therapy practice with regard to the four major systems addressed in PT practice. Encounters with an older adult designed to apply skills from other courses will be integrated. Collaboration with other professionals and advocacy will be stressed. Course offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

**PT 655 - Professional Topics II**

Introduces students to the health care delivery system including managed care, government funded and private insurance, and basic reimbursement methods utilized in each system. Examination of the American Physical Therapy Association Guide for Professional Conduct with clinical application to bioethics and research. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 1

**PT 656 - Clinical Education II**

One six-week full-time clinical experience in physical therapy practice settings followed by weekly discussion, and synthesis of clinical experiences after return to campus. Students are academically prepared to provide physical therapy, with supervision, to patients/clients with neuromuscular, cardiovascular/pulmonary, integumentary, and musculoskeletal impairments and related functional limitations. Course is graded credit/no credit. Prerequisite: PT faculty recommendation. Credits: 5

**PT 657 - Teaching for Physical Therapists**

Educational theory, assessment/evaluation, behavioral objectives, and teaching methods. Planning for teaching situations common to physical therapist practice, including: patients/clients, families, peers, students and other health care professionals. Emphasis on tailoring learning to the unique needs of learners from diverse backgrounds. Prerequisite: successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

**PT 661 - Exam and Intervention for Rehabilitation**

This course deals with the long-term physical therapy examination and intervention for the rehabilitation patient. Areas discussed include adaptive equipment, recreation, wheelchairs, architectural barriers, orthotics, prosthetics and spinal cord injuries. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 4

**PT 662 - Pediatric Practice Management**

In-depth study of pediatric physical therapy. PT management, including diagnosis, prognosis, intervention, and medical/pharmacological management, will be explored. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 3

**PT 665 - Professional Topics III**

Students will be exposed to laws related to the practice of physical therapy. Analysis will include concepts of licensure, disciplinary action and professional liability. Students will be introduced to concepts of social responsibility, citizenship and advocacy available in the legislative process. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

**PT 675 - Clinical Education III**

Full-time (defined as 36-40 hours/week) 9-week clinical experience for third year physical therapy students, with a variety of practice settings available. Students are academically prepared to manage patients/clients with musculoskeletal, neuromuscular, cardiopulmonary, and integumentary disorders. Graded credit/no credit. Offered fall semester. Prerequisites: PT 656 and PT faculty recommendation. Credits: 6

**PT 677 - Clinical Education IV**

Full-time (defined as 36-40 hours/week) 9-week clinical experience for third year physical therapy students, with a variety of practice settings available. Each student will experience a different type setting or different patient problems than in PT 675. Students are academically prepared to manage patients/clients with musculoskeletal, neuromuscular, cardiopulmonary, and integumentary disorders. Graded credit/no credit. Offered fall semester. Prerequisites: PT 675 (may be taken concurrently) and PT faculty recommendation. Credits: 6

**PT 680 - Special Topics in Physical Therapy**

A study of special topics not regularly covered in the curriculum. Expectations of this course approximate those in other 600-level courses. May be repeated for credit when the content varies. Prerequisites: Variable depending upon the semester in which the Special Topics course is utilized; admission to the D.P.T. program. Credits: 1 to 3

**PT 681 - Advanced Clinical Decision-Making**

Students will review and analyze the diagnostic and intervention strategies used in complex case studies and design other strategies based on evidence from an extensive review of the literature. Patient cases with problems involving multiple systems, and the roles of other health care providers, will be emphasized. Course is graded credit/no credit. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

**PT 682 - Health and Wellness**

This course provides a framework and principles for health promotion and wellness across the lifespan. Students will learn to screen and evaluate clients/patients to provide primary, secondary and tertiary prevention services. Through application of the disablement model students learn strategies to prevent disease, injury, impairment, functional limitation and disability. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 3

**PT 684 - Advanced Topics: Sports Physical Therapy**

In-depth, evidence-based study of examination, evaluation and intervention related to sports physical therapy. Includes anatomical, physiological and biomechanical approaches to understanding and management of sport related injury and surgery for multiple sports and clients. Focus on prevention and wellness in susceptible populations. Course is graded credit/no credit. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence or licensed as a physical therapist. Credits: 3

**PT 685 - Professional Topics IV**

The emphasis is on practice management and professional development. Addresses human resource management, facility planning, marketing, quality measures, and financial management as related to the role of the physical therapist. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence. Credits: 2

**PT 686 - Advanced Topics: Pediatric Physical Therapy**

This course critically examines pediatric physical therapist practice in a variety of clinical settings across the continuum of care. Included are in-depth study of evidence-based examination, evaluation, and intervention for patients with complex developmental or medical issues, ages birth to 21. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curriculum or licensed as a physical therapist. Credits: 3

**PT 687 - Advanced Topics: Spinal Manual Therapy**

This comprehensive course utilizes evidence-based practice in the assessment, evaluation, and intervention of patients with spinal movement dysfunction. Topics will include prognosis and prevention, manual therapy techniques, and differential diagnosis of spinal dysfunction. Course is graded credit/no credit. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence or licensed as a physical therapist. Credits: 3

**PT 688 - Advanced Topics: Neurologic Physical Therapy**

This course will critically examine evidence-based practice in neurologic rehabilitation. Current trends in practice will be analyzed from a theoretical, clinical, and neuroscience perspective. Students will apply foundational motor control theories for diagnosing and treating movement dysfunction, including advanced clinical practice skills for management of vestibular, balance and gait dysfunction. Course is graded credit/no credit. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the D.P.T. curricular sequence or licensed as a physical therapist. Credits: 3

## Course Listings and Descriptions

### **PT 698 - Clinical Education V**

Full-time (36-40 hours/week) 9-week clinical experience for third year physical therapy students. As available, students will experience a different type setting or different patient problems than in PT 675 and PT 677. Students are prepared to manage patients/clients with musculoskeletal, neuromuscular, cardiopulmonary and integumentary disorders. Course is graded credit/no credit. Offered spring/summer semester. Prerequisites: PT 677 and PT faculty recommendation. Credits: 6

### **PT 699 - Independent Study in Physical Therapy**

Students will complete a reading project or other approved activity building upon declared student interest. Tangible final product must be completed according to criteria developed by the student and advisor. Offered fall, winter, and spring/summer semesters. Prerequisite: Permission of program. Credits: 1 to 3

### **PT 790 - Physical Therapy Research I**

This is the first of two courses in which physical therapy students fulfill research requirements. Students study the available evidence and apply foundational research concepts. Students propose a method for conducting a research project or complete a case report of systematic review. Guided by faculty mentors. Offered winter and spring/summer semesters. Prerequisite: Successful completion of previous D.P.T. curriculum requirements. Credits: 1

### **PT 793 - Physical Therapy Research II**

Second of two courses in which physical therapy students fulfill research requirements. Students apply foundational concepts, collect data, analyze, and describe results in the context of a research project, case report, or systematic review. Guided by faculty mentors. Offered winter semester. Prerequisite: Successful completion of previous D.P.T. curricular requirements. Credits: 2

### **PT 795 - Dissertation Research**

Work related to the dissertation phase of the graduate student's program. Work will be performed under the supervision of the dissertation committee chair. Offered each semester. Prerequisites: Successful completion of previous DPT curricular requirements and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **PT 796 - Continuation of Doctoral Project or Dissertation Research**

Continuation of work related to the dissertation phase of the graduate student's program. Registration is required after all respective dissertation credits are completed and the dissertation is not completed. Work will be performed under the supervision of the dissertation committee chair. Offered each semester. Prerequisites: Completion of all required project or dissertation credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **REC 300 - Foundations of Therapeutic Recreation**

Acquaints students with the history, philosophy, theories, and models of therapeutic recreation and factors influencing service delivery. Offered fall semester. Prerequisite: Must be admitted to therapeutic recreation program. Credits: 3

### **REC 302 - Leisure, Health, and Wellness**

Addresses the concept of leisure and its use in achieving and maintaining good health and well-being of individuals, families, and societies. Leisure education and complementary health promotion strategies to achieve health and wellness are integrated throughout the course. Part of the Health Issue. Offered fall and winter semesters. Prerequisite: Junior Standing. Credits: 3

### **REC 304 - Diagnostic Groups in Therapeutic Recreation**

Emphasis on the delivery of therapeutic recreation services for persons with illnesses, disabilities, and those who are disadvantaged. Focus on symptomology, etiology, prognosis, and remediation using therapeutic intervention; includes an overview of the effects of illness and disability on the family. (2-1-0) Offered winter semester. Prerequisite: Must be admitted to the therapeutic recreation program. Credits: 3

### **REC 306 - Comprehensive Therapeutic Recreation Programming**

Emphasis on systematic program planning in therapeutic recreation settings utilizing therapeutic recreation service delivery models. Important components in program planning include assessment program planning, implementation and program evaluation. Offered fall semester. Prerequisite: REC 300. Credits: 3

### **REC 308 - Leadership for Therapeutic Recreation**

An introduction to theories and principles of leadership, group dynamics, and facilitation of interventions for persons with special needs will be presented. Developing individual therapeutic relationships and building rapport with groups will be a focus. The emphasis will be on practical experiences in therapeutic recreation leadership roles in various settings. Offered fall semester. Prerequisite: REC 304. Credits: 3

### **REC 310 - Interventions in Therapeutic Recreation**

An in-depth study of the intervention techniques and modalities used in implementing therapeutic recreation programs. Topics include treatment approaches, counseling techniques, and the facilitation process. (2-1-0) Offered winter semester. Prerequisite: REC 302. Credits: 3

### **REC 313 - Therapeutic Recreation for Physical Disability**

Provides students with the knowledge and skills related to the delivery of therapeutic recreation services for persons with physical disabilities and other chronic conditions. Focuses on rehabilitation and community reintegration, in-patient and out-patient services. (2-1-0) Offered winter semester. Prerequisite: REC 304. Credits: 3

### **REC 315 - Therapeutic Recreation for Mental Health**

An introduction to the emotionally impaired population. Emphasis on characteristic of the group, activities to facilitate change in different behavioral domains, therapeutic interventions for adults and children, treatment settings and services, and trends in programming. (2-1-0) Offered fall semester. Prerequisite: REC 304. Credits: 3

### **REC 316 - Therapeutic Recreation with the Elderly**

Involves the study of the needs and services for the well and frail elderly; the response and role of therapeutic recreation service. Community service and practical experience in program planning and delivery. (2-1-0) Offered winter semester. Prerequisite: REC 304. Credits: 3

### **REC 317 - Therapeutic Recreation for Pediatrics**

To provide the student with knowledge on therapeutic recreation treatment for pediatric patients from birth through adolescence with a variety of impairments. Emphasis will include developmental progress, assessment, main diagnostic classifications, modalities, source delivery systems, community reintegration, case studies, and research. Offered winter semester. Prerequisite: REC 304. Credits: 3

### **REC 380 - Special Topics in Therapeutic Recreation**

Provides an opportunity for students to pursue advanced or specialist study in topics related to the field of therapeutic recreation. The selected topics are not ordinarily dealt with in other courses. Can be repeated. Offered on sufficient demand. Prerequisite: Permission of instructor. Credits: 1 to 4

### **REC 389 - Therapeutic Recreation Placement Preparation**

Prepare students for fieldwork and internship placements. Topics will include self-exploration, preparation for successful placement selection, portfolio development, interviewing skills, development of professional behaviors, placement expectations, and completing health compliance requirements. Offered fall semester. Prerequisite: Must be admitted into the therapeutic recreation program. Credits: 1

### **REC 390 - Fieldwork in Therapeutic Recreation**

To be taken in an agency offering a therapeutic recreation program or in a community setting for persons with special needs. Involves practical experience of 300 hours in a supervised program under the direction of an off-campus cooperating agency. Prerequisites: REC 306, REC 308, REC 310, and REC 389. Credits: 3

### **REC 399 - Independent Readings and Special Activities**

Special studies in therapeutic recreation upon consultation with faculty advisor and approval of director of the therapeutic recreation program. Offered every semester. Credits: 1 to 3

**REC 404 - Trends and Challenges in Therapeutic Recreation**

This course examines current challenges and trends in the therapeutic recreation profession. Issues are examined from historical, present, and future perspectives. Professional competence and contemporary trends are highlighted by engaging in critical and analytical thinking. (2-1-0) SWS course. Offered winter semester. Prerequisite: REC 310. Credits: 3

**REC 405 - Administration of Therapeutic Recreation**

Basic principles of organizing and managing quality therapeutic recreation services. Content areas include supervisory and administrative responsibilities, continued quality improvement (CQI), risk management, facility management, budgeting, personnel and volunteer management. Offered winter semester. Prerequisite: REC 407. Credits: 3

**REC 407 - Assessment and Documentation in Therapeutic Recreation**

Examines assessment tools and the systematic assessment process used in the profession. Practical experience in the assessment, planning, implementation and evaluation (APIE) process with attention to documentation for outcomes and accountability. Offered fall semester. Prerequisite: REC 310. Credits: 3

**REC 410 - Research and Evaluation in Therapeutic Recreation**

Introduces students to the basic research process with an emphasis on research to promote evidence based practice in therapeutic recreation. Program evaluation as a means for producing accountable outcomes from therapeutic recreation interventions and advancing the profession is highlighted. Student research projects will be presented at Student Scholars Day. Offered winter semester. Prerequisites: REC 404 and STA 215. Credits: 3

**REC 490 - Internship in Therapeutic Recreation**

Fifteen-week (600 hour) full-time internship. Must be taken under the supervision of a certified therapeutic recreation specialist (CTRS). Offered every semester. Prerequisites: Senior standing, last semester of program, and satisfactory completion of the therapeutic recreation core. Credits: 6 or 12

**REC 499 - Independent Study and Research**

Special studies in therapeutic recreation upon consultation with faculty advisor and director of the therapeutic recreation program. Offered every semester. Credits: 1 to 3

**REL 100 - Religions of the World**

An interdisciplinary study of multiple world religions in their cultural, historical and political context. Students will investigate topics including belief structures, ritual systems, sacred literature, social dimensions and historical development of various religious traditions. The course will include identification and comparison of key aspects of religion across traditions. Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills Cultures - World Perspectives. Offered every semester. Credits: 3

**REL 200 - Introduction to Religious Studies: Concepts and Methods**

An interdisciplinary introduction to the academic study of religion. Through exploration of diverse religious phenomena, students will learn to identify and apply basic terminology, conceptual frameworks, and analytical methods in the field of religious studies. Offered fall and winter semesters. Credits: 3

**REL 300 - Contemporary Theories and Issues in Religious Studies**

An analysis of how contemporary religions have been reframed in response to the secular and scientifically-oriented world, including the religious response to globally diverse religious perspectives. Topics may include religion and spirituality, fundamentalism, nonwestern religions, feminist perspectives, and religion and environmentalism. Offered winter semester. Credits: 3

**REL 305 - Christianity: Scriptures and Tradition**

This course examines the sacred stories, rituals and historical development of the three major traditions of the Christian religion: Eastern Orthodox, Roman Catholicism, and Protestantism. It surveys the development of Christianity from its Jewish and Hellenistic roots through contemporary attempts to translate the Christian faith for the 21st century. Offered fall semester. Credits: 3

**REL 306 - Hinduism and South Asian Religions**

Hinduism is the world's third largest religion with approximately one billion adherents and has given birth to three other religions: Jainism, Buddhism, and Sikhism. This course explores the origins and development of Hinduism, examining key concepts like karma, yoga, and reincarnation in our discussion of Hindu worldviews, cultures, and practices. Fulfills Cultures - World Perspectives. Part of the Identity Issue. Offered every semester. Prerequisite: Junior standing. Credits: 3

**REL 310 - Jewish Scriptures and Traditions**

Focusing in the textual heritage of Judaism, the ancestor of Islam and Christianity as well as a vibrant religion today, this course explores Jewish traditions and rituals as they originated throughout history and as practiced today in the world's diverse Jewish communities. Offered alternate years. Credits: 3

**REL 335 - Sacred Texts - Global Contexts**

A comparative study of sacred texts as literary masterpieces that shape and influence their respective cultural expressions and literary traditions. This interdisciplinary course will examine the multiple intersections of sacred texts with the many faces of globalization. Readings may include selections from: Rig Veda, Upanishad, Bible, Qur'an, and Tao Te Ching. Fulfills Cultures - World Perspectives. Part of the Globalization Issue. Offered fall semester. Prerequisite: Junior standing. Credits: 3

**REL 340 - Religion and Popular Culture in the United States**

An interdisciplinary study of religion and popular culture in the United States. Students will employ religious studies approaches to critically examine cultural forms such as music, art, cinema, social media, sports, and virtual reality in order to analyze the diversity of U.S. popular culture. Fulfills Cultures - U.S. Diversity. Part of the Information, Innovation, and Technology Issue. Offered every semester. Prerequisite: Junior standing. Credits: 3

**REL 380 - Special Topics in Religious Studies**

Various topics emphasizing the practice of religious studies in relation to a contemporary problem, issue, or theme. May be repeated for credit if content differs. Offered fall semester. Credits: 1 to 9

**REL 399 - Independent Readings in Religious Studies**

An interdisciplinary and scholarly or creative project initiated by the student who has special interest in religious studies not available in the current curriculum. Student, faculty, and advisors agree on the scope of the study, its components, and methods of evaluation. May be repeated for credit if content differs. Credits: 1 to 4

**REL 495 - Religious Studies Senior Seminar**

An integration of various disciplinary and/or contemporary approaches to the academic study of religions, including the role of religious studies in professional and cultural settings. Students will develop and present a problem-based senior thesis on a contemporary problem or issue. Offered fall and winter semesters. Prerequisites: Senior status, REL 200, and REL 300. Credits: 3

**REL 499 - Independent Research in Religious Studies**

Independent research and investigation in religious studies from an interdisciplinary perspective. May be repeated for credit if content differs. Offered fall and winter semesters. Credits: 1 to 4

**RIE 330 - Echocardiography I**

This course will cover basic echocardiography terminology, anatomy, instrumentation, and physical principles necessary for the student to understand the principles of two-dimensional and M-mode scanning of the normal heart. Students will also investigate basic systolic and diastolic dysfunctions. Offered fall semester. Corequisites: RIU 320, RIU 321, and RIE 331. Credits: 4

**RIE 331 - Echocardiography I Laboratory**

This course provides laboratory activities correlated to the anatomic and pathologic details presented in RIE 330. Students perform procedures on model patients following demonstrations and must achieve a high level of competency to proceed in the program to clinical education. Offered fall semester. Corequisite: RIE 330. Credits: 2

## Course Listings and Descriptions

### **RIE 332 - Echocardiography II**

This course will cover advanced echocardiography anatomy, pathophysiology, instrumentation, physical principles, and advanced echocardiographic procedures. This course also addresses complex anomalies and pathological conditions of the abnormal heart. Offered winter semester. Prerequisites: RIE 330, RIE 331, RIE 320, RIE 321, and RIE 360. Corequisite: RIE 333. Credits: 3

### **RIE 333 - Echocardiography II Laboratory**

This course provides advanced echocardiographic procedures, including detection of complex anomalies and pathological cardiac conditions, in a laboratory setting. Students perform procedures following demonstrations and must achieve a high level of competency. Offered winter semester. Prerequisite: RIE 331. Corequisite: RIE 332. Credits: 1

### **RIE 340 - Cardiac and Vascular Hemodynamics**

Study of cardiac and vascular hemodynamics in relation to various hemodynamic measurement methods. Special attention is focused on performing hemodynamic calculations. Offered fall semester. Prerequisite: Admission to the diagnostic medical sonography (adult and pediatric echocardiography and vascular sonography concentrations) major. Credits: 2

### **RIE 341 - ECG in Radiologic and Imaging Sciences**

Study of basic electrocardiography including analysis of 12-lead basic cardiac rates and rhythms. Offered fall semester. Prerequisite: Admission to any radiologic and imaging science major. Credits: 2

### **RIE 360 - Introduction to Echocardiography Clinical**

This course provides an overview of the foundations of diagnostic medical sonography in echocardiography and vascular sonography and encompasses the practitioner's role in the health care delivery system, including principles, practices and policies of the educational program, health care organizations, principles of ultrasound, and health safety. Offered fall semester. Prerequisite: Admission to the diagnostic medical sonography - (adult and pediatric echocardiography and vascular sonography) major. Credits: 2

### **RIE 361 - Echocardiography Clinical Education I**

Basic entry level content and clinical practice designed for sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in adult echocardiographic diagnostic medical sonography. Content is supported by a weekly discussion session at the university. Offered winter semester. Prerequisites: RIE 331 and RIE 360. Corequisite: RIE 333. Credits: 2

### **RIE 362 - Echocardiography Clinical Education II**

Continuing content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in adult echocardiographic diagnostic medical sonography. Content is supported by a weekly discussion session at the university. Offered spring/summer semester. Prerequisites: RIE 330, RIE 331, and RIE 361. Credits: 3

### **RIE 363 - Pediatric Echo Clinical Education I**

Entry level content and clinical practice experiences designed for sequential development application, analysis, integration, synthesis, and evaluation of concepts and theories in pediatric echocardiographic diagnostic medical sonography. Content is supported by a weekly discussion session at the university. Offered spring/summer semester. Prerequisites: RIU 320, RIU 321, RIE 330, RIE 331, and RIE 361. Credits: 2

### **RIE 366 - Vascular Sonography Clinical Education I**

Beginning level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in vascular sonography. Content is supported by a weekly discussion session at the university. Offered spring/summer semester. Prerequisites: RIE 332 and RIE 333. Corequisite: RIE 362. Credits: 2

### **RIE 380 - Special Topics in Echo and Vascular Sonography**

Special topics in echocardiography and vascular sonography. Offered every semester. Prerequisite: Faculty approval to assure students have appropriate experiential backgrounds in didactic, laboratory, and/or clinical areas of study. Credits: 1 to 5

### **RIE 432 - Vascular Sonography I**

This course is a study of concepts in noninvasive vascular ultrasound imaging and physiological testing of the cerebrovascular and lower extremity arterial and venous systems. Anatomy, physiology, pathophysiology, scanning techniques, differential diagnoses, and correlative imaging necessary for the clinical practice of vascular sonography will be emphasized. Offered winter semester. Prerequisites: RIU 320, RIU 321. Corequisite: RIE 433. Credits: 2

### **RIE 433 - Vascular Sonography I Laboratory**

This lab integrates demonstrations, practice, and scanning competencies in noninvasive vascular ultrasound imaging and physiological testing of the cerebrovascular, aortoiliac, and lower extremity arterial and venous systems. Offered winter semester. Prerequisites: RIU 320 and RIU 321. Corequisite: RIE 432. Credits: 1

### **RIE 434 - Pediatric Echocardiography I**

This didactic course will cover principles of echocardiography including cardiac anatomy, pediatric echocardiography instrumentation, basic congenital cardiac pathology, and physical principles necessary for the student to begin two-dimensional and M-mode scanning of the pediatric heart. Offered fall semester. Prerequisites: RIU 320 and RIU 321. Corequisite: RIE 435. Credits: 3

### **RIE 435 - Pediatric Echocardiography I Laboratory**

Demonstrations, practice, and laboratory evaluation of pediatric echocardiography with a focus on live patient models who have normal pediatric anatomy as well as measurements and images necessary for demonstration of abnormal cardiac pathology. Offered fall semester. Prerequisite: RIE 333. Corequisite: RIE 434. Credits: 1

### **RIE 436 - Vascular Sonography II**

Continuation of study from RIE 432 in noninvasive vascular ultrasound imaging and physiological testing to include upper extremity vascular systems, intracranial arteries, lower extremity venous insufficiency, and aortoiliac arteries. Anatomy, physiology, pathophysiology, scanning techniques, differential diagnoses, and correlative imaging necessary for the clinical practice of vascular sonography will be emphasized. Offered fall semester. Prerequisite: RIE 432. Corequisite: RIE 437. Credits: 2

### **RIE 437 - Vascular Sonography II Laboratory**

This lab integrates demonstrations, practice, and scanning competencies in noninvasive vascular ultrasound imaging and physiological testing of the upper extremity vascular systems, intracranial arteries, lower extremity venous insufficiency, and aortoiliac arteries. Offered fall semester. Prerequisite: RIE 433. Corequisite: RIE 436. Credits: 2

### **RIE 438 - Pediatric Echocardiography II**

This course will cover anatomical variations, instrumentation, and physical principles necessary for the student to perform advanced two-dimensional and M-mode scanning of the abnormal pediatric heart. Offered winter semester. Prerequisites: RIE 340 and RIE 434. Credits: 3

### **RIE 439 - Vascular Sonography III**

This course focuses on advanced concepts in vascular imaging to include invasive and noninvasive sonographic procedures with emphases in hepatoportal, mesenteric, and renal artery systems necessary for the clinical practice of vascular sonography. Analysis of scanning techniques and differential diagnoses post vascular interventional procedures and advanced technologies will be discussed. Course offered winter semester. Prerequisite: RIE 436. Corequisite: RIE 440. Credits: 2

### **RIE 440 - Vascular Sonography III Laboratory**

This lab integrates demonstrations, practice, and scanning competencies in noninvasive vascular ultrasound imaging of the hepatoportal, mesenteric, and renal artery systems and advanced sonography technologies. Offered winter semester. Prerequisite: RIE 437. Corequisite: RIE 439. Credits: 1

**RIE 457 - Cardiovascular Image Evaluation**

This course is designed to facilitate critical analysis of anatomic and pathologic imaging information related to echocardiography and noninvasive vascular sonography. This course will focus on multi-modality cardiovascular diagnostic procedures in correlation with noninvasive cardiac and vascular sonography. Course offered winter semester. Prerequisites: RIE 434 and RIE 436. Credits: 2

**RIE 463 - Pediatric Echocardiography Clinical Education II**

This course will provide content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in pediatric echocardiographic diagnostic medical sonography. Content is supported by a weekly discussion session at the university. Offered fall semester. Prerequisite: RIE 363. Corequisite: RIE 435. Credits: 3

**RIE 464 - Pediatric Echocardiography Clinical Education III**

Continuation of advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in pediatric echocardiographic diagnostic medical sonography. Content is supported by a weekly discussion session at the university. Offered winter semester. Prerequisites: RIE 434 and RIE 435. Credits: 3

**RIE 466 - Vascular Sonography Clinical Education II**

Advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in vascular sonography. Content is supported by a weekly discussion session at the university. Offered fall semester. Prerequisite: RIE 366. Corequisite: RIE 433. Credits: 3

**RIE 467 - Vascular Sonography Clinical Education III**

Continuation of advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in vascular sonography. Content is supported by a weekly discussion session at the university. Offered winter semester. Prerequisite: Permission of instructor. Credits: 3

**RIE 480 - Special Topics in Echocardiography and Vascular Sonography**

Special topics in echocardiography and vascular sonography. Prerequisite: Faculty approval to assure students have appropriate experiential backgrounds in didactic, laboratory, and/or clinical areas of study. Credits: 1 to 9

**RIE 495 - Advanced Clinical Problems in Echocardiography and Vascular Sonography**

SWS Capstone in diagnostic medical sonography exploring diverse clinical problems in the profession. Includes reflection and contemplation on ethical and legal issues. Requires final rewriting of professional portfolio showcasing past didactic, laboratory, clinical, professional learning, and community service. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the major. Corequisite: RIE 464 or RIE 467. Credits: 3

**RIS 310 - Radiologic and Imaging Sciences Management**

Administrative aspects of the concepts and applications of the basic principles of radiology management, including legal, risk management, ethical, accreditation and regulatory agencies, and quality assurance theories. Offered winter semester. Prerequisite: Admission to a radiologic and imaging sciences major. Credits: 3

**RIS 380 - Special Topics in Radiologic and Imaging Sciences**

Special topics in radiologic and imaging sciences relevant to multiple fields of study, e.g., new radiation physics quality standards that impact radiography, computed tomography, magnetic resonance imaging, and cardiovascular interventional technologies. Offered every semester. Prerequisite: Faculty approval to assure students have appropriate experiential backgrounds in didactic, laboratory, and/or clinical areas of study. Credits: 1 to 5

**RIS 399 - Independent Study**

Independent study in the radiologic and imaging sciences. Offered every semester. Prerequisites: Determined on an individual basis as each independent study course is approved based on individual student

experiential backgrounds in didactic, laboratory, and/or clinical areas of study. Credits: 1 to 5

**RIS 424 - Computed Tomography Instrumentation**

Study of computed tomography instrumentation necessary for competent operation of current equipment. Offered winter semester of even-numbered years. Prerequisite: Permission of instructor. Credits: 2

**RIS 452 - GI-GU Clinical Radiologic and Imaging Sciences**

This course will cover the principles of clinical procedures in gastrointestinal and genitourinary radiologic and imaging sciences. Offered fall semester. Prerequisite: Admission to any radiologic and imaging sciences major. Credits: 3

**RIS 499 - Independent Research in RIS**

Supervised research in radiologic and imaging sciences. Offered every semester. Prerequisite: Permission of instructor. Credits: 1 to 5

**RIT 302 - Radiation Protection Physics**

This introductory course will cover the principles governing production of radiation, interaction of radiation with matter, protection of the radiation worker and patient from exposure, and use of various types of radiation (ionizing, sound, radio) to create radiologic, sonographic, and magnetic resonance images. Course offered fall semester. Prerequisite: Admission to the radiation therapy program. Credits: 2

**RIT 310 - Radiation Therapy Patient Care**

Patient care procedures and interactive skills used in physical and psychological care of the patient during radiation therapy, with emphasis on assessment, identification of emergencies, and specific patient care skills for patients undergoing radiation therapy. Patient education, advocacy, and independent/team roles in patient care are also addressed. Course offered fall semester. Prerequisite: Admission to radiation therapy program. Credits: 3

**RIT 322 - Radiation Biology**

This lecture course considers the radiobiologic areas of radiation interactions, radiosensitivity, radiation dose/response relationships, early and late radiation effects, radiation protection, and health physics. Offered winter semester. Prerequisite: RIS 322. Credits: 2

**RIT 330 - Radiation Therapy Principles and Practices I**

Overview of cancer and the basic foundations of radiation therapy including: basic treatment techniques and patient setup, an introduction to patient simulation, an introduction to intensity modulated radiation therapy (IMRT) and special procedures, as well as identification and application of ethical and legal issues. Offered fall semester. Prerequisite: Admission to the radiation therapy program. Corequisite: RIT 331. Credits: 4

**RIT 331 - Radiation Therapy Principles and Practices I Laboratory**

Introductory lab on treatment and simulation techniques with patient setups specific for brain, lung, pelvis, abdomen, lumbar spine, and safe patient transfer techniques. Offered fall semester. Prerequisite: Admission to the radiation therapy program. Corequisite: RIT 330. Credits: 1

**RIT 332 - Radiation Therapy Principles and Practices II**

Lecture and discussion sessions presenting intermediate concepts of radiation therapy treatment principles and practices for photon and electron dosimetry, neoplasms of the skin, genitourinary system, gynecologic system, gastrointestinal system, circulatory, endocrine and respiratory systems. Offered winter semester. Prerequisite: RIT 331. Corequisite: RIT 333. Credits: 3

**RIT 333 - Radiation Therapy Principles and Practices II Laboratory**

This course provides intermediate laboratory sessions presenting concepts of radiation therapy treatment principles and practices for photon and electron dosimetry, skin, genitourinary, gynecologic, gastrointestinal, endocrine and respiratory neoplasms. Offered winter semester. Prerequisite: RIT 331. Corequisite: RIT 332. Credits: 1

**RIT 334 - Simulations in Radiation Therapy**

Students will encounter and simulate common situations and issues that arise in the delivery of radiation therapy to patients. Topics include patient needs in the therapy process, patient communication, family interactions,

## Course Listings and Descriptions

patient interactions and professional behavior, and appropriate use of treatment devices with simulated patient situations. Offered winter semester. Prerequisite: Admission to the radiation therapy major or to the predosimetry emphasis program. Credits: 2

### **RIT 361 - Radiation Therapy Clinical Education I**

Clinical education course on basic treatment procedures in the clinical setting, under direct supervision. Individualized evaluation of performance and analysis of results obtained are an inherent part of this course. Content is supported by a weekly discussion session at the university. Offered winter semester. Prerequisites: RIS 302, RIT 330, and RIT 331. Credits: 2

### **RIT 362 - Radiation Therapy Clinical Education II**

Clinical education course in intermediate level treatment procedures in the clinical setting under direct supervision, further perfects clinical expertise and judgment of student in clinical radiation therapy. Individualized evaluation of performance and analysis of results are part of this course. Content is supported by a weekly discussion session at the university. Offered spring/summer semester. Prerequisites: RIS 322, RIT 330, and RIT 331. Credits: 4

### **RIT 380 - Special Topics in Radiation Therapy**

Special topics in radiation therapy. Offered every semester. Prerequisites: Faculty approval to assure students have appropriate experiential backgrounds in didactic, laboratory, and/or clinical areas of study. Offered every semester. Credits: 1 to 5

### **RIT 401 - Radiologic Information Technology**

This course provides information related to fundamental concepts of medical and health informatics methods and techniques involved in the integration of computer systems in medical centers, specifically radiologic centers. Students will be introduced to health information systems, data representation and standards, privacy, security, and management of health information. Offered fall semester. Prerequisite: Admission radiation therapy program. Credits: 3

### **RIT 420 - Radiation Therapy Physics I**

Radiation therapy involves the use of ionizing radiation using various energies, particles, and techniques to treat malignancies and benign conditions, either curatively or palliatively. This course describes the principles of physics for the radiation therapist to understand the purpose of multiple radiation energies and the need for photons and electrons. Offered winter semester. Prerequisite: Admission to the radiation therapy major. Credits: 2

### **RIT 422 - Radiation Therapy Physics II**

Radiation therapy involves the use of ionizing radiation to treat malignancies and benign conditions, either curatively or palliatively. The purpose of this course is to familiarize the radiation therapist with the nature of ionizing radiation that allows it to be exploited for its desired characteristics while minimizing potentially undesirable effects. Offered fall semester. Prerequisite: Admission to the radiation therapy major. Credits: 2

### **RIT 424 - Image Guided Principles of Radiation Therapy**

This course is designed to teach competent operation of current imaging equipment within the field of radiation oncology, including knowledge in factors that govern and influence the production and recording of radiographic images for patient simulation, treatment planning, and treatment verification within the field. Course offered winter semester. Prerequisite: RIT 330. Credits: 4

### **RIT 430 - Radiation Therapy Principles and Practices III**

Lecture sessions presenting advanced concepts of radiation therapy treatment principles and practices for pathology, radiobiology, brachytherapy, quality assurance, neoplasms of lymphoreticular system, head and neck, CNS, and breast. Offered fall semester. Prerequisite: RIT 331. Corequisite: RIT 431. Credits: 3

### **RIT 431 - Radiation Therapy Principles and Practices III Lab**

Laboratory sessions presenting advanced concepts of radiation therapy treatment, patient nutrition, set ups, and procedures for breast, head and

neck region, lymphoma, and central nervous system tumors. Offered fall semester. Prerequisite: RIT 331. Corequisite: RIT 430. Credits: 1

### **RIT 432 - Radiation Therapy Principles and Practices IV**

Clinical details of specific skill practices in radiation therapy with special attention to pediatric tumors, GI, bone and soft tissue sarcomas, emerging technologies, detection/diagnosis, clinical trials, and treatment of benign conditions. Common chemotherapy agents and current clinical trials. Offered winter semester. Prerequisite: RIT 331. Corequisite: RIT 433. Credits: 3

### **RIT 433 - Radiation Therapy Principles and Practices Lab IV**

This radiation therapy laboratory course will include patient setup instructions, immobilization techniques, traditional field designs, and patient care skills for simulations of pediatric tumors, GI tumors, bone tumors, adult sarcomas, and benign conditions. Offered winter semester. Prerequisite: RIT 331. Corequisite: RIT 432. Credits: 1

### **RIT 441 - Gross Human Sectional Anatomy**

This course is a study of human sectional anatomy as visualized by radiologic and imaging sciences modalities in planes relevant to the demonstration of head, thorax, abdomen, pelvic, spine, and extremity anatomy. Cadaver correlation to diagnostic medical sonography, echocardiography, diagnostic radiology, computed tomography, and magnetic resonance imaging is emphasized. Course offered winter semester. Prerequisite: Admission to the radiation therapy program, diagnostic medical sonography program, cardiovascular sonography program, or predosimetry emphasis. Credits: 4

### **RIT 458 - Neoplasms**

Overview of the epidemiological, etiological, diagnostic, and treatment foundations of common malignant and benign lesions. Anatomical sites of exploration include: breast, prostate, ovary, colon, stomach, lymphoma, CNS, and skin. Offered fall semester. Prerequisite: Admission to the radiation therapy program, diagnostic medical sonography program, cardiovascular sonography program, or premedical dosimetry emphasis. Credits: 3

### **RIT 460 - Radiation Therapy Clinical Education III**

Clinical education course in which the student gains additional radiation therapy experience in the clinical setting, under direct supervision, and further perfects clinical expertise and judgment. Individualized evaluation of performance and analysis of results obtained are included in this course. Content is supported by a weekly discussion session. Offered fall semester. Prerequisites: RIT 330 and RIT 331. Credits: 3

### **RIT 461 - Radiation Therapy Clinical Education IV**

The student continues to progress toward executing treatment procedures in the clinical setting, under direct supervision, further perfects clinical expertise and judgment of students in a clinical setting. Individualized evaluation of performance and analysis of results obtained are part of this course. Content is supported by a weekly discussion session. Offered winter semester. Prerequisites: RIT 330, RIT 331, RIT 332, RIT 333, RIT 361, RIT 362, RIT 420, RIT 422, RIT 430, RIT 431, and RIT 460. Credits: 3

### **RIT 470 - Radiation Therapy Treatment Planning**

Fundamentals of clinical radiation oncology treatment planning. Precise descriptive methods are presented for a wide range of typical patient conditions. Offered fall semester. Prerequisites: RIT 331 and RIT 331; or RIT 332 and RIT 333, and RIT 420. Corequisites: RIT 422 and RIT 471. Credits: 2

### **RIT 471 - Radiation Therapy Treatment Planning Lab**

Concepts in medical dosimetry as they are applied to clinical radiation oncology treatment planning. Presentations, demonstrations, and evaluations using laboratory treatment planning software are correlated to the lectures. Offered fall semester. Corequisite: RIT 470. Credits: 1

### **RIT 472 - Introduction to Medical Dosimetry**

Medical dosimetry concepts as they are applied to clinical radiation oncology treatment planning. Examples are given from clinical education sites that will be correlated with the corequisite laboratory. Offered winter

semester. Prerequisites: RIT 470 and RIT 471. Corequisite: RIT 473. Credits: 2

#### **RIT 473 - Introduction to Medical Dosimetry Lab**

Application of medical dosimetry concepts as they are applied to clinical radiation oncology treatment planning. Examples will be used from clinical education sites that will be correlated from the corequisite lecture course. Offered winter semester. Prerequisites: RIT 470 and RIT 471. Corequisite: RIT 472. Credits: 1

#### **RIT 495 - Advanced Clinical Problems in Radiation Therapy**

SWS Capstone in radiation therapy exploring diverse clinical problems from frameworks of reflection and contemplation on ethical legal issues relating technical philosophic foundations of radiation therapy procedures and radiation physics, bioeffects, patient interaction, anatomy, and pathophysiology. Requires final rewriting of professional portfolio showcasing past didactic, laboratory, clinical, professional learning, and community service. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the major. Corequisite: RIT 461. Credits: 3

#### **RIU 301 - DMS Image Evaluation I**

This course is designed to facilitate critical analysis of anatomic and pathologic imaging information related to diagnostic medical sonographic procedures for the imaging of abdominal structures. Offered winter semester. Prerequisites: Admission to the diagnostic medical sonography program - general concentration emphasis, RIU 330, RIU 331, and RIU 360. Corequisite: RIU 361. Credits: 1

#### **RIU 302 - DMS Image Evaluation II**

Anatomic and pathologic imaging details and correlations between the accepted diagnostic medical sonographic procedures and clinical data specific to the imaging of obstetrical and gynecological structures including related small parts (breast, thyroid, testicles, prostate). Practical skills and clinical knowledge specific to anatomic and pathologic information will be discussed. Offered fall semester. Prerequisites: RIU 301, RIU 332, RIU 333, and RIU 362. Credits: 1

#### **RIU 320 - Applied Ultrasound Physics Instruction I**

This course will provide theoretical foundations and clinical applications of ultrasound physics and instrumentation, necessary for laboratory and clinical scanning, including an introduction to Doppler principles, performance testing, artifacts, and bioeffects. Offered fall semester. Prerequisite: Admission to the diagnostic medical sonography major. Corequisite: RIU 321. Credits: 2

#### **RIU 321 - Applied Ultrasound Physics Instruction I Lab**

This course will provide correlated laboratory experiences relevant to theoretical foundations and clinical applications of ultrasound physics and instrumentation, necessary for clinical scanning, including an introduction to Doppler principles, performance testing, artifacts, and bioeffects. Offered fall semester. Prerequisite: Admission to the diagnostic medical sonography major. Corequisite: RIU 320. Credits: 1

#### **RIU 322 - Principles of Radiologic Imaging Sciences**

This course will cover the principles governing production of radiation, interaction of radiation with matter, protection of the radiation worker and patient from exposure, and use of various types of radiation (ionizing, sound, radio) to create radiologic, sonographic, and magnetic resonance images. Offered winter semester. Prerequisite: Admission to diagnostic medical sonography - general program. Credits: 3

#### **RIU 324 - Applied Doppler Ultrasound Physics**

Theoretical foundations and clinical applications of applied Doppler diagnostic medical sonographic physics and instrumentation for abdominal, obstetric-gynecology, echocardiography, vascular, and breast imaging. Quality assurance testing and introduction to bioeffects are included. An emphasis on the American Registry of Diagnostic Medical Sonographers' examination is part of this course. Offered winter semester. Prerequisites: RIU 320 and RIU 321. Credits: 2

#### **RIU 330 - Abdominal Sonography I**

This course is designed to introduce the student to abdominal diagnostic medical sonography. This course will cover specific protocols for the investigation of the abdomen through the use of sonography. Specific anatomic and pathologic information necessary for the clinical practice of abdominal diagnostic medical sonography will be discussed. Offered fall semester. Prerequisite: Admission to diagnostic medical sonography major - general concentration. Corequisites: RIU 320, RIU 321, RIU 331, and RIU 360. Credits: 4

#### **RIU 331 - Abdominal Sonography I Lab**

This course provides laboratory activities in abdominal sonography and includes demonstrations and return demonstrations for competency evaluations. There is a practical application that correlates to the anatomic and pathologic details presented in RIU 330 Abdominal Sonography I. Offered fall semester. Prerequisite: Admission to diagnostic medical sonography major - general concentration (abdominal and obstetrics-gynecology). Corequisites: RIU 320, RIU 321, RIU 330, and RIU 360. Credits: 2

#### **RIU 332 - Obstetrics-Gynecology Sonography I**

This course will introduce students to normal and abnormal sonographic clinical procedures of nonpregnant uterus and of the normal gravid uterus. Clinical data relative to related anatomic, physiologic, and pathologic conditions will be emphasized. Prerequisite: Admission to diagnostic medical sonography program — general concentration (abdominal and obstetrics-gynecology). Offered winter semester. Prerequisite: RIU 360. Corequisite: RIU 333. Credits: 3

#### **RIU 333 - Obstetrics-Gynecology Sonography Lab**

This course will include anatomic and pathologic imaging details and correlations in the relationships of diagnostic medical sonographic procedures for the imaging of obstetric and gynecologic structures. Clinical data relative to related anatomic, physiologic, and pathologic conditions will be emphasized by interactive live sonographic evaluation. Offered winter semester. Prerequisite: RIU 360. Corequisite: RIU 332. Credits: 1

#### **RIU 360 - Introduction to Clinical Ultrasound**

This course will provide an overview of the basics of diagnostic medical sonography and the practitioner's role in the health care delivery system to include principles, practices and policies of the educational program, health care organizations, principles of ultrasound and health safety and the basic patient care. Offered fall semester. Prerequisite: Admission to the diagnostic medical sonography major - general concentration. Credits: 2

#### **RIU 361 - Clinical Ultrasound Education I**

Beginning level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in abdominal and obstetrical and gynecologic diagnostic medical sonography. Content is supported by a weekly discussion session at the university. Offered winter semester. Prerequisites: RIU 320, RIU 321, RIU 330, RIU 331, and RIU 360. Credits: 2

#### **RIU 362 - Clinical Ultrasound Education II**

Continuation of Clinical Education I level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in abdominal and obstetrical and gynecologic diagnostic medical sonography. Content is supported by a weekly discussion session at the university. Offered spring/summer semester. Prerequisites: RIU 330, RIU 331, and RIU 360. Credits: 4

#### **RIU 380 - Special Topics in Diagnostic Medical Sonography**

Special topics in diagnostic medical sonography. Offered every semester. Prerequisite: Faculty approval to assure students have appropriate experiential backgrounds in didactic, laboratory, and/or clinical areas of study. Credits: 1 to 5

## Course Listings and Descriptions

### **RIU 420 - Applied Ultrasound Physics Instruction II**

A course in diagnostic medical sonographic physics and instrumentation that explores diverse problems in ultrasound physics from a framework of previous physics courses, clinical experiences, other sonographic didactic coursework, and expectations students have for national ARDMS examinations in physics, as well as their future professional career plans. Offered fall semester. Prerequisite: RIU 320 or RIU 324. Credits: 2

### **RIU 430 - Abdominal Sonography II**

Continuation from RIU 330 which includes anatomic and pathologic imaging details and correlations in the relationships of diagnostic medical sonographic procedures for the imaging of abdominal structures, including the designation of small parts (such as thyroid, breast) and abdominal Doppler procedures. Offered fall semester. Prerequisites: RIU 324, RIU 330, and RIU 331. Corequisite: RIU 431. Credits: 2

### **RIU 431 - Abdominal Sonography II Lab**

This course is a continuation of RIU 331, which will include anatomic and pathologic imaging details and correlations in the relationships of diagnostic medical sonographic procedures for the imaging of abdominal structures including small parts classification. Clinical data relative to related anatomic, physiologic, and pathologic conditions will be emphasized. Offered fall semester. Prerequisites: RIU 324, RIU 330, and RIU 331. Corequisite: RIU 430. Credits: 1

### **RIU 434 - Breast Sonography Procedures**

This course is designed to introduce the student to diagnostic medical sonography of the breast. In this course, the student will study specific protocols for the investigation of the breast and related structures. Specific anatomic and pathologic information necessary for the clinical practice of breast sonography will be discussed. Offered winter semester. Prerequisite: Permission of instructor. Credits: 2

### **RIU 435 - Obstetrics-Gynecology Sonography II**

This course will continue from RIU 332 and include advanced imaging procedures and clinical data that is related to pathologic conditions of the obstetric-gynecologic patient. At the conclusion of this course, the student should have a strong knowledge base of the ob-gyn patient as it applies to diagnostic medical sonography. Prerequisite: RIU 332. Credits: 2

### **RIU 436 - Vascular Technology Procedures I for General Ultrasound**

Noninvasive vascular testing of the abdominal and peripheral arterial system with relevant hemodynamics pertaining to a general sonography perspective. Clinical data pertinent anatomic, physiologic, and pathologic conditions will be emphasized. Prerequisites: RIU 320 and RIU 321. Corequisite: RIU 437. Credits: 2

### **RIU 437 - Vascular Technology Procedures I for General Ultrasound Lab**

Application of the noninvasive vascular testing of the abdominal and peripheral arterial system with relevant hemodynamics pertinent to a general sonography perspective in the laboratory. Clinical data relative to related anatomic, physiologic, and pathologic conditions will be emphasized. Prerequisites: RIU 320 and RIU 321. Corequisite: RIU 436. Credits: 1

### **RIU 438 - Vascular Technology Procedures II for General Ultrasound**

Noninvasive vascular testing of the abdominal and peripheral venous system with relevant hemodynamics pertaining to a general sonography perspective. Clinical data relative to related anatomic, physiologic, and pathologic conditions will be emphasized. Prerequisites: RIU 436 and RIU 437. Corequisite: RIU 439. Credits: 2

### **RIU 439 - Vascular Technology Procedures II for General Ultrasound Lab**

Laboratory component of noninvasive vascular testing of the abdominal and peripheral venous system with relevant hemodynamics pertaining to a general sonography perspective. Clinical data relative to related anatomic, physiologic, and pathologic conditions will be emphasized. Prerequisites: RIU 436 and RIU 437. Corequisite: RIU 438. Credits: 1

### **RIU 454 - Advanced Obstetric- Gynecologic Sonography**

The course will provide the student with lectures from current practicing physicians and various medical professionals who are involved in

the assessment and evaluation of gynecologic and obstetric patients in the clinical setting. The role of sonographic imaging of obstetric and gynecologic patients will be explored. Offered winter semester. Prerequisite: Admission to diagnostic medical sonography - general program. Credits: 3

### **RIU 460 - Clinical Ultrasound Education III**

Continuation of content and clinical practice experiences designed for development, application, analysis, integration, synthesis, and evaluation of concepts and theories in abdominal and obstetrical gynecological diagnostic medical sonography. Content is supported by a weekly discussion session at the university. Offered fall semester. Prerequisites: RIU 330, RIU 331, and RIU 360. Credits: 3

### **RIU 461 - Clinical Ultrasound Education IV**

Continuation of content and clinical practice experiences preparing the student to perform successfully in the clinical setting through sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in abdominal and obstetrical gynecological diagnostic medical sonography. Content is supported by a weekly discussion at the university. Offered winter semester. Prerequisites: RIU 361, RIU 362, and RIU 460. Credits: 3

### **RIU 495 - Advanced Clinical Problems in Ultrasound**

SWS Capstone in radiologic and imaging exploring diverse clinical problems from frameworks of reflection and contemplation on ethical legal issues relating technical philosophic foundations of sonographic procedures and ultrasound physics, bioeffects, patient interaction, anatomy, pathophysiology. Requires final rewriting of professional portfolio showcasing past didactic, laboratory, clinical, professional learning, and community service. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the major. Corequisite: RIU 461. Credits: 3

### **RMD 630 - Medical Dosimetry I**

Orientation and explanation of computerized treatment planning systems, including the procedures required to develop radiation treatment plans for a diverse range of neoplasms in the head and neck, thoracic, and abdominal regions. Course offered fall semester. Corequisites: RMD 661 and RMD 631; RMD 693 or 695. Credits: 3

### **RMD 631 - Medical Dosimetry I Laboratory**

Laboratory practice in the orientation and initial use of common computerized treatment planning systems, including the procedures required to develop radiation treatment plans for a diverse range of neoplasms in the head and neck, thoracic, and abdomen regions. Course offered fall semester. Corequisites: RMD 630, RMD 661; RMD 693 or RMD 695. Credits: 1

### **RMD 632 - Medical Dosimetry II**

Explanation and discussion of advanced details of computerized treatment planning systems, including the procedures required to develop radiation treatment plans for a diverse range of neoplasms in the pelvis and extremities, including brachytherapy, and other procedures (e.g., palliative, electron beam, fusion). Course offered winter semester. Prerequisites: RMD 630, RMD 631. Corequisites: RMD 633 and RMD 662; RMD 693 or RMD 695. Credits: 3

### **RMD 633 - Medical Dosimetry II Laboratory**

Advanced laboratory practice in the orientation and clinical use of common computerized treatment planning systems, including the procedures required to develop radiation treatment plans for a diverse range of neoplasms in the pelvis, extremities, brachytherapy, and other (e.g., palliative, electron beam, fusion) regions. Course offered winter semester. Prerequisites: RMD 630 and RMD 631. Corequisites: RMD 632, RMD 662, PH 625; RMD 693 or RMD 695. Credits: 1

### **RMD 661 - Medical Dosimetry Clinical Education I**

Clinical experience in medical dosimetry in a university affiliated clinical education center is the focus of the course. The student will focus on treatment planning of neoplasms in the head and neck, thorax, and abdomen anatomic areas. Course is offered fall semester. Corequisites: RMD 630 and RMD 631; RMD 693 or RMD 695. Credits: 1 to 3

**RMD 662 - Medical Dosimetry Clinical Education II**

Clinical experiences will be achieved in treatment planning, image fusion, verification calculation, and plan presentation of pelvis, extremities, brachytherapy, and palliative clinical medical dosimetry procedures in a university affiliated clinical education center. Course offered winter semester. Prerequisite: RMD 661. Corequisites: RMD 632 and RMD 633; RMD 693 or RMD 695. Credits: 1 to 4

**RMD 663 - Medical Dosimetry Clinical Education III**

This course enables the student to gain advanced clinical experience in medical dosimetry in a university affiliated clinical education center. The student will focus on advanced treatment planning, image fusion, verification calculation, and plan presentation of electron beam, fusion, HDR, and stereotactic delivery clinical medical dosimetry procedures. Course offered spring/summer semester. Prerequisite: RMD 662. Corequisites: RMD 693 or RMD 695; RMD 670. Credits: 1 to 4

**RMD 670 - Professional Issues in Medical Dosimetry**

Investigation of the psychosocial aspects of oncologic patient care, including thanatology and bereavement, body image and emotions in illness and treatment. Students also explore electronic medical records and charting, treatment error corrections, and legal and ethical issues. Discussion and review of dosimetry credentialing mechanisms is also addressed. Corequisites: RMD 693 or RMD 695; RMD 663. Credits: 3

**RMD 693 - Medical Dosimetry Research Project**

Guided research project in medical dosimetry. Students will work directly with their adviser as well as clinical personnel and vendors to establish a research hypothesis and method of data accumulation and presentation in the area of planning or patient care. This course must be repeated for a total of 6 credits. Course offered each semester. Prerequisites: Admission into the medical dosimetry program and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 3

**RMD 695 - Medical Dosimetry Thesis**

Students will work directly with their adviser to establish a research hypothesis and method of data accumulation/presentation in the area of planning or patient-care in the format of a traditional graduate thesis experience. Students must register for either RMD 693 or RMD 695 throughout continuous enrollment in the MSMD program. Prerequisites: Admission to the medical dosimetry program and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 3

**RMD 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

**RST 180 - Special Topics in Russian Studies**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

**RST 225 - Introduction to Russian Culture**

Concentrates on Russian culture as the Russian way of life and as the contribution Russia has made to civilization in general. Students should gain an understanding of Russia through an investigation of its past, its present, and its contrasts with the United States and the West. Fulfills Cultures - World Perspectives. Offered winter semester of even-numbered years or on demand. Credits: 3

**RST 280 - Special Topics in Russian Studies**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

**RST 380 - Special Topics in Russian Studies**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 9

**RST 399 - Independent Reading**

Independent reading in Russian studies. Credits: 1 to 3

**RST 480 - Special Topics in Russian Studies**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

**RST 495 - Russia in Context (Capstone)**

Interdisciplinary exploration of the so-called accursed questions that arise in any study of Russian cultural and intellectual history, literature, and the arts. Senior thesis and oral comprehensive examination required. Offered winter semester in odd-numbered years or on demand. Prerequisites: Senior standing with a major in Russian studies (others only with permission of coordinator). Credits: 3

**RST 499 - Independent Study and Research**

Independent study and research in Russian studies. Credits: 1 to 4

**RUS 101 - Beginning Russian I: Language and Culture**

An introduction to Russian language and the culture in which it is embedded. Practice in speaking, listening, reading, writing, and culture at the beginning level. Supplemented by multimedia and the Language Resource Center. Offered fall semester. Credits: 4

**RUS 102 - Beginning Russian II: Language and Culture**

Continuation of RUS 101. Further study in speaking, listening, reading, writing, and culture at the beginning level. Supplemented by multimedia and the Language Resource Center. Offered winter semester. Prerequisite: C (not C-) or better in RUS 101, or credit. Credits: 4

**RUS 180 - Special Topics in Russian**

Course content varies. Expectations of students approximate those in other 100-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

**RUS 201 - Intermediate Russian I: Language and Culture**

Continuation of RUS 102. Continued study of speaking, listening, reading, writing, and culture at the intermediate level. Supplemented by multimedia and the Language Resource Center. Offered fall semester. Prerequisite: RUS 102 with a grade of C (not C-) or better, or credit. Credits: 4

**RUS 202 - Intermediate Russian II: Language and Culture**

Continuation of RUS 201. Continued study of speaking, listening, reading, writing, and culture at the intermediate level. Supplemented by multimedia and the Language Resource Center. Fulfills Cultures - World Perspectives. Offered winter semester. Prerequisite: RUS 201 with a grade of C (not C-) or better, or credit. Credits: 4

**RUS 280 - Special Topics in Russian**

Course content varies. Expectations of students approximate those in other 200-level courses. May be repeated for credit when content differs. No more than four credits can be applied to the minor or major. Offered on sufficient demand. Credits: 3 to 4

**RUS 380 - Special Topics in Russian**

Offered on sufficient demand. Credits: 1 to 6

**RUS 399 - Independent Reading**

Offered fall and winter semesters. Credits: 1 to 4

**RUS 480 - Special Topics in Russian**

Course content varies. Expectations of students approximate those in other 400-level courses. May be repeated for credit when content varies. Offered on sufficient demand. Credits: 1 to 4

**RUS 499 - Independent Study and Research**

Offered fall and winter semesters. Credits: 1 to 4

## Course Listings and Descriptions

### **SAT 495 - Teaching Sciences and Arts in Elementary Classrooms**

Students will prepare and practice teaching interdisciplinary lessons for elementary students that meet national and state standards. Thematic content will integrate language arts, mathematics, science, and social studies. Offered winter semester. Prerequisites: Comprehensive Sciences and Arts for teaching major, and junior standing. Credits: 3

### **SCI 225 - Integrated Life Science for K-8 Teachers**

Course promotes mastery of life and earth science concepts necessary to teach K-8 science. Through inquiry and group discussions students develop reasoning and thinking skills critical to science while also developing mastery of science content. Fulfills Foundations - Life Sciences with a lab. Prerequisite: MTH 221 or MTH 222 or MTH 223 (may be taken concurrently). Credits: 4

### **SCI 226 - Integrated Physical Science for K-8 Teachers**

Course promotes mastery of physical and earth science concepts necessary to teach K-8 science. Through inquiry and discussions students develop reasoning and thinking skills. The course focuses on science teaching and learning that is connected to the other science disciplines. Fulfills Foundations - Physical Sciences with a lab. Prerequisite: MTH 221 or MTH 222 or MTH 223 (may be taken concurrently). Credits: 3

### **SCI 319 - Science in Elementary Education**

Students will create and present a lesson plan, test hands-on activities, develop a deeper understanding of physical science concepts, and explore classroom safety issues related to teaching science at the K-8 level. Scientific misconceptions commonly held by teachers and students will be discussed. Prerequisites: BIO 120, CHM 109 or CHM 201, PHY 200 or PHY 201, and GEO 201. Credits: 2

### **SCI 336 - Ecology for K-8 Pre-Service Teachers**

Ecological concepts for preservice teachers. Includes ecosystems, energy flow, evolution, population dynamics, community ecology, and human impacts on the environment. This course is intended to integrate concepts from biology, physics, chemistry, and earth science. Content reflects National and Michigan Science Standards. Course is intended for integrated science majors ONLY. Prerequisites: BIO 205, CHM 109 or CHM 201, GEO 202, GEO 203, PHY 201 (GEO 201 recommended). Credits: 4

### **SCI 380 - Special Topics in Science**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 4

### **SCI 440 - Physics and Chemistry in Secondary Education**

Introduces students to evidence based, physical science pedagogy, science education standards, and science safety practices. Students apply these ideas to lesson plan development and facilitation for physical science content. Offered fall semester. Prerequisites: Junior standing, CHM 116, and PHY 221 or PHY 231. Credits: 3

### **SCI 450 - Earth and Life Science in Secondary Education**

Designed to introduce students to evidence based, earth and life science teaching pedagogy, science education standards, and science safety practices. Students apply these ideas to lesson plan development and facilitation for earth and life science content. Course offered winter semester. Prerequisites: Junior standing; BIO 120 and BIO 121; or GEO 111 and GEO 112. Credits: 3

### **SCI 495 - Teaching Science in the 21st Century**

A study of how four key science disciplines — biology, chemistry, earth science and physics — can be integrated into effective curriculum for teaching science in K-8 classrooms. Constructivist and inquiry-based science techniques are emphasized. The course is the Capstone for the integrated science major. Prerequisites: Senior standing and SCI 319. Credits: 3

### **SCI 580 - Special Topics in Science**

Lecture and/or laboratory courses or workshops in interdisciplinary studies relating to more than one science and/or mathematics discipline. Credits: 1 to 3

### **SCI 621 - Education Research in Science**

Teachers learn science education and action research methods designed to improve student learning in the secondary and middle school science classroom. Topics include science education literature, quantitative and qualitative research methods, and ethical considerations. Offered winter semester of odd-numbered years. Credits: 3

### **SCI 631 - Inquiry Curriculum Development**

Teachers will design and pilot inquiry-based science activities to be implemented in their own classrooms. Offered spring/summer semester of odd-numbered years. Prerequisite: SCI 621. Credits: 4

### **SCI 632 - Inquiry Colloquium**

Teachers are required to implement and evaluate inquiry-based activities in their own classrooms. Teachers must register each semester while implementing and evaluating their inquiry activities. Participation in two semesters of SCI 632 is required for one credit. Offered fall semester of odd-numbered years and winter semester of even-numbered years. Prerequisite: SCI 631. Credits: 1

### **SCI 633 - Applications of Science Education**

Application of science research and curriculum development to action research project. Consultations with a science education advisor required to assist in interpretation and analysis of classroom data collected during action research project. Offered spring/summer semester of even-numbered years. Prerequisite: SCI 632. Credits: 1

### **SLP 200 - Introduction to Communication Disorders**

An introduction to a variety of communication disorders. A review of the professions speech-language pathology and audiology; an overview of the sciences associated with communication; an introduction to how various disorders affect communication. Offered every semester. Credits: 3

### **SLP 302 - Anatomy and Physiology of the Speech and Hearing Mechanism**

This course is a study of the anatomy (structure) and physiology (function) of the speech, language, and hearing mechanism. Offered every semester. Credits: 3

### **SLP 303 - Language Development**

Course of language development in typical children explored from infancy to late adolescence with cultural and socioeconomic issues addressed. Includes semantic, syntactic, morphological, phonological, and pragmatic aspects. Laboratory experience in language and preliteracy in toddlers and preschool years, and school-age language and literacy. Neurological, theoretical, and applied issues addressed. Offered fall and winter semesters. Credits: 3

### **SLP 304 - Phonetics**

Nature of spoken language explored with respect to phonology, articulatory and clinical phonetics, and transcription using the International Phonetic Alphabet and diacritic markers. Includes information on phonological development and disorders, phonological awareness, and dialect. Offered fall semester. Credits: 3

### **SLP 305 - Introduction to Hearing Science**

An exploration of the physiological and psychological aspects of human hearing including acoustics of sound and psychoacoustics. Offered fall and winter semesters. Credits: 3

### **SLP 306 - Speech Science**

This course is the study of speech sound production, focusing on the speech mechanism, the nervous system and their role in the production and perception of human speech. An overview of acoustics and the basic acoustics of speech are presented. Offered fall and winter semesters. Credits: 3

### **SLP 307 - Language Disorders**

This course will focus on the characteristics of language disorders in children and adolescents and will present a multicultural perspective. Offered winter semester. Credits: 3

### **SLP 308 - Articulation and Phonological Disorders**

Disorders of articulation and phonology are explored within a multicultural framework of normal patterns of acquisition and use.

Supplemental Writing Skills course. Offered fall and winter semesters.

Prerequisite: WRT 150. Credits: 3

#### **SLP 309 - Basic Audiology**

A course on advanced anatomy and physiology of the auditory system, audiometric procedures and assessment, and overview of auditory disorders. Offered every semester. Credits: 3

#### **SLP 401 - Neurological Foundations of Communication Disorders**

This course covers the neurological foundations of speech-language pathology including the underlying neuroscience of communication and related neurogenic communication disorders including aphasia, motor speech disorders (e.g. dysarthria), traumatic brain injury, right hemisphere disorders, cognitive communication disorders (e.g. dementia), and dysphagia. Offered winter semester. Credits: 3

#### **SLP 402 - Voice and Fluency**

This course will focus on the theories, characteristics, etiologies, and clinical management of voice and fluency. Physical, cognitive, and affective attributes of fluency/voice disorders will be presented. Offered fall and winter semesters. Credits: 3

#### **SLP 403 - Diagnostics in Communication Disorders**

The procedures for the evaluation (differential diagnosis) of communication disorders in children and adults with emphasis on the case history and diagnostic interviews. The use of diagnostic instruments, informal and standardized, will be addressed. Multicultural and ethical considerations will be highlighted. Offered winter and spring/summer semesters. Credits: 3

#### **SLP 404 - Aural Rehabilitation**

Introduction to aural rehabilitation across age groups, including auditory perception, speech perception, auditory training, speech reading, and psychosocial and educational issues. The nature and accessibility of personal and educational amplification systems and assistive listening devices are discussed. Offered winter and spring/summer semesters. Credits: 3

#### **SLP 405 - Clinical Methods**

Principles and techniques of case management, including designing individualized programs for persons with a variety of impairments. Emphasis on writing objectives, prioritizing goals, developing therapy strategies, analyzing behavior management strategies, assessing learning outcomes, and writing clinical reports. A clinical observation experience is integrated with classroom instruction. Offered winter and spring/summer semesters. Credits: 3

#### **SLP 480 - Special Topics in Speech Language Pathology**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 9

#### **SLP 510 - Applied Research in Speech-Language Pathology**

Study of research specific to speech-language pathology with emphasis on the evaluation and critical analyses of applied single subject design, case study, and other areas of clinical research. Independent thought and critical thinking skills will be addressed. Offered fall and winter semester. Prerequisite: Admission to the speech-language pathology program. Credits: 1

#### **SLP 560 - School Age and Adolescent Language Disorders**

This course examines the nature, assessment, and treatment of language disorders in children aged kindergarten through high school. Receptive and expressive language differences and disorders, including reading and writing disorders, will be studied in depth. Prerequisite: Admission to the speech-language pathology program. Credits: 3

#### **SLP 561 - Advanced Study of Phonological Disorders**

Advanced study of the nature, assessment, and treatment of speech disorders in children. Topics include normal aspects of articulation and phonological development, the causes for speech sound disorders, and phonological assessment practices and treatment strategies that are developmentally appropriate for children. Offered fall and winter semesters. Prerequisite: Admission to the speech-language pathology program. Credits: 3

#### **SLP 562 - Aphasia and Related Disorders**

Specific study of the nature, assessment, and treatment of acquired language disorders in adults, including aphasia, alexia, agraphia, and other related disorders. Offered fall and winter semesters. Prerequisite: Admission to the speech-language pathology program. Credits: 3

#### **SLP 570 - Infant, Toddler, Preschool Language Disorders**

This course focuses on the nature, assessment, and treatment of language disorders in infants and children from birth through five years of age. Students will learn evaluation techniques and treatment strategies for improving the receptive and expressive language abilities for infants, toddlers, and preschool-aged children. Offered winter and spring/summer semesters. Prerequisite: Successful completion of all previously required courses in the SLP curricular sequence. Credits: 3

#### **SLP 571 - Voice Disorders and Laryngectomy**

This course is a theoretical and applied study of the diagnosis and treatment of voice disorders including laryngectomy. This course includes the functional and organic disorders of voice, diagnostic procedures including clinical evaluation and standardized assessments, interviewing and counseling principles, and voice therapy techniques for children and adults. Offered winter and spring/summer semesters. Prerequisite: Successful completion of all previously required courses in the SLP curricular sequence. Credits: 3

#### **SLP 572 - Dysphagia**

Advanced study of the prevention, etiology, diagnosis, and treatment of swallowing disorders in adults and children. Offered winter and spring/summer semesters. Prerequisite: Successful completion of all previously required courses in the SLP curricular sequence. Credits: 3

#### **SLP 573 - Fluency Disorders**

Study of the etiology, diagnosis, treatment, and prevention of fluency disorders in adults and children. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the SLP curricular sequence. Credits: 3

#### **SLP 580 - Special Topics in Speech Language Pathology**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 1 to 9

#### **SLP 581 - Cognitive Communication Disorders**

Study of the etiology and neuropathology of different communication disorders following dementia and other cognitive disorders and corresponding diagnostic and management options. Offered fall and spring/summer semesters. Prerequisite: Successful completion of all previously required courses in the SLP curricular sequence. Credits: 3

#### **SLP 582 - Motor Speech and Craniofacial Disorders**

Study of the etiology and neuropathology of different dysarthric syndromes and corresponding diagnostic and management options. Students will also learn about the development, characteristics, evaluation, and treatment of children with cleft lip and/or palate and other craniofacial syndromes that affect speech, language, hearing, and swallowing. Offered fall and spring/summer semesters. Prerequisite: Successful completion of all previously required courses in the SLP curricular sequence. Credits: 3

#### **SLP 583 - Autism and Augmentative/Alternative Communication**

Study of the communication abilities, differences, and disorders associated with autism spectrum disorders. Students will also learn about augmentative and alternative communication strategies and devices. Offered fall and spring/summer semesters. Prerequisite: Successful completion of all previously required courses in the SLP curricular sequence. Credits: 3

#### **SLP 670 - Professional Seminar in Speech-Language Pathology**

This course addresses selected topics, issues, and other content designed to prepare students for clinical practice in speech-language pathology. Content is treated on an expert level with emphasis upon problem solving and integration of information across didactic and practical knowledge toward clinical skill development. Offered every semester. Prerequisite: Admission to the speech-language pathology program. Students enroll in this course each semester of their academic program for which they are

## Course Listings and Descriptions

on campus. Continuing students must show successful completion of all previously required courses in the SLP curricular sequence. Credits: 1

### **SLP 681 - Clinical Practicum in Speech-Language Pathology I**

This is the first supervised speech-language pathology practicum. The three-course practical experience is designed to provide opportunities for students to develop and hone their clinical skills as they progress from less complex cases under close supervision to more complex cases and greater autonomy. Offered fall and winter semesters. Prerequisite: Admission to the speech-language pathology program. Credits: 3

### **SLP 682 - Clinical Practicum in Speech-Language Pathology II**

This is the second supervised speech-language pathology practicum. The three-course practical experience is designed to provide opportunities for students to develop and hone their clinical skills as they progress from less complex cases under close supervision to more complex cases and greater autonomy. Offered winter and spring/summer semesters. Prerequisite: SLP 681. Credits: 3

### **SLP 683 - Clinical Practicum in Speech-Language Pathology III**

This is the third supervised speech-language pathology practicum. The three-course practical experience is designed to provide opportunities for students to develop and hone their clinical skills as they progress from less complex cases under close supervision to more complex cases and greater autonomy. Offered fall and spring/summer semesters. Prerequisite: SLP 682. Credits: 3

### **SLP 684 - Clinical Internship in Speech-Language Pathology**

This is the final supervised speech-language pathology practicum. Professionals will supervise and teach students in speech-language clinical practice. Students will continue to gain experience and refine their clinical skills in various aspects of the practice of speech-language pathology. Credits: 12

### **SLP 695 - Master's Thesis in Speech-Language Pathology**

Designed to allow graduate students to pursue research in the areas of speech, language, and hearing under appropriate faculty supervision, culminating in the defense of a written thesis. Students choose the thesis option in lieu of the written comprehensive examination. Students should talk with their adviser prior to enrolling. Offered every semester. Prerequisites: Successful completion of all previously required courses in the SLP curricular sequence and completion of the Responsible Conduct of Research Training within last three years. Credits: 1 to 6

### **SLP 696 - Continuation of Master's Project or Thesis Research**

Continuation of work related to the master's project or thesis phase of the graduate student's program. Registration is required after all respective project or thesis credits are completed and the project or thesis is not completed. Work will be performed under the supervision of the project advisor or thesis committee chair. Offered every semester. Prerequisites: Completion of all required project or thesis credits and completion of the Responsible Conduct of Research Training within last three years. Credits: 1

### **SLP 699 - Independent Study in Speech-Language Pathology**

This course provides opportunities for in-depth study in an area of special interest as directed by a faculty member. Offered every semester. Prerequisite: Admission to the speech-language pathology program. Requires department chair and faculty supervisor approval. Credits: 1 to 3

### **SOC 101 - Introduction to Sociology**

Introduction to the fundamental questions, concepts, theories, and general principles of sociological thought. Inquiries into culture, socialization, norms, power relations, social institutions, and group interaction. Illustrates how human action transforms society, and how social and cultural forces constrain human action. Fulfills one of the Foundations - Social and Behavioral Sciences. Offered every semester. Credits: 3

### **SOC 105 - Social Problems**

Examines a range of social conditions, arrangements, and behaviors typically defined as problems in modern society. Applies sociological analysis to understand how problems arise from the organization of

society, and the processes by which conditions become identified as social problems, and how ideology and power shape responses to social problems. Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills Cultures - U.S. Diversity. Offered every semester. Credits: 3

### **SOC 180 - Special Topics in Sociology**

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 3

### **SOC 204 - Introduction to Social Theory**

Builds the intellectual sophistication necessary to understand and work with theoretical concepts. Teaches imaginative assessment and creative construction of theoretical dialogues from classical theory, race and ethnicity, sex, gender and sexuality, recent developments in theory, and other areas, with application to real-life social events. Emphasis on reading primary texts. Course offered fall and winter semesters. Credits: 3

### **SOC 250 - Perspectives on Madness**

Focus is on the social construction of madness. Compares the different ways madness has been defined and treated throughout history and in different cultures. Relationship between those labeled mad, those who label, and the sociocultural context will be examined. Offered fall semester. Credits: 3

### **SOC 251 - Criminology**

An analysis of crime, criminal behavior, and punishment through a variety of historical and contemporary theoretical perspectives. Offered on sufficient demand. Credits: 3

### **SOC 252 - Sociology of Drug Use and Abuse**

Covers the etiologies and use and abuse of alcohol, tobacco, and other drugs (ATOD) in the U.S. Also studies past and present patterns of ATOD, their causes, social and legal aspects, treatment, and the political economy of drug trafficking. Offered every semester. Credits: 3

### **SOC 285 - Families in Society**

An examination of the basic concepts of culture and their application, first to the American family and then to the family in other cultures. Fulfills Cultures - U.S. Diversity. Offered every semester. Credits: 3

### **SOC 286 - Sociology of Health Care**

An analysis of the social facets of health and disease, the social functions of health organizations, the relationship of health care delivery to other social systems, the social behavior of health care providers and consumers, and international patterns of health services. Race, class, and gender issues are examined. Offered fall and winter semesters. Credits: 3

### **SOC 287 - Sociology of Religion**

Critically analyzes religion as an institutional structure and belief system and explores the relationship of religion to social change and organization. Emphasis on religion in the contemporary United States, both the uniquely American aspects of religion and in comparison to the broader diversity of religious expression globally. Fulfills one of the Foundations - Social and Behavioral Sciences. Fulfills Cultures - U.S. Diversity. Offered fall semester. Credits: 3

### **SOC 288 - Sociology of Food**

Considers the way in which values and ideas are socially constructed, with specific focus on the relationship between food and society. A comparative, cross-cultural analysis that examines food production, distribution, preparation, and consumption. Includes nutrition, social eating disorders, religious prescriptions and proscriptions, food and poverty, fast food, and world hunger. Offered on sufficient demand. Credits: 3

### **SOC 289 - Sociology of Art**

Explores the ways that public debates over art, aesthetics, and taste mask fundamental conflicts of culture, class, race, ethnicity, and gender. Examines controversies over the public funding of historical and contemporary cultural projects as well as the fluid boundaries between the taste for high and popular culture. Offered fall semester. Credits: 3

**SOC 290 - Sociology of Education**

An investigation into aspects of formal education (institution and system) employing a sociological framework. A predominantly macro-level approach is used to explore theory, research, and topics related to education, leading to a better understanding of the role of education, its processes, and how it impacts members of society. Offered winter semester. Credits: 3

**SOC 304 - Quantitative Methods in Sociology**

Examination of the basic methods of quantitative empirical research in sociology. Focus on collection, analysis, and interpretation of data. Offered fall and winter semesters. Prerequisites: STA 215, SOC 101 or SOC 105, and three additional credits in sociology. Credits: 3

**SOC 305 - Qualitative Methods in Sociology**

Examination of the basic methods of qualitative empirical research in sociology. Focus on collection, analysis, and interpretation of data. Offered fall and winter semesters. Prerequisites: STA 215, SOC 101 or SOC 105, and three additional credits in sociology. Credits: 3

**SOC 313 - Race and Ethnicity**

Analysis of cultural, historical, and social construction of race and ethnicity in the U.S. and cross-culturally. Assesses theories of prejudice, discrimination, and racism. Grounds the examination of the interplay of group privilege and disadvantage within the context of contemporary issues related to race and ethnicity. Fulfills Cultures - U.S. Diversity. Part of the Human Rights Issue. Offered every semester. Prerequisite: Junior standing. Credits: 3

**SOC 315 - Social Class Inequality**

Focus on the historical, socioeconomic, and political construction of class inequality in the United States from a critical perspective. Includes attention to cultural and global context. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

**SOC 317 - Sociology of Gender**

Explores gender as a socially constructed system of stratification. Topics may include how ideas about gender shape childhood, families, education, work, violence, science, and social inequality. Examines how gender intersects with other socially constructed systems of stratification, including race, sexuality, class, age, and ability. Fulfills Cultures - U.S. Diversity. Part of the Identity Issue. Cross-listed with WGS 317. Offered fall semester. Prerequisite: Junior standing. Credits: 3

**SOC 318 - Sociology of Sexuality**

Explores sexuality as a socially constructed system of stratification. Topics may include the production of sexual identities and desires, and how ideas about sexuality shape the media, violence, social movements, and work. Examines how sexuality intersects with other socially constructed systems of stratification, including race, gender, class, age, and ability. Fulfills Cultures - U.S. Diversity. Part of the Identity Issue. Cross-listed with WGS 318. Offered winter semester. Prerequisite: Junior standing. Credits: 3

**SOC 319 - Classic Social Theory**

A critical survey of social theorists who shaped early sociology and remain relevant today. Covers theory from the early modern period to World War II. Offered fall semester. Prerequisites: SOC 204 and six additional hours in sociology. Credits: 3

**SOC 321 - Contemporary Sociological Theory**

A critical survey of social theorists who extended and sometimes challenged the sociological perspective. Emphasizes the development and application of theory in relationship to contemporary issues. Covers theorists from post World War II to the present. Offered winter semester. Prerequisites: SOC 204 and six additional credits in sociology. Credits: 3

**SOC 322 - Sociology of Community**

Examines sociology's community studies tradition and concerns with the modern fate of close-knit, cohesive communities. Readings focus on the field's intellectual origins, contrasts between small towns and cities, major theories, research methods, and contemporary communities. Fulfills Cultures - U.S. Diversity. Part of the Identity Issue. Offered winter semester. Prerequisites: SOC 101 and junior standing. Credits: 3

**SOC 333 - Sociology of the Civil Rights Movement**

This course applies multiple sociological models of social movements to the American Civil Rights Movement from 1940-1970s. Offered fall semester. Credits: 3

**SOC 345 - Cultural Sociology**

Examines the symbolic processes in the production and circulation of meanings within society and the sociocultural context in the construction and interpretation of social behavior, social identity, and location. Offered odd-numbered years. Prerequisite: SOC 101 or ANT 204, or permission from the instructor. Credits: 3

**SOC 350 - Family and Gender in the Developing World**

A comparative examination of the impact of development on families and gender roles in third world countries. Will include consideration of general issues (e.g., factors affecting family reproduction decisions, women in the formal and informal labor force, etc.) and in-depth study of gender and family in one or more countries. Fulfills Cultures - World Perspectives. Part of the Identity Issue. Cross-listed with WGS 350. Offered fall and winter semesters. Prerequisites: WRT 150 with a grade of C (not C-) or better and junior standing. Credits: 3

**SOC 351 - Urban Sociology**

Explores urban theory (Chicago School, political economy, and cultural approaches); the evolution of cities; suburbanization, race relations, street life, sustainability (economic, social and environmental), redevelopment, urban politics, and international comparisons. Readings focus on theory, specific cities, and environmental concerns. Part of the Sustainability Issue. Offered fall semester. Prerequisites: SOC 101 and junior standing. Credits: 3

**SOC 355 - Sociology of Work and Employment**

Provides an understanding of the current labor market through an examination of the changing dynamics of work, occupational structure, and labor relations in the U.S. and globally. Analyzes the impact of globalization on workers, and the efforts of workers' movements to respond to new economic challenges. Part of the Globalization Issue. Prerequisite: Junior standing. Credits: 3

**SOC 360 - Social Psychology: Sociology's View**

Studies how individual's perceptions, belief systems, moralities, identities, and behaviors are influenced by their place in society relevant to institutions and structural context. Also studies how individuals, as actors, influence our social world. Offered every semester. SOC 360 is not equivalent to PSY 360, students may receive credit for both courses. Prerequisite: SOC 101. Credits: 3

**SOC 366 - American Society and Media**

Interdisciplinary approach to the ways in which mediated mass culture produces meaning in contemporary American society as examined through a variety of critical lenses such as political economy and sociocultural analyses of the organization of the mass media, media content, and audience reception studies of film, television, and/or music cultures. Part of the Information, Innovation, and Technology Issue. Cross-listed with LIB 366. Offered every year. Prerequisite: Junior standing. Credits: 3

**SOC 377 - Globalization: Structures and Movements**

Examines and critiques the historical origins, economic and technological foundations, institutional arrangements, ideological underpinnings, collective movements, and controversial outcomes of 'transnationalism' and 'globalization.' Sociological analysis emphasizes macrolevel institutions that shape globalization, social conflicts arising from its effects, and the consequences of global change on individuals, groups, and organizations. Offered winter semester. Prerequisite: One of SOC 101, SOC 105, or SOC 280. Credits: 3

**SOC 379 - Sociology of Love**

An investigation of love from a sociological perspective, including the following: the social construction of love, love and intimacy in relation to the social construction of gender and sexualities, and cross-cultural comparisons. Offered fall semester. Prerequisite: Junior standing. Credits: 3

## Course Listings and Descriptions

### **SOC 380 - Special Topics in Sociology**

A seminar for the study of important topics not ordinarily covered in other courses. This course may be taken more than once when the topic is different. Offered on sufficient demand. Credits: 1 to 3

### **SOC 381 - Class, Race, Gender, and Sexuality**

Focus is on the social, historical, and cultural meanings of class, race, and gender. Gives students a better understanding of the interrelationship of class, race, and gender within the context of family life, schooling, and work. Fulfills Cultures - U.S. Diversity. Offered fall and winter semesters. Prerequisite: SOC 101 or SOC 280. Credits: 3

### **SOC 386 - Death and Dying**

Considers the way in which ideas and values are socially constructed and contextually grounded. Specific focus on the historical, socioeconomic, psychological, and political construction of death and dying in the United States. A comparative aspect is also provided. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### **SOC 387 - Sociology of Childhood**

Explores sociological issues, theory and research on the social and cultural worlds of children. Focuses on the institution of childhood and the study of children as social actors. Main attention devoted to the social lives of children and their families. Offered fall and winter semesters. Prerequisite: SOC 101. Credits: 3

### **SOC 388 - Middle Age and Aging**

Examines the social context of mid-life aging in contemporary society in areas such as work, family, health, and politics. Applies social theories and primarily historical analysis of the socio-political issues and myths regarding aging in a rapidly aging society and social world. Offered fall semester. Credits: 3

### **SOC 389 - Child Maltreatment**

An examination of the individual, familial, community, and sociocultural causes of child maltreatment in this country. Focus is on the analysis and integration of theory, research, and practice. Offered fall and winter semesters. Credits: 3

### **SOC 390 - Advanced Seminar on Social Issues**

An in-depth analysis of a specific social issue, problem, or sociological area. Seminar in format, the course is intended to give majors an opportunity to continue to pursue some topic of interest in depth. Topics vary. Students may take more than once if topic is different. Offered on sufficient demand. Credits: 3

### **SOC 392 - Social Deviance and Social Control**

An analysis of deviant behavior: its causes, manifestations, prevention, and programs of control. Special attention is given to the role of social norms in generating as well as controlling deviance. Emphasis is put on ways in which social structures generate and label deviants. Offered fall semester. Credits: 3

### **SOC 399 - Independent Readings**

Independent supervised readings in selected topics. A student may take only one reading course for one to three credits per term. No more than six hours of SOC 399 and SOC 499 combined may count toward a major or three hours of SOC 399 and SOC 499 combined toward the minor. Offered every semester. Prerequisites: SOC 101 and consent of the instructor before registration. Credits: 1 to 3

### **SOC 490 - Practicum: Career-Service**

Agency experience in the community relating practical training and independent study in a specialized area. Limited to nine credits maximum. Offered every semester. Prerequisites: 15 hours of course preparation and permission of instructor. Graded credit/no credit. Credits: 1 to 9

### **SOC 495 - Senior Seminar in Sociology (Capstone)**

Critiques contemporary debates in sociology. Through active reading, discussion and production of a milestone statement, students will reflect on the meaning and application of the sociological imagination, which may include a research project or critical thinking project. Offered fall and winter semesters. Prerequisites: Senior standing, SOC 304 or SOC 305, SOC 319 or SOC 321, and prior approval. Credits: 3

### **SOC 499 - Independent Study and Research**

Research conducted individually with faculty supervision. Attention given to written and oral presentation of research findings. A student may take only one independent study course for one to four credits per term. No more than six hours of SOC 399 and SOC 499 combined may count toward a major or three hours of SOC 399 and SOC 499 combined toward the minor. Offered every semester. Prerequisites: Nine hours in major and prior approval. Graded credit/no credit. Credits: 1 to 3

### **SPA 101 - Beginning Spanish I: Language and Culture**

An introduction to the Spanish language and to the cultures of the Spanish-speaking world. Practice in speaking, listening, reading and writing for students at the novice level. Supplemented by multimedia and the Language Resource Center. Intended for students with no previous study of Spanish. Offered fall and winter semesters. Credits: 4

### **SPA 102 - Beginning Spanish II: Language and Culture**

Continuation of SPA 101. Continued development of speaking, listening, reading and writing for students at the novice level. Cultures of the Spanish-speaking world integrated throughout. Supplemented by multimedia and the Language Resource Center. Students may not receive credit for both SPA 102 and SPA 150. Offered fall and winter semesters. Prerequisite: C (not C-) or better, or Credit, in SPA 101, or appropriate placement test score. Credits: 4

### **SPA 150 - Accelerated Beginning Spanish: Language and Culture**

One semester accelerated review of beginning Spanish for students with prior study. Covers the same material as SPA 101-102. Development of speaking, listening, reading, writing and cultural competencies. Supplemented by multimedia and the Language Resource Center. Students cannot receive credit for both SPA 102 and SPA 150. Prerequisite: Prior study of Spanish. Credits: 4

### **SPA 180 - Special Topics in Spanish**

Course content varies. Expectations of students approximate those in other 100-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

### **SPA 201 - Intermediate Spanish I: Language and Culture**

Continued development of speaking, listening, reading and writing for students at the Intermediate level. Cultures of the Spanish-speaking world integrated throughout. Supplemented by multimedia and the Language Resource Center. Offered fall and winter semesters. Prerequisite: C (not C-) or better, or Credit, in SPA 102 or 150, or appropriate placement test score. Credits: 4

### **SPA 202 - Intermediate Spanish II: Language and Culture**

Continued development of speaking, listening, reading and writing for students at the Intermediate level. Review of grammar and expansion of vocabulary. Focus on cultures of the Spanish-speaking world through authentic texts. Supplemented by multimedia and the Language Resource Center. Fulfills Cultures - World Perspectives. Offered fall and winter semesters. Prerequisite: C (not C-) or better, or Credit, in SPA 201, or appropriate placement test score. Credits: 4

### **SPA 203 - Spanish for Heritage Speakers**

An intermediate Spanish course for students who grew up listening to and/or speaking Spanish. Focus on developing all four language skills, with special emphasis on the needs of heritage learners. Offered fall semester. Prerequisite: Permission of instructor. Credits: 4

### **SPA 204 - Supplemental Spanish Grammar**

An intermediate-level review of Spanish grammar designed for students who have weak language skills. This course provides a rigorous grammar review of the entire verb system (tense, mood, voice, and aspect), clause structure, and the pronominal system. Offered winter semester. Prerequisite: SPA 202. Credits: 4

### **SPA 280 - Special Topics in Spanish**

Course content varies. Expectations of students approximate those in other 200-level courses. May be repeated for credit when content differs. Offered on sufficient demand. Credits: 1 to 4

**SPA 285 - Intermediate Spanish in Mexico**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 4

**SPA 286 - Mexican Culture**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 2

**SPA 300 - Reading and Telling Stories**

This course introduces some of the most important short story writers from Spain and Latin America of the late nineteenth and twentieth centuries. It is designed to aid students to develop reading strategies, as well as to become more skilled storytellers. Offered fall and winter semesters. Prerequisite: C (not C-) or better in SPA 202, or credit, or appropriate placement test score. Credits: 3

**SPA 303 - Professional Writing**

Builds practical writing skills in written Spanish to enable students to produce documents pertinent to their future professional careers. Designed for the Spanish minor, with an emphasis on linguistic and cultural registers of written Spanish and on specialized vocabulary. Contains a service-learning component. Offered fall semester. Prerequisite: SPA 322 with a grade of C (not C-) or better. Credits: 3

**SPA 304 - Spanish for Health Professionals**

A third-year Spanish course designed to prepare students in the health professions to successfully communicate with Spanish-speaking clientele. Offered winter semester. Prerequisite: SPA 202 with a grade of C (not C-) or better. Credits: 3

**SPA 305 - Spanish for Law Enforcement**

This course is designed to teach the specialized vocabulary and terminology necessary for law enforcement professionals to communicate in Spanish. A review of relevant grammatical structures will also be presented. In addition, cross-cultural differences, cultural sensitivity, and language variation as they relate to issues of law enforcement will be central themes of this course. Offered fall semester. Prerequisite: SPA 202 with a grade of C (not C-) or better. Credits: 3

**SPA 306 - Spanish for Business**

The purpose of this class is to introduce students to the Spanish business terminology and to teach the fundamentals of practical commercial correspondence (oral and written) in advertising, insurance, transportation, banking, and foreign trade. Special attention will be paid to cross-cultural differences and similarities in specific countries. Offered winter semester. Prerequisite: SPA 202 with a grade of C (not C-) or better. Credits: 3

**SPA 307 - Death and Dying in Hispanic Literature**

Examines the literary representations of and responses to death and dying within the historical and cultural context of Spain and Latin America through the reading and discussion of representative poetic, dramatic, and narrative works. Course does not count toward the major or minor when taught in English. Does not count toward Spanish major or minor. Offered winter semester. Credits: 3

**SPA 308 - Spanish Phonetics**

Introduction to the sound system of Spanish. Phonetic transcription of texts in Spanish. Offered fall and winter semesters. Prerequisite: SPA 202 with a grade of C (not C-) or better. Credits: 3

**SPA 309 - Advanced Spanish Grammar**

A study of the syntax and morphology of Spanish designed to give students a deeper understanding of the language and to increase their accuracy and range in the use of it. Offered fall and winter semesters. Prerequisite: SPA 322 with a grade of C (not C-) or better. Credits: 3

**SPA 310 - Spanish Civilization and Culture**

An introduction to the political, social, economic, and cultural history of Spain. Offered fall and winter semesters. Prerequisite: SPA 322 with a grade of C (not C-) or better. Credits: 3

**SPA 311 - Latin American Civilization and Culture I**

An introduction to the political, social, economic, and cultural history of Latin America up to the 1800s. Offered fall semester. Prerequisite: SPA 322 with a grade of C (not C-) or better. Credits: 3

**SPA 312 - Latin American Civilization and Culture II**

Designed to provide students with the knowledge of major historical, literary, and cultural moments in Latin America from Independence to the present day. Offered winter semester. Prerequisite: SPA 322 with a grade of C (not C-) or better. Credits: 3

**SPA 313 - U.S. Latino/a Civilization and Culture**

An introduction to the political, social, economic, and cultural history of Latinos/as in the United States that leads to an appreciation and awareness of the cultural roots and current lifestyles of these groups. Fulfills Cultures - U.S. Diversity. Offered fall and winter semesters. Prerequisite: SPA 322 with a grade of C (not C-) or better. Credits: 3

**SPA 314 - Teaching Methods**

This course provides future Spanish teachers with an introduction to the basic concepts of Spanish pedagogy with particular emphasis on the communicative approach. Students will learn to write lesson plans, design and teach communicative activities, and create appropriate evaluation materials such as exams and quizzes. Offered fall and winter semesters. Prerequisites: SPA 322 with a grade of C (not C-), and SPA 310 or SPA 311 or SPA 312 or SPA 313. Credits: 3

**SPA 315 - One-Act Hispanic Drama**

This introduction to the study of Spanish-American and Peninsular drama through one-act plays focuses on textual analysis as well as practicing Spanish oral and written skills via informal performances, creative writing, and analytical projects. The course is based primarily in discussion and active-learning activities. Offered fall semester of odd-numbered years. Prerequisite: SPA 202. Credits: 3

**SPA 320 - Composition and Conversation for Spanish Heritage Speakers**

This course focuses on developing the academic language skills of heritage learners of Spanish, defined as those who have acquired Spanish through cultural connections with family, community, or country of origin. SPA 320 is designed for heritage speakers who have intermediate-high or advanced proficiency. Course offered fall and winter semesters. Prerequisite: SPA 203 or permission of the instructor. Credits: 3

**SPA 321 - Composition and Conversation I**

First of a two-part sequence designed to improve proficiency in oral skills and academic writing in Spanish as well as listening and reading skills. Course will present a systematic review of grammar and promote the acquisition of new vocabulary in the context of Hispanic culture. Offered fall and winter semesters. Prerequisite: SPA 202 with a grade of C (not C-) or better, or credit, or appropriate placement test score. Credits: 3

**SPA 322 - Composition and Conversation II**

Second of a two-part sequence designed to improve proficiency in oral skills and academic writing in Spanish as well as listening and reading skills. Course will present a systematic review of grammar and promote the acquisition of new vocabulary in the context of Hispanic culture. Offered fall and winter semesters. Prerequisite: SPA 321 with a grade of C (not C-) or better. Credits: 3

**SPA 325 - Early Spanish Literature in Translation**

A survey of Spanish literature from its beginnings to 1800, including Don Quixote and other works of the Golden Age. Offered on sufficient demand. Credits: 3

**SPA 327 - The History of the Spanish Language**

An introduction to the phonological, morphological, and syntactic evolutions and changes that took place as Spanish developed from spoken Latin. Offered winter semester of odd-numbered years. Prerequisites: SPA 308 and SPA 309 with a grade of C (not C-) or better. Credits: 3

**SPA 329 - Sociolinguistics of Spanish**

An introduction to the relationship between Spanish language and society, including the evolution of Spanish in Spain and Latin America,

## Course Listings and Descriptions

dialectal variation, Spanish in contact with other languages, and Spanish as a component of individual and group identity. Offered fall semester. Prerequisite: SPA 322 with a grade of C (not C-) or better, or permission of instructor. Credits: 3

### **SPA 330 - Introduction to Literary Analysis**

Introduction to the literary analysis of the narrative, poetry, and drama of Spain and Spanish America. Offered fall and winter semesters. Prerequisites: SPA 322 plus three credits at the 300 level with a grade of C (not C-) or better. Credits: 3

### **SPA 331 - Survey of Spanish Literature**

A historically grounded survey of the principle literary works and movements of Spain. Offered fall and winter semesters. Prerequisites: SPA 322 plus three credits at the 300 level with a grade of C (not C-) or better. May be taken concurrently with SPA 330. Credits: 3

### **SPA 332 - Survey of Spanish American Literature**

A historically grounded survey of the principle literary works and movements of Spanish America. Offered fall and winter semesters. Prerequisites: SPA 322 plus three credits at the 300 level with a grade of C (not C-) or better. May be taken concurrently with SPA 330. Credits: 3

### **SPA 335 - Introduction to Spanish Linguistics**

A general introduction to modern linguistic concepts, applied especially to the Spanish language. Includes the sound system (phonetics and phonology), word formation (morphology), the structure of utterances (syntax), meaning and usage (semantics and pragmatics), and language variation. Offered fall and winter semesters. Prerequisite: SPA 309 with a grade of C (not C-) or better or permission of instructor. Credits: 3

### **SPA 350 - Spanish Laboratory Theatre**

Consists of rehearsal and public performance of a full-length play or a group of one-act plays. Plays selected from contemporary peninsular and Spanish-American authors. Offered winter semester of even-numbered years. Prerequisite: SPA 202 with a grade of C (not C-) or better. Credits: 3

### **SPA 360 - Perspectives on Hispanic Culture and Society**

A multidisciplinary study of Spanish-American and peninsular culture and society, as represented in architecture, food, music, sports, the visual arts and other cultural expressions. Special emphasis is placed on the historical and sociopolitical contexts of the examined material. Course offered fall and winter semesters. Prerequisite: SPA 321 with a C or better. Credits: 3

### **SPA 378 - Contemporary Latin American Literature**

A survey of Spanish literature of the past three decades in English translations, taking in a variety of nations, regions, and cultures, including Afro-Latin and indigenous voices. Genres to be studied include the novel, the short story, poetry, drama, testimonial narrative, speeches, folklore, and film. Cross-listed with ENG 378 and LAS 378. Offered winter semester of even-numbered years. Prerequisites: WRT 150 and one literature course (SPA 330 for Spanish majors). Credits: 3

### **SPA 380 - Special Topics in Spanish**

Offered on sufficient demand. Credits: 1 to 6

### **SPA 385 - Advanced Spanish in Mexico**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 4

### **SPA 386 - Mexican Culture**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 2

### **SPA 387 - EUSA Madrid-Language**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits: 3

### **SPA 388 - EUSA Madrid-Internship**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credits: 3 to 6

### **SPA 395 - Advanced Speaking Strategies and Skills**

Development and assessment of speaking skills in Spanish at the Advanced level as defined by the American Council on the Teaching of Foreign Languages (ACTFL). Course offered fall and winter semesters. Prerequisite: SPA 314. Credits: 3

### **SPA 399 - Independent Reading**

Offered fall and winter semesters. Credits: 1 to 4

### **SPA 410 - Spanish American Narrative**

Study of some of the major prose writers of the 20<sup>th</sup> century. Offered fall semester. Prerequisites: SPA 330 and SPA 332 with a grade of C (not C-) or better, or permission of instructor. Credits: 3

### **SPA 420 - Topics in Early Spanish Literature**

Study of Spanish literature before 1700, centered on a thematic or genetic framework relevant to the cultural climate of early Spain. Topics may include The Evolution of Early Spanish Literature, Love and Honor in Golden Age Drama, Imaginative Fiction before Cervantes, or The Language of Desire in Early Prose and Poetry. Offered winter semester of odd-numbered years. Prerequisites: SPA 330 and SPA 331 with a grade of C (not C-) or better. Credits: 3

### **SPA 430 - U.S. Latino/a Literature**

An in-depth study of Latino/a literature produced in the United States. Texts will be closely examined from a cultural and historical perspective as well as within the history of narrative forms in order to facilitate an appreciation and awareness of the cultural roots and current lifestyle of Latinos/as in the United States. Offered winter of even-numbered years. Prerequisites: SPA 330 and SPA 332 with a grade of C (not C-) or better. Credits: 3

### **SPA 440 - Cervantes**

Survey of Cervantes' masterwork, Don Quixote de la Mancha. Offered winter semester of even-numbered years. Prerequisites: SPA 330 and SPA 331 with a grade of C (not C-) or better. Credits: 3

### **SPA 450 - Modern Spanish Novel**

Study of the novel in 19<sup>th</sup> and 20<sup>th</sup> century Spain. Special emphasis on the realists and the generation of 1898. Offered fall semester of odd-numbered years. Prerequisites: SPA 330 and SPA 331 with a grade of C (not C-) or better. Credits: 3

### **SPA 460 - Women Authors**

An in-depth study of Spanish and Spanish American women authors whose literature, across the centuries, has dealt with a particular historical, cultural, social, and philosophical experience. Cross-listed with WGS 460. Offered fall semester of even-numbered years. Prerequisites: Completion of SPA 330, plus SPA 331 or SPA 332 with a grade of C (not C-) or better. Credits: 3

### **SPA 480 - Special Topics in Spanish**

Course content varies. Expectations of students approximate those in other 400-level courses. May be repeated for credit when content varies. Variable credit. Offered on sufficient demand. Credits: 1 to 6

### **SPA 495 - Cross-National Literary Movements (Capstone)**

Interdisciplinary exploration of a major literary period or genre such as romanticism, rationalism, or symbolism from a cross-national perspective. Offered fall and winter semesters. Prerequisites: Completion of three credits at 400 level (literature) with a C (not C-) or better and senior standing with a major in Spanish. Required of all Spanish majors. Credits: 3

### **SPA 499 - Independent Study and Research**

Offered fall and winter semesters. Credits: 1 to 4

### **SST 309 - Teaching Social Studies: Elementary**

Introduces students to strategies, methods, and issues that are related to teaching social studies content at the elementary level. Students will

study current state and national standards and design units and lessons to achieve appropriate objectives. Offered fall and winter semesters. Prerequisite: Junior standing or permission of instructor. Credits: 3

#### **SST 310 - Teaching Social Studies: Secondary**

Introduces students to strategies, methods, and issues that are related to teaching social studies content at the secondary level. Students will study current standards and design units and lessons to achieve appropriate objectives. Must be taken before student assisting. Offered every semester. Prerequisite: Junior standing or consent of the instructor. Credits: 3

#### **SST 310 - Data Literacy for Social Studies Teachers**

Introduces students to databases used in social studies disciplines. Students will investigate K-12 students' understanding of data; analyze, interpret, and organize data; create graphs, charts, and infographics; and use data to address social studies problems. Students will also develop project-based lessons aimed at building data literacy in K-12 education. Must be taken prior to teach assisting. Offered fall and winter semester. Prerequisite: MTH 110 or equivalent. Completion of SST 309/310 highly recommended. Credits: 3

#### **SST 495 - Education in Plural Societies (Capstone)**

Examines the models used to interpret and explain the role of social studies education in the United States and the world. Explores questions related to social studies as a transmitter of social/cultural values and how these values transform across disciplines and time, both in and out of the classroom. Offered every semester. Prerequisites: Senior standing in the major; one semester fieldwork in school (may be concurrent). Credits: 3

#### **STA 185 - Statistics Study Abroad**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

#### **STA 215 - Introductory Applied Statistics**

A technique-oriented approach to statistical problems with emphasis on applications. Descriptive statistics, probability distributions, estimation, testing hypotheses, t-test, regression and correlation, chi-square tests, one-way analysis of variance. A statistical software package will provide computational assistance. Fulfills Foundations - Mathematical Sciences. Offered every semester. Prerequisite: MTH 110 or equivalent. Credits: 3

#### **STA 216 - Intermediate Applied Statistics**

Project-oriented introduction to major statistical techniques using a statistical package such as SAS or SPSS. Hypothesis testing, {t-test}, multivariate regression, analysis of variance, analysis of covariance, chi-square tests, nonparametric statistics. Offered every semester. Prerequisite: STA 215 or STA 312. Credits: 3

#### **STA 220 - Statistical Modeling for Engineers**

This is a first course in statistics using modeling as the unifying framework upon which to build understanding of applied statistical analysis. Focus is on applications of statistical modeling with real and simulated data. Topics include descriptive statistics, probability, data management, statistical modeling, and inference. Open only for engineering students. Offered fall and winter semesters. Prerequisite: MTH 201. Corequisite: EGR 220. Credits: 2

#### **STA 285 - Statistics Study Abroad**

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

#### **STA 301 - Questionnaire Design and Execution**

An activity and project oriented overview of factors involved in the development of self-administered questionnaires. Topics include ethics and regulations related to research involving human subjects, item construction, response options/scaling, scale scoring, layout considerations, survey administration, reliability and validity, and subscale determination. Course offered winter semester. Prerequisite: STA 215 or STA 312. Credits: 3

#### **STA 310 - Introduction to Biostatistics**

An introduction to the statistical methods commonly encountered in medical, biological, and health science problems using a statistical package such as SAS or SPSS. Longitudinal data analysis, repeated measures ANOVA, Friedman test, categorical data analysis, odds ratios, sensitivity and specificity, McNemar's test, logistic regression, survival analysis, and reliability. Offered winter semester on sufficient demand. Prerequisite: STA 216. Credits: 3

#### **STA 311 - Introduction to Survey Sampling**

A project-oriented overview of topics related to survey sampling. Topics include sampling and nonsampling errors, questionnaire design, nonprobability and probability sampling, commonly used sampling methods (e.g., simple random, stratified, systematic, cluster), estimating population sizes, and random response models. SAS or a sampling package software will be used. Offered winter semester. Prerequisite: STA 216. Credits: 3

#### **STA 312 - Probability and Statistics**

Introduction to the basic concepts of probability and statistics using calculus; discrete and continuous probability distributions, sampling, estimation, confidence intervals, tests of hypotheses, regression and correlation, applications, and problem solving. Offered fall and winter semesters. Prerequisite: MTH 201. Credits: 3

#### **STA 314 - Statistical Quality Methods**

Statistical techniques applicable to problems of product quality. Methods and philosophy of statistical process control such as reduction of random variability, control charts, and process capability studies. Modern methods for quality control and improvement, including online and off-line procedures. Various management philosophies of quality improvement. Applications and projects. Offered on sufficient demand. Prerequisite: STA 215. Credits: 3

#### **STA 315 - Design of Experiments**

Application-oriented overview of designed experiments. Students will learn about planning and conducting experiments and about analyzing the resulting data using a major statistical package. Simple comparative experiments concerning means and variances, experiments with single or multiple factors, factorial designs, and response surface methodology. Offered fall semester. Prerequisite: STA 216 or STA 314. Credits: 3

#### **STA 317 - Nonparametric Statistical Analysis**

Applied statistical analysis when the distributions of the populations are unknown. Students will learn how to test for location, test for distributions, compare populations, and calculate measures of association. A statistical software package will be used. Offered winter semester on sufficient demand. Prerequisite: STA 216. Credits: 3

#### **STA 318 - Statistical Computing**

A detailed study of the advanced features of major statistical packages used in statistical computing, such as SAS and SPSS. Emphasis on the data entry, data manipulation, data storage, data simulation, and graphical display features of these packages. Offered on sufficient demand. Prerequisite: STA 215. Credits: 3

#### **STA 321 - Applied Regression Analysis**

Multivariate regression analysis with emphasis on application using a statistical software package. Topics include method of least squares, residual analysis, collinearity, data transformation, polynomial regression, general linear model, selecting a best regression model, and logistic regression. Offered fall semester on sufficient demand. Prerequisite: STA 216. Credits: 3

#### **STA 340 - Statistics in the Media**

An examination of statistics reported in the media. Students will read news stories and published research to critically evaluate the conclusions made, recognizing when assertions are and are not supported by evidence. Common fallacies and misconceptions will be covered. Part of the Information, Innovation, and Technology Issue. Offered fall and winter semesters. Prerequisites: STA 215 and junior standing. Credits: 3

## Course Listings and Descriptions

### STA 341 - Demographic Methods

An application-oriented overview of procedures and techniques for the collection, evaluation and analysis of demographic data. Topics include sources of, and problems with, vital statistics data, data registries and surveys, measures of population growth, composition, fertility, mortality and migration. Part of the Globalization Issue. Course offered winter semester. Prerequisites: STA 215 or STA 312; junior standing. Credits: 3

### STA 345 - Statistics in Sports

An application-oriented overview of the statistical methodology that can be utilized to describe and evaluate the performance of individuals or teams participating in sports. Emphasis will be on data collection, descriptive statistics, and statistical inference and modeling utilized in sports. Offered fall and winter semesters. Prerequisite: STA 215 or STA 312. Credits: 3

### STA 380 - Special Topics in Statistics

Readings, lecture, discussions, or lab (or any combination) in specific statistics topics. Permission of the instructor required. Offered on sufficient demand. Prerequisites: Depend upon the topic selected. Credits: 1 to 3

### STA 385 - Statistics Study Abroad

Of varying focus, the course makes use of the history, culture, and society of a host country in order to highlight disciplinary perspectives in context. To be taught in that country (or countries) as part of an approved study abroad program. By permit only. Credit may vary. Credits: 1 to 6

### STA 412 - Mathematical Statistics I

A theoretical study of the following topics: sample space, conditional probability, independence, Bayes' Theorem, Bernoulli Trials, and discrete and continuous random variables and their distributions, Chebyshev's inequality, joint distribution, expectation, variance, and moment generating functions. Offered fall semester. Prerequisites: STA 215 or STA 312; and MTH 202. Credits: 4

### STA 415 - Mathematical Statistics II (Capstone)

A theoretical study of the following topics: the Law of Large Numbers, the Central Limit Theorem, the nature of statistical inference, tests of hypotheses, sampling theory, point and interval estimation, linear models, analysis of categorical data, and distribution-free methods. Offered winter semester. Prerequisites: STA 412 and MTH 227. Credits: 4

### STA 418 - Statistical Computing and Graphics with R

An introduction to statistical programming and graphics using the object-oriented statistical language R. Skills in writing R code to perform statistical analyses, graphics and simulations are developed. Emphasis will be on solving real problems with hands-on work including randomization statistics, time series, data mining and big data analysis. Cross-listed with STA 518. Course offered fall semester. Prerequisites: (STA 215 or STA 220 or STA 312) and (STA 216 or CIS 162 or CIS 261). Credits: 3

### STA 419 - Statistics Project

Students will learn a systematic approach to statistical consulting, how to communicate with nonmathematical audiences, and develop the ability to apply appropriate statistical techniques to research questions. Actual experience with current university and industry research projects and SAS/SPSS is given. Offered fall and winter semesters. Prerequisite: STA 216. Credits: 3

### STA 421 - Bayesian Data Analysis

An introduction to Bayesian data analysis utilizing the Gibbs Sampler and Metropolis-Hastings algorithm (Markov Chain Monte Carlo method). Estimating posterior distribution parameters, evaluating model effectiveness, hypothesis testing and bivariate regression modeling. Appropriate computer programs will be used for analysis of real data sets. Offered winter semester on sufficient demand. Prerequisites: STA 312 and MTH 202. Credits: 3

### STA 425 - Actuarial Probability and Statistics

An intensive exploration and practice of techniques and concepts similar to those expected to be found in problems related to actuarial science. Offered winter semester. Prerequisite: STA 412. Credits: 3

### STA 426 - Multivariate Data Analysis

Multivariate analysis with emphasis on application using a statistical package such as SAS or SPSS. Topics include principle components analysis, factor analysis, discriminant analysis, logistic regression, cluster analysis, multivariate analysis of variance, and canonical correlation analysis. Cross-listed with STA 526. Offered fall semester on sufficient demand. Prerequisite: STA 216. Credits: 3

### STA 430 - History of Statistics

An overview of the people, events, and ideas that shaped the development of modern statistics. Advancements in the 20th century are emphasized, as well as the mathematical geniuses that made it happen. Contributions of legendary figures such as Fisher, Pearson, Deming, Bayes, Cox, and Neyman are discussed. Offered winter semester of odd-numbered years. Prerequisites: Two statistics courses and junior standing. Credits: 1

### STA 490 - Statistics Internship

Internship in a statistical situation with individual faculty supervision to allow students to apply academic knowledge to actual and professional experiences. Offered fall and winter semesters. Prerequisites: Junior status and permission of the instructor. Graded credit/no credit. Credits: 1 to 3

### STA 499 - Independent Study and Research

Independent research in an area of interest to the students, supervised by a member of the statistics faculty. Hours, credits, topics, and time to be arranged by the student in conference with professor. Approval of the department required. Offered fall and winter semesters. Credits: 1 to 3

### STA 518 - Statistical Computing and Graphics with R

An introduction to statistical programming and graphics using the object-oriented statistical language R. Skills in writing R code to perform statistical analyses, graphics and simulations are developed. Emphasis will be on solving real problems with hands-on work including randomization statistics, time series, data mining and big data analysis. Cross-listed with STA 418. Course offered fall semester. Prerequisite: Admission to a graduate program in biostatistics, computer information systems, or medical and bioinformatics. Credits: 3

### STA 526 - Multivariate Data Analysis

Multivariate analysis with emphasis on application using a statistical package such as SAS or SPSS. Topics include principle components analysis, factor analysis, discriminant analysis, logistic regression, cluster analysis, multivariate analysis of variance, and canonical correlation analysis. Cross-listed with STA 426. Offered fall semester on sufficient demand. Credits: 3

### STA 580 - Special Topics in Statistics

Readings, lectures, discussions, or labs (or any combination of these) in special topics in statistics or biostatistics. Prerequisite: Depends on the topic. Credits: 1 to 4

### STA 610 - Applied Statistics for Health Professions

Project-oriented overview of major statistical techniques commonly used in problems encountered in health professions. Students will learn to use a major statistical computing package. Hypothesis testing, t-tests, regression, analysis of variance, analysis of covariance, categorical data analysis, nonparametric statistics. Offered fall, winter, and spring/summer semesters. Credits: 3

### STA 615 - Design of Experiments for Engineers

Application-oriented overview of designed experiments commonly encountered in engineering. Students will learn about planning and conducting experiments and about analyzing the resulting data using a major statistical package. Simple comparative experiments concerning means and variances, experiments with single or multiple factors, factorial designs, Taguchi designs, and response surface methodology. Offered fall semester on sufficient demand. Prerequisite: STA 513 or STA 312 or STA 314. Credits: 3

### STA 616 - Statistical Programming

Provides intensive instruction in the use of SAS to prepare data for statistical analysis. Topics include importing/exporting data in various formats; character and numeric manipulation; merging, setting and combining datasets; effective programming skills using arrays, loops and

macros; creating graphs; and producing reports. Offered winter semester. Prerequisite: STA 610. Credits: 3

#### **STA 620 - Applied Multivariate Methods for Health Care**

An applications-oriented overview of statistical methods commonly used in multivariate analyses of health care data. Students will develop skill in understanding published reports of multivariate analyses. Techniques include canonical correlation analysis, multivariate analysis of variance, covariance and repeated measures, principle components analysis, factor analysis, discriminant analysis, and cluster analysis. Offered fall semester. Prerequisite: STA 610 or STA 622. Credits: 3

#### **STA 621 - Design of Experiments and Regression**

Design and analysis of single- and multiple-factor experiments. Includes block designs, repeated measures, factorial and fractional factorial experiments, response surface experimentation. Techniques include simple and multiple linear regression, repeated measures, generalized linear models, correlation, and model building diagnosis. Applications in biological and biomedical problems. A computer package will be used. Offered fall semester. Prerequisite: STA 616. Credits: 4

#### **STA 622 - Statistical Methods for Biologists**

Design of experiments and application of statistical techniques commonly used by biologists. Emphasis on techniques for count data, correlation and regression, analysis of variance, multivariate analysis, and nonparametric methods using biological data. A computing package will be utilized throughout the course. Offered fall semester. Credits: 3

#### **STA 623 - Categorical Data Analysis**

Study of the methodology and application of statistical techniques for categorical data. Methods include binomial and multinomial models, Poisson and logistic regression and contingency tables. Additional topics which may be covered include repeated measures and random effect models. Model interpretation and the application of statistical software will be emphasized. Offered winter semester. Prerequisite: STA 616. Credits: 3

#### **STA 625 - Clinical Trials**

This course is designed for individuals with a quantitative background who are interested in the scientific, policy, design and management aspects of clinical trials. Topics include types of treatment allocation and randomization, patient recruitment and adherence, power and sample size, interacting with monitoring committees, administering multicenter trials, and study closeout. Offered winter semester. Prerequisites: STA 610 and one of the following: PSM 650, BIO 610, BMS 601, or NUR 690. Credits: 2

#### **STA 628 - Survival Analysis**

An applied introduction to analyzing time to event data with emphasis on data analysis and corresponding interpretations. Topics include survivor and hazard functions, censoring, Kaplan-Meier estimation, log-rank and related tests, Cox proportional hazards model, time-dependent covariates, and parametric models. SAS will be used. Offered winter semester of odd-numbered years. Prerequisite: STA 616 (prerequisite or corequisite). Credits: 3

#### **STA 630 - Perspectives in Advanced Biostatistics**

Reflecting on the knowledge and skills acquired throughout the biostatistics program and internship, this course examines the responsibilities of a professional biostatistician. This course will also examine current topics in biostatistics including survival analysis (including Kaplan-Meier estimation), sequential analysis of emerging data, bioequivalence, analysis of health surveys, and Bayesian methods. Offered winter semester. Prerequisite: STA 621. Credits: 3

#### **STA 631 - Statistical Modeling and Regression**

Traditional and modern computationally-intensive statistical modeling techniques. Basics of probability theory, including conditional probability, Bayes' Theorem, and univariate probability models. Regression modeling and prediction including simple linear, multiple, logistic, Poisson, nonlinear and nonparametric regression. Methods for model selection and shrinkage. Emphasis is on application and interpretation using statistical software. Offered fall semester. Prerequisite: Permission of instructor. Credits: 3

#### **STA 680 - Special Topics in Statistics**

Readings, lecture, discussions, or labs (or any combination of these) in special topics in statistics or biostatistics. Prerequisites: Depends on the topic. Credits: 1 to 4

#### **STA 699 - Independent Study**

Independent research in an area of statistics or biostatistics that is of interest to the student and the supervising faculty member. Readings and discussions may be appropriate. Hours, credits, meeting times, and the topic(s) in statistics or biostatistics are determined by the student and faculty mentor. Offered fall and winter semesters. Prerequisite: Departmental approval is required. Credits: 1 to 4

#### **SW 150 - Human Needs in Complex Societies**

Common human needs are examined and a number of historical responses to these needs are placed in a societal context. Cultural forces which affect resource allocation patterns and service delivery systems are analyzed. Fulfills one of the Foundations - Social and Behavioral Sciences. Offered fall, winter, and spring/summer semesters. Note: SW 150 is a prerequisite for all social work courses. Credits: 3

#### **SW 300 - Pluralism in American Society**

Pluralism in American society is explored through analysis of cross-cultural practices and values, with an emphasis on the commonalities and differences for individuals, groups, organizations, and communities. The social welfare response in the context of U.S. diversity will be a primary focus. Offered fall and winter semesters. Credits: 3

#### **SW 316 - Interviewing in Social Work**

Principles and techniques associated with the successful interview. Consideration is given to understanding the interviewee, oneself as the interviewer, and the implications of sociocultural backgrounds for the interview and its participants. Recording and reporting skills specifically related to social work practice are taught and case materials from different fields of practice are employed. Offered winter semester. Prerequisite: SW 317. Corequisites: SW 318 and SW 341. Credits: 3

#### **SW 317 - Generalist Practice I**

Provides students with knowledge, values, and skills for multilevel generalist practice. Prepares students for direct and indirect service delivery involving intervention model; micro, mezzo, and macro skills, planning; risk management and crisis intervention; termination, evaluation, and follow-up. Offered fall semester. Prerequisites: SW 150, SOC 101, PSY 101, PLS 102; and SOC 105 or SOC 280 or SOC 252; and ECO 210 or ECO 211 or SOC 315. Corequisites: SW 319, SW 340, SW 348. Credits: 3

#### **SW 318 - Generalist Practice II**

This course trains students in the skills of engagement, assessment and intervention with individuals, families and groups. Taught from a strengths-based perspective with respect for diversity, this course focuses on micro and mezzo theories relevant to practice. Three hours per week of volunteer service in an approved social agency required. Offered winter semester. Prerequisite: SW 317. Corequisites: SW 316 and SW 341. Credits: 3

#### **SW 319 - Social Welfare Policy and Services**

This course reviews social welfare policy and services including economic, traditional, political, and other socio-cultural influences. It introduces students to basic policy and services analysis, examines specific target populations, and teaches the skills necessary to translate policy into beginning level social work practice. Offered fall semester. Corequisites: SW 317, SW 340, and SW 348. Credits: 3

#### **SW 320 - Children and Child Welfare Services**

Synthesizes, deepens, and integrates generalist social work practice content with a focus on professional foundation knowledge, values, and skills as these apply to services for children. Reviews policies and programs that affect children and families and considers related multicultural issues. Offered fall semester. Prerequisites: SW 150 and SW 317; SW 318 and SW 341 (may be taken concurrently); or with permission. Credits: 3

## Course Listings and Descriptions

### **SW 322 - Responding to Illness**

This course investigates how the issue of health influences individuals, groups and communities in unique ways. The complexity of responses to a continuum of health and illness conditions is explored through student collaboration, problem solving opportunities and the integration of classroom experiences with exposure to health and illness issues. Part of the Health Issue. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

### **SW 333 - Community Work with the Lesbian, Gay, Bisexual and Transgender Community**

This course aims to prepare students for community work with lesbian, gay, bisexual, and transgender (LGBT) people by providing a deeper understanding of LGBT history identities, families, health and mental health challenges, and issues of political advocacy. The course will examine a variety of issues that affect LGBT people. Part of the Identity Issue. Course offered fall and winter semester. Prerequisite: Junior standing. Credits: 3

### **SW 340 - Human Behavior and the Social Environment I**

The course provides knowledge, values and skills employed in assessing groups, organizations, and communities. Emphasis is focused on the social systems perspective, social work values, and ethics and the issues related to the diversity of context. The course presents theories and knowledge necessary to practice in macrosettings (groups, organizations, communities and society). Offered fall semester. Corequisites: SW 317, SW 319, and SW 348. Credits: 3

### **SW 341 - Human Behavior and the Social Environment II**

This course provides biological, psychological and social knowledge about human growth and development within life cycle stages. Emphasis is on the development of an individual within a family or small group as experienced within larger social systems. The assessment process within each developmental stage is related to the work of a generalist practitioner. Offered winter semester. Prerequisite: SW 340. Corequisites: SW 316 and SW 318. Credits: 3

### **SW 348 - Professional Development in Social Work**

The course provides students with knowledge, values, and skills associated with professionalism and identifying with the social work profession. Emphasis is focused on self-awareness, personal reflection, attention to professional roles/boundaries, advocacy and ethics in social work. Offered fall semester. Corequisites: SW 317, SW 319, and SW 340. Credits: 3

### **SW 351 - Cross Cultural Service Learning**

The focus of this course is on the unique culture(s) within the United States and taught using a service-learning approach. Students explore the themes of social welfare development. Students explore the themes of social services, politics, policies, and the history of the assigned culture. The course includes a two or three-week experiential learning component in a specific location in the United States. The advanced practice social worker will recognize the interconnectedness between social work, social justice, and civic/global responsibility. Offered spring/summer semester. Prerequisite: Accepted into the B.S.W. program. Credits: 3

### **SW 354 - Social Work: International Service**

The focus of this course is on international social work policy and practice. Students interact with various communities using a service-learning approach. The students explore the themes of social services, politics, policies, and the history of the assigned culture. The course includes a two or three-week experiential learning component in an international location. The advanced practice social worker will recognize the interconnectedness between social work, social justice, and civic/global responsibility. Offered spring/summer semester. Prerequisite: Permission of instructor. Credits: 3 to 4

### **SW 380 - Special Topics in Social Work**

The study of issues and concerns important to the social work community not ordinarily covered in other courses. Offered in response to the special interests of faculty and student majors. Topics to be announced. Offered every other fall semester. Prerequisite: Permission of instructor. Credits: 1 to 4

### **SW 430 - Social Work Research**

This foundational course in social work research presents ethical considerations and basic principles and techniques of social science research in relation to generalist practice in social work settings. The organizing principle for the course is the research cycle, including problem identification, research design, research methods, analysis, and implications for practice. Offered fall semester. Prerequisite: STA 215. Credits: 4

### **SW 439 - The Family and Social Work Practice**

An elective course that deepens, broadens, and integrates professional foundation knowledge, values, and skills as these apply to generalist practice with families. Examines practice processes related to assessment, intervention, and evaluation, including presenting problems of race, gender, and other multicultural variables related to programs and services for families in America. Offered winter semester. Prerequisite: SW 317. Credits: 3

### **SW 453 - Case Management**

The development of case management as an agency function, practitioner role, systemic process and therapeutic intervention are explored. Various models, principles, and functions of case management are examined. The responsibilities and functions of the case manager (i.e. assessment, coordination, monitoring, and advocacy, etc.) are presented with emphasis on requisite skills. Offered fall and winter semesters. Corequisite: Field education. Prerequisite: SW 318. Credits: 3

### **SW 461 - Multicultural Issues in Social Work Practice**

The content of this course has been designed to develop a relevant knowledge base and understanding of the biopsychosocial factors and experiences in the lives of the diverse races, ethnicity, and cultures of population groups in the United States. The emphasis is to be placed examining (personal) individual, societal, and institutional attitudes, as well as social worker approaches in a multicultural society. Offered winter semester. Prerequisite: SW 317. Credits: 3

### **SW 470 - Contemporary Social Policy Issues**

SW 470 builds upon and strengthens social welfare policy and service analyses introduced in SW 319. Contemporary social welfare policy and services are discussed and analyzed in light of their aim to ameliorate societal conditions and human functioning. Strategies for policy change are also examined. Course offered fall and winter semesters. Prerequisite: SW 319. Credits: 3

### **SW 490 - Social Work Field Education I**

This course requires 225 hours of involvement in social work activities per semester in a School of Social Work approved field education site. Students have opportunities to apply theories, techniques, and concepts through observation and participation in supervised assignments and show evidence of skill acquisition through supervisor assessment and evaluation. Offered fall semester. Prerequisite: SW 317. Corequisite: SW 492. Credits: 3

### **SW 491 - Social Work Field Education II**

This course requires 225 hours of interacting in social work activities per semester in a School of Social Work approved field education site. Students have opportunities to apply theories, techniques, and concepts through observation and participation in supervised assignments and to show evidence of skill acquisition through supervisor assessment and evaluation. Offered winter semester. Prerequisite: SW 490. Credits: 3

### **SW 492 - Social Work Field Seminar I**

This course assists students in understanding and achieving competence in the social work skills taught and practiced in their field practicum setting. The course requires students to report and analyze field activities with faculty and peers, including the assessment and evaluation of client populations as well as issues related to agency functioning. Offered fall semester. Corequisite: SW 490. Credits: 1

### **SW 493 - Social Work Field Seminar II**

This course assists students in understanding and achieving competence in the social work skills taught and practiced in their field practicum setting. The course requires students to report and analyze field activities

with faculty and peers, including the assessment and evaluation of client populations as well as issues related to agency functioning. Offered winter semester. Corequisites: SW 491 and SW 495. Credits: 1

#### **SW 495 - Social Work Capstone**

Students will evaluate and assess the core competencies gained from the classroom and field experiences. Each session will require critical thinking on how and where the competencies and practice behaviors required of competent social workers were mastered. Students are challenged to apply ethical decision-making processes to their field education experiences. Offered winter semester. Prerequisite: SW 490. Corequisites: SW 491 and SW 493. Credits: 3

#### **SW 499 - Independent Study in Social Work**

Student and/or faculty initiated special projects that explore some aspect of social work theory or practice. A maximum of four credits in independent study may be taken during undergraduate social work education. Prerequisites: Senior standing and advanced permission of instructor. Credits: 1 to 4

#### **SW 600 - Cultural Competency for Social Work**

This course examines cross-cultural practices and values, with emphasis on the commonalities and differences among individuals, groups, organizations, and communities. Emphasis is given to critical analyses of people based on age, ethnicity, race, gender, religion, spirituality, sexual orientation, socioeconomic status, veteran, and/or disability status. Offered every semester. Credits: 3

#### **SW 601 - Foundations of Social Work Practice**

Examines social welfare as an institution, and social work as a profession in American society. Included are basic knowledge, values, and skills required for advanced generalist practice. Emphasis is on values and ethics, populations-at-risk, social and economic justice, and engagement with individuals, families, groups, organizations, and communities. Credits: 3

#### **SW 603 - Integrated Methods**

This foundation course for advanced generalist social work practice includes training in engagement, assessment and intervention with individuals, families, groups, organizations, and communities. Using a strengths-based perspective with respect to diversity, this course focuses on micro, mezzo, and macro theories relevant to practice. Offered fall and winter semesters. Credits: 3

#### **SW 607 - Building Relationships Across Interprofessional Domains [BRAID] Social Work Seminar**

Seminar elaborates on interprofessional education (IPE) course content as it pertains to social work experiences, skills and values creating opportunities for students to strengthen competence in skills practiced in their field education settings. Students will report and analyze interprofessional activities with faculty and peers and integrate application of IPE class content. Offered fall and winter semesters. Corequisite: IPE 507. Credits: 1

#### **SW 610 - Social Welfare Policy and Services I**

An examination of the social services delivery systems in the United States, including the profession of social work; an analysis of the historical development in economic, political, and social contexts. Offered fall and winter semesters. Credits: 3

#### **SW 612 - Social Policy: Families and Children**

This course examines the history and influence of the major contemporary public policies and programs on the welfare of children and families. Emerging trends and issues and their implications for future social policy, programs, and services are examined. Interventions via advanced practice skills are discussed. Offered spring/summer semester. Prerequisite: SW 610. Credits: 3

#### **SW 613 - Human Rights and Social Work**

The course is structured to provide students with a basis for literacy about modern human rights, including core principles, key documents, institutions, and practices. A framework for the analysis of social work/human rights interactions is utilized and systematically applied, including but not limited to the effect of social, political and economic policies,

and programs on human rights; health and social consequences of human rights violations; and the inextricable linkage between promoting and protecting mental and physical health, community well-being and family functioning and promoting and protecting human rights. Prerequisite: SW 610. Credits: 3

#### **SW 614 - Social Policy and Mental Health**

Examines the development of mental health policies and services in the United States and in Michigan. Public policies and organizations are analyzed and evaluated in relation to trends, impacts, and outcomes on the problem of mental illness in society. Offered spring/summer semester. Prerequisite: SW 610. Credits: 3

#### **SW 620 - Human Behavior and the Social Environment**

The course synthesizes and applies theories of human behavior and the social environment into social work practice with individuals, families, groups, organizations, and communities, based on the person-environment construct and biopsychosocial-spiritual assessment models. Special attention will be the effects of diversity and difference, and lifespan development. Offered fall and winter semesters. Credits: 3

#### **SW 622 - Psychopathology and Social Deviance**

Provides students with a comprehensive body of knowledge, organized and integrated in both theoretical and practical terms. Includes an awareness of the dimensions of deviant or abnormal behavior. Helps students understand the individual in his or her complexities and the process and outcome of human development and forces (internal and external) that enter into the psychodynamics of deviant and/or abnormal human behavior. Offered winter and spring/summer semesters. Prerequisites: SW 600 and SW 620. Credits: 3

#### **SW 630 - Social Work: Global Service-Learning**

The focus of this course is on international social work policy and practice. Students interact with various communities using a service-learning approach. The students explore the themes of social services politics, policies and the history of the assigned culture. The course includes a two or three-week experiential learning component in an international location. The advanced practice social worker will recognize the interconnectedness between social work, social justice, and civic/global responsibility. Offered spring/summer semester. Prerequisites: SW 610 and permission of instructor. Credits: 3

#### **SW 631 - Cross Cultural Service Learning**

The focus of this course is on the unique culture(s) within the United States and taught using a service-learning approach. Students explore the themes of social welfare development. Students explore the themes of social services, politics, policies and the history of the assigned culture. The course includes a two or three-week experiential learning component in a specific location in the United States. The advanced practice social worker will recognize the interconnectedness between social work, social justice, and civic/global responsibility. Offered spring/summer semester. Prerequisites: SW 610 and permission of instructor. Credits: 3

#### **SW 640 - Seminar in Advanced Generalist Practice (Capstone)**

A broadening of student knowledge of the professional foundation for practice across populations-at-risk. Students will identify and develop individual topics. (May be taken only once.) Offered winter semester. Corequisites: SW 654 and SW 655. Credits: 3

#### **SW 650 - Field Education I**

The first in a series of applied field education courses involving 315 clock hours in a university approved and supervised social work field setting. Emphasis is on the application of core competencies and practice behaviors within M.S.W. generalist perspective. Taken concurrently with 1 credit field seminar SW 651. Prerequisites: SW 600, SW 601, SW 603, and SW 620. Corequisite: SW 651. Credits: 3

#### **SW 651 - Field Education Seminar I**

Field seminar focused on integrating coursework with foundation field experiences. One credit course (for a total of 15 class hours) that meets biweekly with students concurrently enrolled in SW 650. Corequisite: SW 650. Credits: 1

## Course Listings and Descriptions

### **SW 652 - Field Education II**

The second in a series of applied field education courses involving 315 clock hours in a university approved and supervised social work field setting. Emphasis is on the core competencies and application of advanced practice behaviors within an advanced generalist perspective. Must be taken concurrently with SW 653 a one credit field seminar. Offered fall semester. Prerequisites: SW 650 and SW 651. Corequisite: SW 653. Credits: 3

### **SW 653 - Field Education Seminar II**

Field seminar focused on integrating coursework with second semester advanced field experiences. One credit course (for a total of 15 class hours) that meets bi-weekly with students concurrently enrolled in SW 652. Prerequisites: SW 650 and SW 651. Corequisite: SW 652. Credits: 1

### **SW 654 - Field Education III**

The third in a series of applied field education courses involving 315 clock hours in a university approved and supervised social work field setting. Emphasis is on the development along 10 core competencies and advanced practice behaviors within MSW advanced generalist perspective. This course is taken concurrently with SW 655, a one credit field seminar. Prerequisites: SW 652 and SW 653. Corequisites: SW 655 and SW 640. Credits: 3

### **SW 655 - Field Education Seminar III**

Field seminar focused on integrating coursework with third semester advanced field experiences. One credit course (for a total of 15 class hours) that meets biweekly with students concurrently enrolled in SW 654. Offered winter semester. Prerequisite: SW 652. Corequisites: SW 654 and SW 640. Credits: 1

### **SW 660 - Grant Writing and Resource Development**

Instruction in how to find grant resources, develop grant proposals and associated budgets, and evaluate outside proposals. Students will learn to diversify agency financial resources through planned giving, corporate requests, endowment campaigns, and special events. Offered winter semester. Credits: 3

### **SW 662 - Substance Abuse and Social Work Practice**

Examines the impact of the social work profession on substance abuse problems. Considers etiology, epidemiology, prevention, methods of treatment and policy issues, as well as the relationship between race, gender, age, social class, and substance abuse. Offered winter semester. Prerequisites: SW 600 and SW 620. Credits: 3

### **SW 664 - Social Work Practice in Schools**

This course is required for social work practitioners in Michigan public schools. It provides an overview of social work practice in a public school setting. Examined are the concepts of a school as an institution, its staff, students, community, and laws that affect education and social work practice, and methods of advanced practice. Offered spring/summer and winter semesters. Prerequisites: SW 600, SW 601, SW 603, SW 610, and SW 620. Credits: 4

### **SW 665 - Aging in Contemporary Society**

A review of specialized knowledge of social work practice with older adults, families, caregivers and professionals. Issues impacting elder autonomy, safety, financial well-being, health care, social and community supports are explored, with particular attention to populations at risk. Offered winter semester. Credits: 3

### **SW 667 - Holistic Practices in Social Work**

Introduces energy management for behavioral transformation and explores a range of energy management approaches, e.g., acupuncture, biofeedback, massage, qigong, and yoga, among others, as social holistic practice. Focuses on stress management, energy, and capacity development through mind, body, and spirit dynamic application for holistic health and self-actualization. Credits: 3

### **SW 668 - Child and Adolescent Trauma**

This course explores intervention with traumatized children and adolescents. Assessment foci include the role of development, culture, and evidence based trauma-specific practice with children, adolescents and

their families. Other topics include: trauma focused CBT, identification of risk and protective factors that foster resiliency, caregiver interventions, and strengths-based practice. Offered winter and spring/summer semesters. Prerequisite: SW 670. Credits: 3

### **SW 669 - Responses to Loss and Death**

This course examines death, grief, and loss in America including theories, cultural rituals, social traditions, and taboos before and after death. Psychological and spiritual foundations of death, grief, and loss are explored from multiple perspectives and cultures including the experience of grief and bereavement for individuals, groups, and communities. Course offered winter semester. Prerequisite: Postbaccalaureate status or permission of instructor. Credits: 3

### **SW 670 - Social Work Practice: Individuals**

This course focuses on selected knowledge and skills from the cognitive/behavioral and psychosocial models and their application to social work practice with individuals. Perspectives on differential assessments and interventions drawn from these approaches will be studied. Factors of minority group status and gender are examined. Offered fall and winter semesters. Prerequisite: SW 603. Credits: 3

### **SW 671 - Social Work Practice in Health Care**

This course emphasizes the development of social work skills pertinent to health care settings. Assessment of the impact of illness, treatment, and hospitalization on patients and families are explained. Models of the helping process and health care theories will be examined and result in advanced practice skills. Offered winter semester. Prerequisite: SW 603. Credits: 3

### **SW 672 - Social Work Practice: Groups**

Focuses on concepts, values, skills, and techniques germane to the practice of social group work. Examines the history, roles, theoretical underpinnings, interventive strategies, and modes of group work practice. Offered fall semester. Prerequisite: SW 603. Credits: 3

### **SW 673 - Social Work Practice with Children and Adolescents**

Prepares students for direct practice with children and adolescents who are experiencing separations, trauma, and other life crises. Encompasses a variety of methods and models, including play therapy and group work. Offers didactic and experiential learning. Offered fall semester. Prerequisites: SW 603 and SW 622. Credits: 3

### **SW 674 - Social Work Practice: Families and Children**

Examines an integrated model of family practice focusing on family development and dysfunction at various stages in the family life cycle. Using a family system and ecological systems perspective, students are taught specific assessment and intervention knowledge and skills. Concepts from several current models of family practice are studied and drawn upon. Offered fall and winter semesters. Prerequisite: SW 603. Credits: 3

### **SW 675 - Child Welfare and Family Services**

This course prepares students for advanced practice in child welfare and family services in the public or private sector. Addresses social work's historic mission to serve poor and vulnerable families with a variety of direct practice methods from an advanced generalist perspective. Offered winter semester. Prerequisite: SW 603. Credits: 3

### **SW 676 - Community and Social Planning**

A review of professional practice in social planning and community organization. Exploration of a range of theories, concepts, and applications. Includes focus on power, influence, interorganizational relationships and action strategies, development and use of structure and leadership. Offered fall semester. Prerequisite: SW 603. Credits: 3

### **SW 677 - Principles of Supervision**

Examines the various tasks and techniques related to supervision in social service agencies. Supervision is introduced as an educational process, an administrative function, and a development tool. Dimensions of the supervisor/worker relationship will be discussed, with particular attention to the impact of gender and race on the process. Offered winter and spring/summer semester. Prerequisite: SW 603. Credits: 3

**SW 678 - Human Services Administration**

Provides a conceptual, theoretical, and methodological foundation in the organization and administration of human services. Inter and intra-organizational variables and characteristics that undergird and impinge upon the effective delivery of human services are examined. Issues and forces affecting the social welfare enterprise will be analyzed along with those factors. Offered fall semester. Prerequisite: SW 603. Credits: 3

**SW 679 - Program Planning, Monitoring and Evaluation**

Provides a comprehensive examination of all phases of program development, from the point when an idea is first generated through the process of determining the nature of the program, the steps taken to ensure the effort is proceeding as planned and finally, the assessment of outcomes and impact. Offered winter semester. Prerequisite: SW 603. Credits: 3

**SW 680 - Special Topics in Social Work**

Students study issues and concerns important to the social work profession not ordinarily covered in other courses. Offered in response to the special interests of faculty and students. Topic(s) to be announced in advance of registration. Offered fall semester. Prerequisites: SW 600, SW 601, SW 603, SW 610, and SW 620. Credits: 1 to 4

**SW 690 - Social Research I**

This course is the first of two in social work research. The foundational concepts and methodology used for scientific practice, including the investigation and evaluation of social work practice problems, an understanding of techniques and issues in measurements, options in research designs, data collection and analysis, and the development of new knowledge in agencies and programs with particular reference to the advanced generalist perspective. Offered winter and spring/summer semesters. Credits: 3

**SW 693 - Social Research II**

The second course in social research. Evaluation of social work practice and development of new knowledge with particular reference to the generalist orientation. Emphasis on demonstrating ways to incorporate research skills as an integral part of social work interventions with individuals, families, and larger systems. Includes both small group research and single-system designs. Particular attention given to the rationale for doing single-system research for evaluating social work practice; procedures for developing single-system designs, recording and assessing data for reliability and validity, and using the results for planning effective intervention and follow-up. Also included is content on research ethics for generalist practitioners. Cross-listed with CJ 600. Offered spring/summer and fall semesters. Prerequisites: SW 690 and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**SW 694 - Master's Thesis**

Faculty-supervised study and research on a subject approved by the student's advisor and committee. Offered every semester. Prerequisites: SW 690 and SW 693 and consent of thesis advisor. Credits: 3

**SW 695 - Master's Thesis**

Continuation of faculty-supervised research and writing on a subject approved by the student's advisor and committee. Offered every semester. Prerequisites: SW 694, consent of thesis committee and completion of the Responsible Conduct of Research Training within last three years. Credits: 3

**SW 699 - Independent Study**

Independent study of an issue related to social welfare or social work theory or practice. Offered every semester. Prerequisites: Approval of advisor and faculty member directing the study. Credits: 1 to 3

**US 102 - Career Education Class**

Designed for students seeking assistance in developing a career and educational plan suited to their needs, goals, and career choices. Emphasis and activities will be placed on personal and career assessment, career and occupational information, planning, and decision-making. Credits: 1

**US 280 - Special Topics in University Studies**

A variable topics course emphasizing the study of university-wide topics in relation to a contemporary problem, issue, or theme. May be repeated for credit. Offered as needed. Credits: 3

**US 301 - Internship and Job Search Strategies**

Provides a structured approach to organizing and executing a job search campaign for an internship or employment following graduation. Topics include skill identification, job market research, resume writing, effective networking, interviewing, negotiating offers, and job survival skills. Offered fall and winter semesters. Credits: 1

**US 380 - Special Topics in University Studies**

A variable topics course emphasizing the study of university-wide topics in relation to a contemporary problem, issue, or theme. May be repeated for credit. Offered as needed. Credits: 3

**US 480 - Environmental Sustainability**

Readings, lectures, and/or discussions in special topics not normally covered by other courses in the program. Credits: 1 to 9

**WAT 530 - Aquatic Ecosystems and Processes**

Aquatic ecosystems play vital functions in our biosphere. Understanding the role of aquatic ecosystems requires knowledge of processes occurring in the air and watersheds, and interactions with aquatic organisms. This lecture/discussion course will be a forum for learning about life and its dynamic interactions in earth's aquatic ecosystems. Cross-listed with BIO 530. Course offered fall semester of odd-numbered years. Prerequisite: Graduate standing or permission of instructor. Credits: 3

**WAT 651 - Emerging Issues in Water Resources**

The most pressing water resource-related issues facing the planet today will be discussed and analyzed. Particular emphasis will be placed on analyzing these problems from a variety of perspectives, including environmental, economic, societal, and political. Cross-listed with BIO 651. Offered fall semester of odd-numbered years. Prerequisite: BIO 440 or BIO 450. Credits: 2

**WGS 180 - Special Topics in Women, Gender, and Sexuality Studies**

Special topics in women, gender, and sexuality studies. Focus will vary by semester and instructor. May be repeated for credit when content differs. Course offered each semester. Credits: 1 to 3

**WGS 200 - Introduction to Gender Studies**

Examines research about gender in personal development, race/ethnicity, class, and sexual orientation through films, readings, and focused studies of the consequences of gender experience in life and learning. Fulfills one of the Foundations - Social and Behavioral Sciences. Offered fall and winter semesters. Credits: 3

**WGS 224 - Introduction to LGBTQ Studies**

Introduces LGBTQ histories, cultures and theoretical perspectives in the context of race, class, gender, sexuality, age, religion, ability, and nation. Topics include literary and artistic expression, biological investigations, health matters, policy and politics, community life, and other issues relevant to studying gay, lesbian, bisexual, transgender, intersex, and queer life. Offered winter semester. Credits: 3

**WGS 255 - Gender and Popular Culture**

This interdisciplinary course is an introductory examination of the role of U.S. popular culture in creating and maintaining ideologies of gender. Building upon an intersectional analysis, content will focus on using gender as a lens to analyze popular images and messages about race and sexuality. Fulfills Cultures - U.S. Diversity. Offered fall and winter semesters. Credits: 3

**WGS 280 - Special Topics in Women Gender, and Sexuality Studies**

A variable course emphasizing the study of women, gender, and sexuality studies topics in relation to a contemporary problem, issue, or theme. May be repeated for credit when content differs. Offered upon sufficient demand. Credits: 3

## Course Listings and Descriptions

### **WGS 302 - Women, Politics, and Public Policy**

This course explores the ways that gender influences government and policy decisions. Students will explore many gendered issues and the relevant policy responses. Topics include domestic violence, reproductive policies, divorce and the family, marriage and the family, poverty, class, and compensation. Cross-listed with PLS 302. Offered winter semester. Prerequisite: PLS 102 or junior standing. Credits: 3

### **WGS 310 - Sexual Orientation and the Law**

An examination of legal and policy issues relating to sexual orientation including topics relating to constitutional law, criminal law, family law, and employment law. Offered winter semester. Part of the Human Rights Issue. Credits: 3

### **WGS 315 - Psychology of Sex Differences**

A critical examination of the psychological research regarding purported mental, emotional, and behavioral differences between women and men, theories of the development of gender identity, and the etiology of differences. Issues discussed will include the construction of difference and the cultural and ideological uses of the rhetorics of difference. Cross-listed with PSY 315. Offered winter semester. Credits: 3

### **WGS 316 - Human Intimacy and Sexuality**

A comparative analysis of sexual practices, reproductive strategies, and intimate relationships using competing viewpoints (e.g. cultural psychology and evolutionary psychology). Topics covered may include comparing dating, cohabiting, married and gay and lesbian couples; factors in relationship stability and divorce; and the social control of sexuality and production. Cross-listed with PSY 316. Prerequisite: PSY 101. Credits: 3

### **WGS 317 - Sociology of Gender**

Explores gender as a socially constructed system of stratification. Topics may include how ideas about gender shape childhood, families, education, work, violence, science, and social inequality. Examines how gender intersects with other socially constructed systems of stratification, including race, sexuality, class, age, and ability. Fulfills Cultures - U.S. Diversity. Part of the Identity Issue. Cross-listed with SOC 317. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **WGS 318 - Sociology of Sexuality**

Explores sexuality as a socially constructed system of stratification. Topics may include the production of sexual identities and desires, and how ideas about sexuality shape the media, violence, social movements, and work. Examines how sexuality intersects with other socially constructed systems of stratification, including race, gender, class, age, and ability. Fulfills Cultures - U.S. Diversity. Part of the Identity Issue. Cross-listed with SOC 318. Offered winter semester. Prerequisite: Junior standing. Credits: 3

### **WGS 320 - Crimes Against Women**

An in-depth study of crimes committed almost exclusively against women. Such crimes include sexual harassment, rape, and certain types of murder. The course is taught within the framework of feminist theory and research. Cross-listed with CJ 320. Offered fall semester. Credits: 3

### **WGS 325 - Body, Gender, Sexuality in Antiquity**

Introduction to views about the body, gender, and sexuality in ancient Greece and Rome. Special attention is given to ancient texts that inform feminist and queer theory. Topics include ancient medicine and modern dietetics; the figure of Antigone in feminist and postcolonial literature; Greek homosexuality, Victorian Hellenism, and American law. Part of the Identity Issue. Cross-listed with CLA 325. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **WGS 326 - Sexuality, Justice, and Advocacy**

An exploration of sexuality through an interdisciplinary lens; topics include adult sexual development, public policy, and methods of advocacy for sexual health and justice. Through various learning activities, including field study with campus and community organizations, students will increase their knowledge and facilitation skills related to sexual health

education. Part of the Health Issue. Cross-listed with LIB 326. Course offered every semester. Prerequisite: Junior standing. Credits: 3

### **WGS 334 - Sex, Power, and Politics**

Explores the ways that gender identity and sexual orientation matter politically, intersect with race and class issues, and impact human flourishing. Examines these issues from a philosophical perspective, sets them in historical and contemporary political contexts, and investigates the role public policy and social norms play in the process. Part of the Identity Issue. Cross-listed with PLS 334. Course offered winter semester. Prerequisite: Junior standing. Credits: 3

### **WGS 335 - Women, Health and Environment**

This course is an overview of contemporary women's health issues focusing on the interconnectedness between health and the environment. Topics include reproductive issues, pesticides, sustainable development, occupational hazards, health insurance, and breast cancer. Discussions and readings will focus on the impact of race, class, and sexuality on women's health. Part of the Sustainability Issue. Offered fall semester in even-numbered years. Prerequisite: Junior standing. Credits: 3

### **WGS 336 - Lesbian, Gay and Queer Literature**

This interdisciplinary course makes use of literary, historical, and social scientific theories and methods in an in-depth study of lesbian, gay and queer literature with attention to historical and cultural context. Literature may include literary classics, pulp fiction, postcolonial literature, feminist fiction, and postmodern narratives. Cross-listed with ENG 336. Offered winter semester of even-numbered years. Credits: 3

### **WGS 343 - Black Feminist Thought**

Survey of the interdisciplinary field of black feminist studies. Focuses on the history, theoretical approaches, and interventions of black feminist studies through examination of the foundational topics and concerns of the field. Cross-listed with AAA 343. Course offered fall semester. Credits: 3

### **WGS 350 - Family and Gender in the Developing World**

A comparative examination of the impact of development on families and gender roles in third world countries. Will include consideration of general issues (e.g., factors affecting family reproduction decisions, women in the formal and informal labor force, etc.) and in-depth study of gender and family in one or more countries. Fulfills Cultures - World Perspectives. Part of the Identity Issue. Cross-listed with SOC 350. Offered fall and winter semesters. Prerequisites: WRT 150 with a grade of C (not C-) or better and junior standing. Credits: 3

### **WGS 352 - Black Women's Culture and Communities**

A historical and theoretical analysis of the distinct identities African American women constructed for themselves (and had constructed for them) in response to the forces of patriarchal domination and political colonization. Fulfills U.S. Diversity requirement. Part of the Human Rights Issue. Cross-listed with AAA 352. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **WGS 358 - Women and Gender in South Africa**

This course will cover current debates in social and political issues for women and gender in South Africa. Topics may include history, education, labor, government, women's activism, family, violence, HIV/AIDS, health and reproductive issues, environmental issues, social entrepreneurship, and nongovernmental organizations. This course will be taught in South Africa. Offered spring/summer semester. Prerequisites: Permission of the instructor and minimum GPA of 2.5. Corequisite: WGS 493. Credits: 3

### **WGS 360 - Foundations of Feminism**

Focuses on the historical development of feminist thought. Interdisciplinary examination of the theoretical approaches to feminism and gender. Designed for, but not limited to WGS students. Offered winter semester. Prerequisite: WGS 200 or permission of instructor. Credits: 3

### **WGS 365 - Queer Theory**

Engages in an interdisciplinary examination of theoretical approaches to sexuality and gender. Focuses on contemporary queer theory, including its historical development. Offered fall semester. Prerequisite: WGS 200 or WGS 224. Credits: 3

**WGS 370 - Women and the Law**

Overview of legal limitations on sex discrimination in the United States and efforts to end discrimination; marriage and divorce; relationships outside of marriage; reproductive rights and biological factors impacting these rights; violence against women; and employment discrimination focusing on gender-based influences that contribute to these human rights violations. Part of the Human Rights Issue. Cross-listed with LS 370. Offered winter semester. Prerequisite: Junior standing. Credits: 3

**WGS 371 - Historical Perspectives on Gender and Sexualities**

Variable topics centering on the history of gender and sexuality. Topics include historical understandings of gender identity and sexual orientation and may vary by region and era. May be repeated if content varies. Cross-listed with HST 371. Offered every semester. Prerequisite: Foundations - Historical Perspectives or junior standing. Credits: 3

**WGS 380 - Special Topics in Women Gender, and Sexuality Studies**

Provides an interdisciplinary opportunity for students to pursue advanced study in special topics related to women and women's roles in this and other cultures. Topics vary each term. May be taken more than once when the topic is different. Offered on sufficient demand. Credits: 1 to 4

**WGS 395 - Women and Gender Studies Research Methods**

Explores dominant epistemologies and familiarizes students with research methods commonly used in women and gender studies. Examines ways in which feminist and gender theories inform research questions, shape research practice, and define relationships with research participants. Offered fall semester. Prerequisite: WGS 360. Credits: 3

**WGS 399 - Independent Readings**

Independent supervised readings in selected topics. Offered every semester. Prerequisite: Permission of program coordinator. Credits: 1 to 3

**WGS 402 - Feminist Visionary Thinkers**

This variable topics course examines the life and work of a significant feminist visionary thinker or thinkers whose theories, work and/or actions have effected deep change in the world resulting in paradigm shifts within global cultures, institutions, societies, and world views. Cross-listed with LIB 402. May repeat for credit. Course offered winter semester. Credits: 3

**WGS 450 - Global Feminisms**

This course offers a comparative analysis of local/global feminisms through history, activism, development and forms of feminism in different countries as well as an examination of the status of women in those countries as it impacts feminist activism. Offered fall semester. Prerequisite: WGS 200. Credits: 3

**WGS 460 - Spanish Women Authors**

An in-depth study of Spanish and Spanish American women authors whose literature, across the centuries, has dealt with a particular historical, cultural, social, and philosophical experience. Cross-listed with SPA 460. Offered fall semester in even-numbered years. Prerequisites: Completion of SPA 330, plus SPA 331 or SPA 332 with a grade of C (not C-) or better. Credits: 3

**WGS 461 - Language and Gender**

Examination of theoretical approaches to the dynamics of language and gender. Investigation of the relationship of language and gender with social categories such as age, ethnicity, class, and sexuality. Application of social and linguistic theories to analyses of data with particular attention to contexts of the classroom, workplace, and media. Cross-listed with ENG 461. Offered winter semester. Prerequisite: ENG 261. Credits: 3

**WGS 490 - WGS Internship**

Work experience in the community relating practical training and independent study in a specialized area, initiated by the student, who prepares a proposal in consultation with a faculty advisor and a work site supervisor. The student submits a final report. 50 hours internship/credit hour. Offered every semester. Prerequisite: 12 hours of WGS coursework. Credits: Variable.

**WGS 491 - Contemporary Theory and Practicum**

Examination and application of contemporary feminist, gender, and queer theory. Includes student-designed practicum which might be an internship,

case study, or activist project. Final paper locates student-designed practicum within contemporary feminist, gender, and queer theory. Offered fall semester. Prerequisite: WGS 360 or WGS 365. Credits: 3

**WGS 492 - Community Collaborative**

This course combines an analytical component with the practical field experience of working with a community agency that serves women and girls. Using an interdisciplinary perspective, the coursework draws upon the fields of gender studies, feminist theory, women's studies, business administration, nonprofit theory, and sociology. Offered winter semester. Prerequisite: Junior standing or permission of instructor. Credits: 3

**WGS 493 - Community Collaborative in South Africa**

This course combines the practical field experience of working with a nongovernmental organization in South Africa with an analytical component focusing on gender, global feminist theory, nonprofit theory, and social entrepreneurship. Students will combine internship hours with training, contextual lectures, and reflection. Offered spring/summer semester. Prerequisites: Permission of the instructor and minimum GPA of 2.5. Corequisite: WGS 358. Credits: 3

**WGS 495 - Capstone**

Explores examples of past and present scholarship to reaffirm the interdisciplinary nature of the field and to highlight the relationships among feminist theory, intellectual practice, and social change. Students complete an individual project on topic of their own choosing. Offered every semester. Prerequisites: WGS 360 and WGS 395. Credits: 3

**WGS 499 - Independent Study and Research**

Research conducted individually with faculty supervision. Attention given to written and oral presentation of research findings. No more than six credit hours of WGS 399 and WGS 499 combined may count toward the WGS major, WGS minor, or LGBTQ minor. Prerequisites: WGS 360 or WGS 365; written permission of faculty. Credits: 1 to 4

**WRT 098 - Writing with a Purpose**

Students draft essays to develop fluency, voice, purpose, and structure. They also learn revision and editing skills. Students work one hour per week with a peer consultant from the Fred Meijer Center for Writing and Michigan Authors. Credits earned for this course do not count toward the number of credits required for graduation. Offered fall semester. Credits: 4

**WRT 150 - Strategies in Writing**

Students practice a variety of rhetorical forms and develop structure, style, and voice. They invent, plan, draft, revise and edit, formulate and support arguments, and incorporate sources. Students work regularly in the Fred Meijer Center for Writing and Michigan Authors and in a computer classroom. Students must receive a grade of C (not C-) or better to fulfill the Foundations - Writing. Offered fall and winter semesters. WRT 150 is a prerequisite for any SWS course. Credits: 4

**WRT 180 - Special Topics in Writing**

Topics will be announced in the class schedule and prerequisites may be listed. May be repeated for credit. Credits: 3

**WRT 200 - Introduction to Professional Writing**

This course serves as an introduction to professional writing, providing the skills necessary for writing, presenting, and interacting in professional contexts. This course introduces students to some of the most common genres in professional writing and emphasizes the importance of audience and context for composing effective professional documents. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**WRT 210 - Writing with Style**

Close study of the rhetorical dimension of diction, sentence structure, rhythm, coherence, paragraphing, figures of speech, and whole compositions in various genres. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

**WRT 219 - Introduction to Creative Writing**

Introduction to the theory and practice of various forms of creative writing. Students may write poetry, fiction, nonfiction or drama and also read literature in each genre. Fulfills Foundations - Arts. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

## Course Listings and Descriptions

### **WRT 253 - Document Production and Design**

This course provides an introduction to electronic layout, design, and typographic principles as well as the technical foundation and practical experience to produce documents for print production. Students will work from a foundation in rhetoric and basic graphic design principles to write, design, and produce a range of document types. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

### **WRT 305 - Writing in the Disciplines**

Designed to enable students to sharpen their writing skills and begin exploring writing form and styles specific to their academic interests. Sections listed by academic area in the class schedule. Students must receive a grade of C (not C-) or better. Credits: 3

### **WRT 306 - Seminar for Writing Tutors**

A workshop for tutors employed by the Grand Valley Writing Center. Covers topics related to the process of individualized tutoring of students for improvement of writing skills. Offered each semester. Prerequisites: WRT 150 and current employment by the Writing Center. May be repeated one time for credit. Credits: 1

### **WRT 307 - Consulting With Writers**

Examines the role consultants play in the development of writers and writing. Students will observe and analyze situations in which writers work together as well as practice response techniques. Readings and assignments focus on different kinds of work associated with assisting writers: consulting, responding, collaborating, and ghostwriting. Offered winter semester. Prerequisites: WRT 200 and WRT 219; or by permission of instructor. Credits: 3

### **WRT 308 - Working with Manuscripts**

This course helps students work with unpublished manuscripts intended for publication in several venues. Students will assess manuscripts' potential and make editorial recommendations about the content, structure, length, style, and techniques appropriate to a manuscript's genre and potential audience. Students will also learn copy-editing techniques and conventions. Offered winter semester of even-numbered years. Prerequisites: WRT 200 or WRT 219; and WRT 210. Credits: 3

### **WRT 310 - Intermediate Style and Technique**

Students will study the rhetorical and artistic dimension of writing techniques in two or more of the following genres: drama, fiction, nonfiction, and poetry. This class focuses particular attention on forms and techniques on the micro-level of: the line, paragraph, chapter, scene, section. Offered winter semester. Prerequisites: WRT 210 and WRT 219. Credits: 3

### **WRT 320 - Intermediate Poetry Workshop**

Theory and practice of the genre of poetry. Students will read literature in the genre of poetry and then write poetry. There will be some discussion of current publication markets; periodically, guest writers will give public readings and visit class. Offered fall and winter semesters. Prerequisite: WRT 219. Credits: 3

### **WRT 330 - Intermediate Fiction Workshop**

Theory and practice of the genre of fiction. Students will read literature in the genre of fiction and then write fiction. There will be some discussion of current publication markets; periodically, guest writers will give public readings and visit class. Offered fall and winter semesters. Prerequisite: WRT 219. Credits: 3

### **WRT 350 - Business Communication**

Training in communication skills for business and the professions. Assignments cover varieties of information management, including handling research, gathering data, writing reports, manuals, directions, and correspondence, and making oral presentations. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

### **WRT 351 - Writing for the World Wide Web**

Emphasizes learning rhetorical structures best suited for writing in the nonlinear Web environment and on exploring the cultural impact Web-related discourse has had on bridging technology and the arts. Students practice professional writing as they learn to build Web documents

for community and commercial Internet audiences. Offered fall and winter semesters. Prerequisites: WRT 253 and (WRT 200 or WRT 350). Credits: 3

### **WRT 353 - Visual Rhetoric and Document Design**

Visual rhetoric and document design enhances the basic principles of writing learned in WRT 253. Drawing upon aesthetics, practical methods, and research in visual rhetoric, the course examines document design as an audience-oriented form of writing. This course also introduces students to cross-cultural iconography and the quantitative display of information. Offered winter semester. Prerequisites: WRT 200 and WRT 253. Credits: 3

### **WRT 354 - Writing in the Global Context: Culture, Technology, and Language Practices**

This course prepares students for the challenges of writing in the global context. Through analysis and practice, students will learn to write and design documents that respond to the needs of local and global audiences in the 21st century workplace. Focus: communication competence, cultural dimension of language and design. Part of the Globalization Issue. Offered fall semester. Prerequisite: Junior standing. Credits: 3

### **WRT 360 - Intermediate Creative Nonfiction**

Theory and practice of nonfiction genres. Students will read nonfiction work by various writers and write their own nonfiction pieces. Emphasis is on shaping written products for publication in particular contexts. The course will feature student writing workshops. Offered fall and winter semesters. Prerequisites: WRT 150 and WRT 219. Credits: 3

### **WRT 365 - Intermediate Magazine Writing**

This course will introduce students to common forms of magazine and long-form nonfiction. Students will pitch and develop article ideas and replicate magazine page layouts for their writing. Offered fall semester of even-numbered years. Prerequisites: WRT 210 and WRT 219. Credits: 3

### **WRT 380 - Special Topics in Writing**

Topics will be announced in the class schedule and prerequisites may be listed. May be repeated for credit. Credits: 3

### **WRT 381 - Writing and Sports**

Examines sports and culture from a range of perspectives in a range of genres, including those related to journalistic forms, commentary, the personal essay, fiction, and poetry. The theory and practice of these genres will be emphasized through student writing. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 3

### **WRT 399 - Independent Studies**

Before registration, the student must arrange for supervision by a faculty member and submit a contract (available in the writing office) specifying the scope of the proposed study. No more than three credits in WRT 399 may be applied to the major or minor. Offered fall and winter semesters. Prerequisite: WRT 150. Credits: 1 to 4

### **WRT 410 - Advanced Style and Technique**

Students will study the rhetorical and artistic dimension of writing techniques in multiple genres from: drama, fiction, nonfiction, and poetry. This class focuses particular attention on forms and techniques on the macro-level of: book-length works by notable contemporary writers, genre conventions, and cultural and commercial concerns related to publishing. Offered winter semester of even-numbered years. Prerequisite: WRT 310. Credits: 3

### **WRT 420 - Advanced Poetry Workshop**

Advanced theory and practice of the genre of poetry. Students will read literature, work on a writing project, and discuss current publication markets and manuscript arrangement. Periodically, guest writers will give public readings and visit class. May be repeated once for credit. Offered winter semester. Prerequisite: WRT 320. Credits: 3

### **WRT 430 - Advanced Fiction Workshop**

Advanced theory and practice of the genre of fiction. Students will read literature, work on a writing project, and discuss current publication markets and manuscript arrangement. Periodically, guest writers will give public readings and visit class. May be repeated once for credit. Offered fall and winter semesters. Prerequisite: WRT 330. Credits: 3

**WRT 451 - Advanced Writing for the Web**

Emphasizes writing and designing websites using Web content management systems (CMS). Students will learn to configure the CMS for drafting, revising, managing, and organizing documents, and they will use the CMS to create websites for various types of communities and different organizational needs. Offered winter semester of even-numbered years. Prerequisite: WRT 351. Credits: 3

**WRT 455 - Multimodal Composing**

Multimodal composing prepares writers to make informed choices regarding the mixing of modes in their composing processes. This course explores how media influence what texts accomplish and how they are received. Students analyze and produce texts that integrate words with other modes using a variety of software programs. Offered fall semester of odd-numbered years. Prerequisites: WRT 200 and WRT 253. Credits: 3

**WRT 460 - Advanced Creative Nonfiction**

Advanced theory and practice of the genre of nonfiction, including creative nonfiction. Students will read literature, work on a writing project, and discuss current publication markets and manuscript arrangement. Periodically, guest writers will give public readings and visit class. May be repeated once for credit. Offered winter semester. Prerequisite: WRT 360. Credits: 3

**WRT 465 - Advanced Magazine Writing**

This course expands on students' knowledge of magazine and long-form periodical writing and focuses on tailoring their writing and designs to specific markets and magazine styles. Offered winter semester of even-numbered years. Prerequisite: WRT 365. Credits: 3

**WRT 490 - Internship**

A supervised work experience in an area of a student's potential career interest. Initiated by the student, who plans the work experience with the advisor, the faculty sponsor chosen to supervise the internship, and the supervisor at the worksite. As a rough guide, the student should expect to spend 45 hours per semester in the internship and supporting academic work for each credit awarded. Credit is awarded only when the student, the faculty sponsor, and the work supervisor have completed evaluations of the internship. Offered every semester. Credits: 1 to 3

**WRT 495 - Genre and Writing (Capstone)**

Capstone course required of all writing majors. Explores the historical and ideological boundaries that define conventional writing genres: poetry and prose; fiction and nonfiction; literary fiction and genre fiction; academic writing and professional writing; text and hypertext; and so on. The course will consider disciplinary and professional influences on genre definition as well as various ethnic, gender, and economic conceptualizations of genre. Offered fall and winter semesters. Prerequisites: Writing core courses and senior standing. Credits: 3

## Glossary of Terms

**Academic advisor:** A university employee who helps the student make informed and responsible decisions in the pursuit of the student's academic goals.

**Academic dismissal:** Dismissal from a college or program for not maintaining the minimum required grade point average (GPA).

**Advanced placement:** Eligibility to enroll in courses beyond the entry level through transfer credit or examination.

**Auditing:** Registering for and attending class(es) regularly without being held responsible for the work required for credit. (No credit hours are earned and full tuition must be paid. The grade AU appears on the record.)

**Bachelor of Arts degree:** Distinguished by its concentration in liberal arts; typically focused on culture, arts, philosophy, and language.

**Bachelor of Science degree:** Grounded in the liberal arts and distinguished by its focus on mathematics, statistics, quantitative reasoning, and scientific analysis.

**Bachelor's degree:** A degree granted after completing at least four years of full-time academic study beyond the completion of high school and fulfillment of graduation requirements.

**Board:** A term used for the meal plan (e.g., room and board) at a college or university.

**Capstone course:** A senior-level culminating course within each undergraduate major. Normally it is among the last courses taken for degree completion. See Academic Policies and Regulations for more detail.

**Class standing:** A classification based on the number of credit hours earned to classify a student at the freshman, sophomore, junior, or senior level. One's classification, e.g., freshman, sophomore, junior, or senior.

**Cocurricular:** Being outside of but usually complementing the regular curriculum.

**Cognate:** A course related to the courses in a major program or to a degree requirement.

**Commencement:** The formal ceremony of conferring degrees at the end of the semester or academic year.

**Concentration:** A subset of courses within a major.

**Concluding period:** A period at the end of a semester when final examinations are given.

**Concurrent enrollment:** A term describing a student who is attending two higher education institutions simultaneously (e.g., GVSU and GRCC or MCC).

**Corequisite:** A requirement, usually another course that must be undertaken at the same time.

**Credit hour:** A unit of academic credit measured in semester hours or quarter hours. One credit hour usually represents one hour of class time per week.

**Credit load:** The total number of credits for which a student registers during a semester or session.

**Credit/no credit:** A method used to evaluate performance in courses, separate from the grade point system.

**Deadline:** The date by which certain information must be received by any given office or unit. (Current deadline dates are listed in the Annual Class Schedule.)

**Dean:** An administrator in charge of a division of a university or college.

**Dean's list:** A public announcement, at the end of each semester, listing students who have achieved a specified grade point average (GPA) or level of achievement established by the dean of the unit.

**Declaration of major/minor:** To state formally one's intention to pursue a specific major or minor, typically done through the university Record's/Registrar's Office.

**Degree analysis:** A report that shows the requirements for specific degree programs and details a student's progress toward completion of the degree.

**Degree-seeking student:** An applicant who has been granted admission to a degree program under full, provisional, or conditional status.

**Drop and add:** The process of making certain changes (dropping and adding classes) in a student's schedule of courses during the first five class days of the semester. Adding courses is possible only in this five-day period. See the class schedule listed on the Web for deadlines to drop courses.

**Dual credit:** An option applying to courses that may be taken for either graduate or undergraduate credit provided the student obtains special permission.

**Elective:** A course that will count as general credit toward a degree but is not a specific program requirement.

**Emphasis:** A defined subset of courses within a major that appears as an official designation on the transcript.

**Encumbrance:** A hold placed on a student's record as a result of an unfulfilled monetary obligation to the university or of a disciplinary action by the university.

**Full-time student:** An undergraduate student taking 12 or more hours each semester, or a graduate student taking nine or more hours each semester. Undergraduates who are planning to complete a bachelor's degree in four years need to average 15 hours per semester.

**General education requirements:** A defined selection of courses from all divisions of the university, making up the liberal arts base of each baccalaureate degree. The General Education Program is a required component of each bachelor's degree.

**Good standing:** A designation that signifies that a student is eligible to continue, to return, or to transfer elsewhere. It implies good academic standing.

**Grade point average (GPA):** A student's scholastic average, computed by dividing total quality points by quality hours attempted.

**Graduate:** One who has received an academic or professional degree; one who has completed the prescribed course of study in any school or institution of higher learning.

**Graduation:** The actions of receiving or conferring an academic degree after all requirements have been met.

**Graduation audit:** The final review of a student's academic record that determines eligibility to graduate.

**Grant:** Financial assistance that is awarded to students and does not have to be repaid, usually based on need.

**Guest student:** A degree student from another college or university who is taking courses at Grand Valley for one semester. The credits earned are usually transferred back to the student's home institution.

**GVSU hybrid online course:** A course that blends online and face-to-face on-campus meetings. At least 50 percent of the instruction and interaction is online.

**GVSU online course:** A course where all of the instruction and interaction is online. There are no face-to-face on-campus meetings.

**GVSU traditional course:** A course where the instruction and interaction is face-to-face on-campus during class meetings. Web technologies may be incorporated into the course delivery.

**High school scholars program:** Concurrent enrollment in high school and college or university courses.

**Honors:** Designation indicated on the university degree and transcript to reflect outstanding scholarship.

**Honors courses:** Special courses offered by the Grand Valley State University Frederik Meijer Honors College designed to offer intellectual challenge and personal attention to particularly able students.

**Incomplete:** The grade I, sometimes granted when a student is temporarily unable to complete course requirements because of unusual circumstances.

**Independent study:** A course of study undertaken by a student under the supervision of one or more faculty members outside the classroom.

**Interdisciplinary:** Designating a combination of subject matter from two or more disciplines within a course or program.

**Internship:** Work in a firm or agency related to a student's major program and/or career plans. Involves earning university credit and may or may not involve receiving payment.

**Issues:** The two-course upper-division component of the General Education Program in which students develop their ability to draw on previous knowledge and experience, collaborate with others, and address problems that connect to important world issues.

**Loan:** Financial assistance to students that must be repaid. Low-interest loans are available and financial need may or may not be a factor.

**Major:** A collection of related courses generally consisting of 30 to 50 semester hours of credit.

**Master's degree:** A degree granted upon the completion of at least one year of graduate-level work beyond the bachelor's degree.

**Michigan residence requirements:** The requirements for identifying or establishing permanent residency in Michigan for tuition assessment purposes.

**Minor:** A collection of courses generally consisting of a minimum of 20 semester hours of credit.

**myPath:** A Web-based tool that provides an opportunity for undergraduate students to monitor the progress to their academic degree.

**Nondegree-seeking student:** A student who has been admitted to a nondegree-seeking category (sometimes referred to as a continuing education student) and is not currently seeking a bachelor's or master's degree.

**Part-time student:** An undergraduate student who takes fewer than 12 hours during a semester or a graduate student who takes fewer than nine hours during a semester.

**Portfolio:** A collection of work (e.g., paintings, writings, etc.) that may be used to demonstrate competency in an academic area.

**Prerequisite:** A requirement, usually the completion of another course, that must be met before a student may register for a course.

**Provost:** A senior academic administrator at an institution of higher education.

**Quality point:** The numerical value given to letter grades. For example an A is equivalent to four points per semester hour, a B to three points, a C to two points, a D to one point, and an F to zero points.

**Readmission:** An admission procedure followed by a student who was previously enrolled at Grand Valley and then dismissed.

**Re-entry:** An enrollment procedure followed by a student who was previously enrolled in good standing at Grand Valley but whose attendance was interrupted for two consecutive semesters, including the summer session.

**Registration:** The process of signing up and paying tuition and fees for courses each semester.

**Residence requirement:** The requirement that the final 30 semester hours of coursework before the bachelor's degree be completed at Grand Valley. Graduate students must complete a minimum of 24 hours in residency at Grand Valley.

**Scholarship:** Financial assistance to students awarded on the basis of academic achievement. Financial need may or may not be a factor.

**Semester:** A unit of time, 15 weeks long, in the academic calendar.

**Semester hour:** The unit of academic credit, usually meaning the pursuit of a subject for one period a week for one semester.

**Senior institution:** An institution of higher education offering baccalaureate programs. Grand Valley is a public senior institution.

**Service-learning:** A method of teaching, learning, and reflecting that combines academic classroom curriculum with meaningful service throughout the community.

**Student employment:** Part-time jobs made available to students with financial need through federally funded programs (work-study) and to students without need through the Student Employment Office.

**Study abroad:** An arrangement by which GVSU students complete part of their degree program studying in another country.

**SWS section:** A section of a Grand Valley course that requires extensive writing to teach students to distinguish writing conventions and expectations in their major field from those in other fields while still recognizing that all writing depends on communicating purposefully with an audience.

**Teachable major:** A state-approved major program for teacher certification at the secondary and/or elementary level.

**Telecourse:** A course offered for credit on WGVU/WGVK-TV, channels 35 and 52.

**Thesis:** An extensive written discourse on a new point of view resulting from research, usually a requirement for an advanced academic degree.

**Time limit:** The length of time within which a graduate degree must be completed. At Grand Valley the time limit is eight years.

**Transcript:** A copy of a student's permanent academic record at a particular institution. This term is also used to identify the financial aid form that indicates the amount and type of financial aid a student received from a college or university.

**Transfer credit:** Credit earned at another accredited institution and accepted toward a Grand Valley degree.

**Tuition:** The amount of money that must be paid for courses based on the number of credits for which one registers.

**Undergraduate:** A university student who has not yet received a first degree.

**Upper division:** Classification of students or courses beyond the second year.

**Withdrawal:** Withdrawal from a course or the university. The grade assigned will depend upon the time in the semester in which the student withdrew.

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- Martin, Jean**, Associate Professor Emerita of Nursing. B.S.N., University of Michigan; M.S., Boston University; Ph.D., Rush University.
- Masselink, Linda**, Senior Librarian Emerita. B.S., Grand Valley State University; A.M.L.S., University of Michigan.
- Mayberry, Robert**, Professor Emeritus of Communications. B.A., Swarthmore College; M.A., Cornell University.
- McCrea, Frances**, Professor Emeritus of Sociology. B.A., Grand Valley State University; M.A., Ph.D., Western Michigan University.
- McGee, J. David**, Associate Professor Emeritus of Honors. B.S., University of Kansas; M.B.A., California State University at Long Beach; M.A., Ph.D., Indiana University.
- McGhee, Betty**, Associate Professor Emerita of Psychology. B.A., University of South Carolina; M.Ed., University of Toledo; Ph.D., University of Chicago.
- Menning, Daleene**, Professor Emerita of Art and Design. B.S., M.S.A., University of Michigan.
- Merkle, Anne W.**, Associate Librarian Emerita. B.A., Hope College; M.S.L., Western Michigan University.
- Morse, Deanna**, Professor Emerita of Communications. B.S., Iowa State University; M.A., Goddard College; M.F.A., School of the Art Institute of Chicago.
- Muraski, Virginia**, Professor Emerita of Mathematics and Computer Science. A.B., B.S., Jacksonville State College; M.A.T., Michigan State University; M.A., University of Illinois; Ph.D., Michigan State University.
- Murray, Diane**, Senior Librarian Emerita. B.A., Hope College; M.S.L., Western Michigan University; M.M., Aquinas College.
- Muskovitz, Rosalyn**, Professor Emerita of Art and Design. B.A., Oakland University; M.A., Michigan State University; M.F.A., Kent State University.
- Neal, William J.**, Professor Emeritus of Geology. B.S., University of Notre Dame; M.A., Ph.D., University of Missouri at Columbia.
- Niemeyer, Glenn A.**, Provost and Vice President for Academic Affairs Emeritus. A.B., Calvin College; M.A., Ph.D., Michigan State University; L.H.D., Grand Valley State University.
- O'Connor, Christine**, Professor Emerita of Psychology. B.A., University of Connecticut; M.A., Ph.D., Michigan State University.
- Orosz, Joel**, Distinguished Professor Emeritus of Public, Nonprofit, and Health Administration. B.A., Kalamazoo College; M.A., Ph.D., Case Western Reserve University.
- Osmun, Gregory**, Associate Professor Emeritus of Education. B.A., M.A., Michigan State University; Ed.D., University of Michigan.
- Ostroot, Nathalie M.**, Professor Emerita of Sociology. B.A., M.A., Ph.D., University of Chicago.
- Pace, Diana**, Associate Dean of Students Emerita. B.A., Duke University; M.A., Ph.D., University of North Dakota.
- Pare, Eileen**, Associate Professor Emerita of Chemistry. B.A., Rosary College; M.S., University of Illinois; Ph.D., University of Windsor.
- Paschke, Richard E.**, Professor Emeritus of Psychology. B.S., University of Illinois; M.A., Northern Illinois University; Ph.D., Purdue University.
- Pettengill, Glenn**, Professor Emeritus of Finance. B.A., Fort Hayes Kansas State University; M.S., University of California, Davis; Ph.D., University of Arkansas.
- Poitras, Ronald**, Associate Professor Emeritus of Geography and Urban Planning. B.A., California State University/Northridge; M.U.P., University of Oregon.
- Pottorff, Donald**, Professor Emeritus of Education. B.S., M.S., Central Missouri State University; Ph.D., Michigan State University.
- Pratt, Philip**, Professor Emeritus of Mathematics. B.A., M.A., Ph.D., Michigan State University.
- Preston, Joseph P.**, Professor Emeritus of History. B.A., Park College; M.S., University of Wisconsin; Ph.D., University of Missouri.
- Randall, Virginia**, Associate Dean of Students Emerita. B.A., M.B.A., Grand Valley State University; Ph.D., Michigan State University.

- Reick, Kay**, Assistant Professor Emerita of Nursing. B.S.N., M.S., University of Michigan.
- Reifel, John**, Professor Emeritus of Economics. B.A., University of Notre Dame; M.A., Ph.D., Michigan State University.
- Reinken, Barbara**, Associate Professor Emerita of Education. B.S., Indiana University; M.S., University of Wisconsin; Ph.D., Michigan State University.
- Richmond, Gary**, Professor Emeritus of Chemistry. G.A., Washington and Jefferson College; Ph.D., The Ohio State University.
- Rivera-Muniz, Pedro**, Associate Professor Emeritus of Mathematics and Statistics. B.A., M.A., Syracuse University.
- Rogers, Joyce A. French**, Associate Professor Emerita of Nursing. B.S.N., Michigan State University; M.S.N. Wayne State University; Ph.D., Michigan State University.
- Rogers, Karel**, Professor Emerita of Biology. B.S., M.S., Ph.D., Michigan State University.
- Rowe, Patricia**, Professor Emerita of Movement Science. B.S., M.A., Central Michigan University; Ph.D., Michigan State University.
- Rudolph, Bennett**, Professor Emeritus of Marketing. B.S., Roosevelt University; M.S., Ph.D., University of Illinois.
- Rynbrandt, Linda**, Associate Professor Emerita of Sociology. B.A., Grand Valley State University; M.A., Ph.D., Western Michigan University.
- Salazar, Laura**, Professor Emerita of Communications. B.S., Wisconsin State University; M.A., Kent State University; Ph.D., University of Michigan.
- Scott, James**, Associate Professor Emeritus of Movement Science. B.S., M.A., P.E.S., Central Michigan University.
- Seeger, Mary**, Professor Emerita of Modern Languages and Literatures. B.A., University of Minnesota; Ph.D., University of Wisconsin.
- Seeger, Wilhelm**, Professor Emeritus of Modern Languages and Literatures. A.B., M.A., University of Michigan; Ph.D., University of Wisconsin.
- Shedd, Joan**, Assistant Professor Emerita of Nursing. B.S., Eastern Mennonite College; M.S.N., University of Colorado.
- Sheline, Mary Ann**, Director Emerita of the Regional Math and Science Center. B.S., Chatham College; M.A. Carnegie Mellon University; Ed.S., University of Nebraska at Kearney.
- Shontz, John**, Professor Emeritus of Biology. B.S.Ed., Edinboro State College; M.A., Miami University; Ph.D., Duke University.
- Shroyer, Jan**, Associate Professor Emerita of Mathematics. B.S., Knox College; M.A.T., Ph.D., Michigan State University.
- Simone, Roberta**, Professor Emerita of English. B.S., Northern Illinois University; M.A., Bowling Green University; Ph.D., University of Illinois.
- Singleton, Harriet**, Senior Counselor Emerita of Counseling and Career Development Center. B.A., M.A., Michigan State University.
- Stark, Gary D.**, Professor Emeritus of History. B.A., Hamline University; M.A., Ph.D., The Johns Hopkins University.
- Stevenson, John**, Professor Emeritus of Physical Therapy. B.A., Vassar College; M.S., The Pennsylvania State University; M.S., Central Michigan University; Ph.D., Indiana University.
- Strickland, James**, Professor Emeritus of Physics. B.S., Franklin and Marshall College; Ph.D., Massachusetts Institute of Technology.
- Swanson, Jane**, Professor Emerita of Social Work. B.A., M.S.W., Ph.D., Michigan State University.
- Tanis, Dave**, Associate Professor Emeritus of Chemistry. B.A., Calvin College; M.S., Western Reserve University.
- Ten Brink, Norman**, Professor Emeritus of Geology. B.S., University of Michigan; M.S., Franklin and Marshall College; Ph.D., University of Washington.
- Ten Eyck, Allan**, Professor Emeritus of Education. A.B., Aquinas College; A.M., Ed.D., University of Michigan.
- Terry, M. Nancy**, Senior Librarian Emerita. A.B., A.M.L.S., University of Michigan.
- Tevebaugh, John**, Professor Emeritus of History. A.B., M.A., Ph.D., University of Illinois.
- Travis, Anthony**, Professor Emeritus of History. B.S., Loyola University of Chicago; M.S., Ph.D., Michigan State University.
- Tucker, Veta Smith**, Professor Emerita of English. B.A., M.A., Michigan State University; A.D., University of Michigan.
- Tyson, Lois**, Professor Emerita of English. B.A., Rutgers University; M.Ed., M.A., Ohio University; Ph.D., The Ohio State University.
- Underwood, Kathleen**, Associate Professor Emeritus of History and Women, Gender, and Sexuality Studies. B.A., University of Colorado; M.A., Ph.D., University of California at Los Angeles.
- VanAntwerp, Jill**, Associate Professor Emerita of English. B.A., M.A., Ph.D., Michigan State University.
- Van Steeland, Ronald**, Vice President for Finance and Administration Emeritus. B.A., Michigan State University; L.H.D., Grand Valley State University.
- VanderWerf, Marilyn**, Assistant Professor Emerita of Nursing. B.S.N., Northern Illinois University; M.S.N., Grand Valley State University.
- Waggoner, Kathryn**, Senior Librarian Emerita. B.A., Ball State University; M.A.T., M.L.S., Indiana University.
- Ward, Ronald**, Director Emeritus of the Annis Water Resources Institute. Sc.D., The Johns Hopkins University.
- Watson, Robert**, Associate Professor Emeritus of English. B.A., Princeton University; M.A., Ph.D., University of Wisconsin – Madison.
- Wenner, Wendy**, Dean Emerita of the Brooks College of Interdisciplinary Studies. B.A., Carlton College; M.A.T., Northwestern University; Ph.D., Marquette University.
- Westra, Helen**, Associate Professor Emerita of English. B.A., Calvin College; M.A., University of Michigan; Ph.D., University of Notre Dame.
- Whitehill, Sharon**, Professor Emerita of English. B.A., Grand Valley State University; M.A., Ph.D., University of Illinois.
- Williams, Donald**, Professor Emeritus of Sociology. B.A., Western Michigan University; M.A., Michigan State University; Ph.D., Western Michigan University.
- Williams, Sr., Donald**, Dean Emeritus of Minority Affairs. B.S., Eastern Michigan University; M.A., West Virginia University.
- Wissink, John**, Associate Professor Emeritus of Education. B.A., Calvin College; M.A., Western Michigan University; Ph.D., University of Arizona.
- Wojciakowski, Claudia Sowa**, Professor Emerita of Leadership and Learning. B.S., M.A., Ph.D., Michigan State University.
- Wolter, James**, Professor Emeritus of Marketing. B.A., Indiana University; M.S., Ball State University; M.B.A., Indiana University; Ph.D., Michigan State University.
- Yackish, Thomas**, Associate Professor Emeritus of Engineering. B.S., Purdue University; M.S., University of Illinois.
- Zaugra, John**, Senior Counselor Emeritus of Counseling and Career Development Center. B.S., Southern Illinois University; M.S., Illinois State University; M.A., Roosevelt University; Ed.D., University of Montana.

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**Laurel Davis**, Reading Intervention Specialist. B.A., Grand Valley State University.

**Wendy Miller**, Reading Intervention Supervisor. B.A., University of Iowa; M.A., Grand Valley State University.

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**Alissa Thelen**, Assessment Specialist. B.A., University of Minnesota at Duluth; M.Ed., Grand Canyon University.

**Amirah Vosburgh**, Manager of Programs and Marketing. B.S., Grand Valley State University.

**Jill Weber**, Reading Intervention Specialist. B.S., Grand Valley State University.

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**Bonnie Bowen**, Assistant Vice President for Academic Affairs. B.B.A., Grand Valley State University.

**Christopher Plouff**, Assistant Vice President for Academic Affairs. B.S., M.S., Michigan Technological University; Ed.D., Eastern Michigan University.

**Daniel Weller**, Equipment and Technical Support Manager. B.A., M.S., Grand Valley State University.

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**Marizel Davila Figueroa**, Research Compliance Specialist. B.A., Purdue University; M.S., Ph.D., University of Illinois at Urbana – Champaign.

**Benjamin Vesper**, Research Compliance Specialist. B.S., Central Michigan University; M.S., Ph.D., Northwestern University; M.B.A., University of Illinois at Chicago.

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**Muriel Lutes**, Director of Ronald E. McNair Scholars Program/TRiO. B.Ph., Grand Valley State University; M.A., M.S.W., Western Michigan University.

## Research Protections Program

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**Christine Rener**, Vice Provost for Instructional Development and Innovation/Director. B.S., Michigan State University; Ph.D., Northwestern University.

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**Marlene Kowalski-Braun**, Associate Vice Provost for Student Affairs and Inclusion and Equity. B.S., Central Michigan University; M.A., Ball State University; Ph.D., Western Michigan University.

**Steven Lipnicki**, Assistant Dean of Students. B.S., State University of New York College at Oneonta; M.A., Michigan State University.

**Aaron Haight**, Assistant Dean of Students. B.A.A., Central Michigan University; M.P.A., Grand Valley State University; Ed.D., Eastern Michigan University.

**Takeelia Garrett-Lynn**, Student Ombuds. B.A., M.Ed., Grand Valley State University.

**Michael Szydlowski**, Student Intervention Support Coordinator. B.A., M.A., Central Michigan University.

## Campus Recreation

**Katharine Harmon**, Director of Campus Recreation. B.S., Northern Michigan University; M.A., Central Michigan University.

**Joseph Bitely**, Assistant Director of Campus Recreation. B.S., Western Michigan University.

**Amy Campbell**, Associate Director of Campus Recreation. B.S., Hillsdale College; M.Ed., Grand Valley State University.

**Kayla Cupples**, Assistant Director of Marketing and Special Events. B.B.A., Grand Valley State University.

**Mitchell Eastlick**, Competitive Sports Coordinator. B.A., San Jose State University; M.S., Ohio University.

**Eric Garvelink**, Assistant Director of Campus Recreation. B.S., M.Ed., Grand Valley State University.

### Career Center

**Troy Farley**, Director of Career Center. B.S., Grand Valley State University.

**Christopher Babbitt**, Assistant Director of Career Center. B.A., Michigan State University; M.Ed., Grand Valley State University; M.A., Western Michigan University.

**Rachel Becklin**, Associate Director of Career Center. B.A., Western Michigan University; M.Ed., Grand Valley State University.

**Stephanie Dombrowski**, Assistant Director of Career Center. B.S., Grand Valley State University; M.A., Western Michigan University.

**Lisa Knapp**, Associate Director of Career Center. B.A., Hope College; M.Ed., Grand Valley State University.

**Ginger Lange**, Associate Director of Career Center. B.S., M.A., Michigan State University.

**Carlos Martinez Cruz**, Assistant Director of Career Center. B.A., Michigan State University.

**Susan Proctor**, Employer Development Manager. B.S., Grand Valley State University.

**Megan Riksen**, Assistant Director of Career Center. B.A., University of Michigan; M.Ed., Grand Valley State University.

**Kristie Scanlon**, Employer Relations Coordinator. B.S.W., Grand Valley State University; M.S.W., Western Michigan University.

**Lori Staggs**, Assistant Director of Career Center. B.A., Hope College; M.A., California State University, San Bernardino.

### Children's Enrichment Center

**Sarah Lord**, Program Coordinator/Lead Teacher. B.A., University of Southern Indiana.

### Housing and Residence Life

**Andrew Beachnau**, Associate Vice Provost for Student Affairs and Director of Housing and Health Services. B.A., Alma College; M.Ed., Grand Valley State University; Ph.D., Michigan State University.

**Colleen Lindsay-Bailey**, Associate Director, Residence Education. B.S., M.A., Michigan State University.

**Bradley Bender**, Living Center Director. B.A., Central Michigan University; M.S.W., Michigan State University.

**Joseph Courtade**, Living Center Director. B.A., Grand Valley State University; M.A., New York University.

**Emily Davis**, Living Center Director. B.A., Central Michigan University; M.Ed., Grand Valley State University.

**Matthew Delaney**, Living Center Director. B.A., Adrian College; M.A., Michigan State University.

**Dexter Earney**, Living Center Director. B.A., Webster University; M.Ed., Grand Valley State University.

**Kristen Evans**, Assistant Director of Housing. B.S., Western Michigan University; M.Ed., Grand Valley State University.

**Abigail Forbes**, Financial Manager of Housing. B.A., M.A., Michigan State University.

**Melanie Grover**, Assistant Director of Housing. B.S., M.Ed., Grand Valley State University.

**Jamillya Hardley**, Living Center Director. B.A., University of Michigan; M.Ed., Grand Valley State University.

**Brenda Mitchner**, Associate Director of Housing. B.S., M.P.A., Grand Valley State University.

**Jasmine Padin**, Living Center Director. B.S., M.Ed., Grand Valley State University.

**Adam Tate**, Facilities Manager. B.B.A., Western Michigan University.

**Brandie Tenney**, Assistant Director of Housing. B.B.A., Western Michigan University; M.Ed., North Carolina State University.

**Elizabeth Thimmesch-Harbold**, Assistant Director of Housing. B.S., M.Ed., Grand Valley State University.

**Elizabeth Tomaro**, Living Center Director. B.S., Grand Valley State University.

**James Van Nada**, Living Center Director. B.A., Oakland University; M.A., Bowling Green State University.

**Elizabeth Williams**, Living Center Director. B.A., Central Michigan University; M.Ed., Grand Valley State University.

**Dena Willis**, Occupancy Manager. B.S., Central Michigan University; M.Ed., Grand Valley State University.

**Kellie Zachman**, Living Center Director. B.A., M.Ed., Grand Valley State University.

### Student Academic Success Center (SASC)

**Michael Messner**, Assistant Vice Provost for Student Success. B.S., M.Ed., Grand Valley State University.

**Ariel Arnold**, Program Advisor, TRIO Student Support Services. B.A., M.A., Western Michigan University.

**Damon Arnold**, Director, Laker Academic Success Center/Special Associate to Athletic Director. B.A., M.A., California State University at Chico; M.S., University of Idaho; Ph.D., Washington State University.

**Nykia Gaines**, Director, TRIO Student Support Services STEM Program. B.S., M.Ed., Grand Valley State University; Ph.D., Bowling Green State University.

**Alicia Lloyd**, Senior Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Care McLean**, Program Services Coordinator, TRIO Student Support Services. B.A., Michigan State University; M.Ed., Grand Valley State University.

**Marnie Parris-Bingle**, Program Advisor, TRIO Student Support Services. B.S., Central Michigan University; M.Ed., Grand Valley State University.

**Jackie Rautio**, Associate Director of Student Academic Success Center. B.S., Central Michigan University; M.A., Western Michigan University.

**Linda Rettig**, Program Advisor, TRIO Student Support Program. B.A., Aquinas College; M.A., University of Phoenix; M.A., Grand Valley State University.

**Alexis Schewe**, Senior Academic Advisor. B.S., Central Michigan University; M.S., St. Cloud State University.

**Karel Swanson**, Coordinator of the Structured Learning Assistant Program and Senior Academic Advisor. B.A., M.Ed., Grand Valley State University.

**Sulari White**, Senior Associate Director of Student Academic Success Center. B.A., Calvin College; M.B.A., Western Michigan University.

**Marqus Wright**, Director, TRIO Student Support Services. B.S., M.S., Illinois State University.

### Student Life and Event Services

**Robert Stoll**, Associate Dean of Student Life. B.S., M.A., Northern Michigan University.

**Melissa Baker-Boosamra**, Associate Director of Student Life. B.A., M.P.A., Grand Valley State University.

**Kelly Arrand**, Student Life Promotions Coordinator. B.F.A., Grand Valley State University.

**John Bancheri**, Head Men's and Women's Rowing Coach. B.A., University of Charleston; M.A., Marietta College.

**Elizabeth Collver**, Assistant Director of Student Life. B.A., The Ohio State University; M.S., Texas A&M University.

**Santiago Gayton**, Assistant Director for Fraternity and Sorority Life. B.A., Grand Valley State University; M.A., University of the Pacific.

**Valerie Guzman**, Associate Director of Student Life. B.A., Central Michigan University; M.Ed., Grand Valley State University.

**Ryan Neloms**, Assistant Director of Events Services. M.S.W., Grand Valley State University.

**Kellie Pnacek-Carter**, Assistant Director of Events Services. B.A., Grand Valley State University.

## Administrative Directory

**Eric Stevens**, Student Organization Development Coordinator. B.A., Spring Arbor University; M.Ed., Grand Valley State University.

**LeaAnn Tibbe**, Associate Director of Student Life. B.A., M.Ed., Grand Valley State University

### University Counseling Center

**Amber Roberts**, Director of University Counseling Center. B.S., Grand Valley State University; M.A., Michigan State University; Ph.D., Purdue University.

**Brian Bossick**, Psychologist and Assistant Director of University Counseling Center. B.S., John Carroll University; M.A., Ph.D., University of Akron.

**Nicholas Debenardi**, Psychologist. B.S., Michigan State University; M.A., Ph.D., University of Missouri – Kansas City.

**Bonnie Dykstra**, Psychologist/Coordinator of Alcohol and Other Drug Prevention Services. B.S., M.A., Central Michigan University; Ph.D., Walden University.

**Abraham Eapen**, Psychologist. B.A., Mahatma Gandhi University; M.A., Wright State University; Psy.D., Wright State University.

**Eric Klingensmith**, Psychologist and Assistant Director of University Counseling Center. B.S., University of Central Florida; Psy.D., Antioch University.

**Monica Lackups-Fuentes**, Psychologist. B.A., St. Mary's University; M.S., Eastern Michigan University.

**Nicole Marganti**, Psychologist. B.A., Alma College; M.A., Psy.D., University of Indianapolis.

**Latrece McDaniel**, Social Worker. B.S., B.A., M.S.W., Michigan State University.

**Pamela Miller**, Psychologist and Associate Director of University Counseling Center. B.S., Michigan State University; M.S.W., Washington University; Ph.D., Georgia State University.

**Mark Sampson**, Psychologist and Associate Director of University Counseling Center. B.A., M.A., Ph.D., The Ohio State University.

**Melissa Selby-Theut**, Social Worker. B.A., Concordia University; M.S.W., Grand Valley State University.

**Meghan Veltri**, Career Development Specialist. B.S., M.Ed., Grand Valley State University.

**Kathy Watt**, Psychologist/Nurse Practitioner. B.S., Grand Valley State University; M.A., Western Michigan University; M.S.N., Michigan State University; Ph.D., Andrews University.

**Leslie White**, Clinical Social Worker. B.A., Calvin College; M.S.W., Western Michigan University.

### University Libraries

**Annie Belanger**, Dean of University Libraries. B.A., York University; M.L.I.S., University of Western Ontario.

**Dorothy Alt**, Acquisitions/Cataloging Manager. B.A., Grand Valley State University.

**Robert Beasecker**, Director of Special Collections. A.B., Hillsdale College; A.M.L.S., University of Michigan.

**Sarah Beaubien**, Head of Collections and Scholarly Communications. B.S. Northern Michigan University; M.L.S., Indiana University.

**Andrea Benefiel**, Archivist for Collection Management. B.A., Ball State University; M.L.I.S., Simmons College.

**Jeffrey Daniels**, Interim Associate Dean of Technology and Information Services; Head of Technical Services and Electronic Resource Management. B.S., Grand Valley State University; M.L.I.S., Wayne State University.

**Jason Durham**, Operations Manager, Pew Libraries. B.S., Grand Valley State University.

**Erin Fisher**, Library Program Manager. B.A., Truman State University; M.L.I.S., University of Illinois – Champaign.

**Elizabeth Martin**, Head of Professional Programs. B.A. Western Michigan University; M.L.I.S. Wayne State University.

**Brian Merry**, Head of Access Services, Pew Campus Libraries. B.S., Grand Valley State University.

**Samantha Minnis**, Evening Operations and User Services Manager. B.A., Central Michigan University; M.S.L.I.S., Kent State University.

**Mary Morgan**, Library Technology Manager. B.S., Jordan College Energy Institute.

**Mary O'Kelly**, Head of Instructional Services. B.A., University of Michigan; M.L.I.S., University of Wisconsin.

**Jacklyn Rander**, Publishing Services Manager. B.A., Grand Valley State University.

**Patrick Roth**, Head of Technology and Systems. B.S., Grand Valley State University; M.L.I.S., Wayne State University.

**Leigh Rupinski**, Archivist for Public Services and Community Engagement. B.A., Grand Valley State University; M.S., University of Michigan.

**Lynn Sheehan**, Interim Associate Dean of Research and Instruction; Head of Liberal Arts Programs. B.G.S., University of Michigan; M.L.I.S., University of South Carolina.

**Jennifer Torreano**, Library Research Consultant Manager. B.A., Grand Valley State University.

**Caralee Witteveen-Lane**, Library Services Manager. B.A., Calvin College; M.A., DePaul University; A.M.L.S., Wayne State University.

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**Miles Jonassen**, Simulation Operations Specialist. B.A., Central Michigan University; M.M., Aquinas College.

**Kimberly Muma**, Health Compliance Coordinator. B.S.N., Grand Valley State University; B.S., M.S., Ferris State University.

**Lisa Naymick**, Clinical Simulation and Learning Resource Specialist. B.A., Michigan State University; M.S., Marquette University.

**Warren Olson**, Health Compliance Officer. B.S.N., Grand Valley State University.

**Brenda Pawl**, Director of Interprofessional Initiatives and Special Projects. B.S.N., M.S.N., Grand Valley State University.

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**Anne Hiskes**, Dean of the Brooks College of Interdisciplinary Studies. B.A., Hope College; M.A., Ph.D., Indiana University.

**Craig Benjamin**, Director of the Global Institute for Big History. B.A., Ph.D., Macquarie University.

**Steeve Buckridge**, Director of Area and Global Studies. B.A., Barry College; M.A., University of Miami; Ph.D., The Ohio State University.

**Melanie Shell-Weiss**, Chair, Liberal Studies Department. B.A., University of Michigan; M.A., Ph.D., Michigan State University.

**Norman Christopher**, Executive Director of the Sustainable Community Development Initiative. B.A., University of North Carolina; M.B.A., University of Connecticut.

**Danielle DeMuth**, Chair, Women, Gender, and Sexuality Studies. B.A., Heidelberg College; M.A., Ph.D., University of Toledo.

**Lindsay Ellis**, Director of Writing Across the Curriculum and Faculty Writing Support. B.A., Wheaton College; M.A., University of Chicago; Ph.D., University of Michigan.

**Open**, Program Coordinator of Middle Eastern Studies.

**Carol Griffin**, Director of General Education. B.S., North Dakota State University; M.S., Indiana University; M.S., Ph.D., State University of New York.

**Richard Hiskes**, Program Director, Human Rights Minor. A.B., Hope College; M.A., Ph.D., Indiana University.

**Yumiko Jakobcic**, Campus Sustainability Coordinator. B.S., Grand Valley State University; M.E.M., Duke University.

**Jennifer Jameslyn**, Director of Integrative Learning and Advising. B.A., Kalamazoo College; M.A., University of Iowa.

**Patrick Johnson**, Director of Fred Meijer Center for Writing and Michigan Authors. B.A., M.A., Washington State University.

**Sarah King**, Program Coordinator of Religious Studies. B.S., University of Guelph; M.A., Wilfrid Laurier University; Ph.D., University of Toronto.

**Regina McClinton**, Director of the Intercultural Training Certificate. B.A., University of California – Riverside; Ph.D., University of California – Berkeley.

**Louis Moore**, Program Coordinator of African/African – American Studies. B.A., M.A., California State University – Sacramento; Ph.D., University of California – Davis.

**Kelly Parker**, Program Director of Environmental Studies. B.A., Texas A&M University; M.A., Ph.D., Vanderbilt University.

**Melanie Rabine**, Writing Center Specialist. B.A., Grand Valley State University.

**Open**, Program Coordinator of East Asian Studies and Chinese Studies.

**Kimberly McKee**, Director of the Kutsche Office of Local History. B.A., George Washington University; M.Sc., London School of Economics; Ph.D., Ohio State University.

**Ellen Schendel**, Associate Dean, Brooks College of Interdisciplinary Studies. B.A., Birmingham Southern College; M.A., Florida State University; Ph.D., University of Louisville.

**David Stark**, Program Coordinator of Latin American Studies. B.A., M.A., Ph.D., Indiana University.

**Jonathan White**, Executive Director of the Homeland Defense Initiative. B.A., M.A., Western Michigan University; M.Div., Western Theological Seminary; Ph.D., Michigan State University.

**Barbara and Stuart Padnos International Center**

**Mark Schaub**, Chief International Officer and Executive Director of Padnos International Center. B.A., Lakeland College; M.F.A., Wichita State University; Ph.D., Purdue University.

**Rebecca Hambleton**, Director of Study Abroad and International Partnerships. B.S., M.Ed., Grand Valley State University.

**Alissa Lane**, Coordinator of Outreach and International Students. B.F.A., Michigan State University.

**Elena Selezneva**, Intercultural Faculty/Coordinator of Faculty-led Programs. M.A., Michigan State University.

**Meaghann Smith**, Study Abroad Advisor. B.A., M.Ed., Grand Valley State University.

**Katherine Stoetznner**, Director of International Student and Scholar Services. B.A., Kalamazoo College; M.Ed., Grand Valley State University.

**Center for Adult and Continuing Studies**

**Simone Jonaitis**, Executive Director of the Center for Adult and Continuing Studies. B.A., University of Michigan; M.A., Western Michigan University; Ph.D., Michigan State University.

**Leslie Bateman**, Director of Professional Development Partnership. B.S., Jacksonville University; M.Ed., Grand Valley State University.

**Shawntain Jenkins**, Director, Muskegon Center Program. B.B.A., M.P.A., Grand Valley State University.

**Lisa Miller**, Director, Meijer Holland Campus. B.A., Alma College; M.Ed., Grand Valley State University.

**Shannon Owen**, Director of Northern Michigan Programs. B.S., M.A., Eastern Michigan University.

**Eric Packer**, Director of Distance Education. A.A., Grand Rapids Junior College; B.S., Ferris State University; M.Ed., Wayne State University.

**Judy Palmer**, Coordinator, Grand Forum. B.A., Northwestern University.

**Melissa Peraino**, Director of Educational Outreach. B.A., Alma College; M.A., Ball State University.

**Katherine VanDerKolk**, Student Services Coordinator, Meijer Holland Campus. B.A., Hope College; M.Ed., Grand Valley State University.

**Frederik Meijer Honors College**

**Jeffrey Chamberlain**, Director, Frederik Meijer Honors College. B.A., Bryan College; M.A., Trinity College; Ph.D., University of Chicago.

**Coeli Fitzpatrick**, Chair, Frederik Meijer Honors College. B.A., Regis University; M.A., Ph.D., Binghamton University.

**Elizabeth Lambert**, Director of Fellowships. B.A., Agnes Scott College; M.A., Ph.D., Indiana University at Bloomington.

**Megan Marshall**, Academic and Enrichment Advisor. B.A., University of Rhode Island; M.A., Loyola University – Chicago.

**Kelly McDonell**, Honors Academic and Enrichment Advisor. B.A., M.Ed., Grand Valley State University.

### College of Community and Public Service

**George Grant, Jr.**, Dean of the College of Community and Public Service. B.S.W., Marygrove College; M.S.W., Grand Valley State University; Ph.D., Western Michigan University.

**Paul Stansbie**, Associate Dean. B.S., Southern New Hampshire University; M.B.A., University of Nottingham; Ph.D., The University of Plymouth.

**Mark Hoffman**, Associate Dean. B.A., College of Wooster; M.A., Ph.D., Cleveland State University.

**Ruth Stegeman**, Assistant Dean and Director of Community Engagement. B.S., Calvin College; M.A., Western Michigan University.

**Kathleen Bailey**, Director, School of Criminal Justice. B.S., Central Michigan University; M.A., Ed.D., Western Michigan University.

**Robin Smith-Colton**, Coordinator. B.S., M.S.W., Grand Valley State University; Ph.D., Loyola University – Chicago.

**Amanda Clark**, Academic Advisor. B.S., Grand Valley State University; M.Ed., University of South Carolina.

**Breeann Gorham**, Director of CCPS Undergraduate Advising Center. B.S., M.A., Central Michigan University.

**Dianne Green-Smith**, Director of School of Social Work. B.A., Xavier University; M.S.W., Tulane University; Ph.D., Loyola University – Chicago.

**Richard Jelier**, Chair, Department of the School of Public, Nonprofit, and Health Administration. B.A., B.S., M.A., Ph.D., Michigan State University.

**Anne London**, Senior Academic Advisor. B.S., M.P.A. M.Ed., Grand Valley State University.

**Cray Mulder**, Director, M.S.W. Program. B.A., Calvin College; M.S.W., Grand Valley State University; Ph.D., University of Illinois at Urbana – Champaign.

**Deborah Ronk**, Field Education Coordinator. M.S.W., B.S., Central Michigan University; M.S.W., Grand Valley State University.

**Kathleen Scheuerle**, Field Education Coordinator. B.S.W., B.A., Hope College; M.S.W., Grand Valley State University.

**Michael Sciarini**, Chair, Department of Hospitality and Tourism Management. B.S., M.A., Ph.D., Michigan State University.

**Shantonya Scott**, Academic Advisor. B.B.A., Saginaw Valley State University; M.B.A., Davenport University.

**Amanda Stansbie**, HTM Internship Coordinator. B.S., Southern New Hampshire University.

**Williamson Wallace**, Director of Criminal Justice Training. B.S., University of North Carolina – Charlotte; J.D., Thomas M. Cooley Law School.

**Quincy Williams**, Undergraduate and Internship Program Coordinator. B.A., Missouri Valley College; M.A., Lindenwood University.

## Administrative Directory

### Dorothy A. Johnson Center for Philanthropy

**Kyle Caldwell**, Executive Director. B.S., M.A., Western Michigan University.

**Teresa Behrens**, Director of the Institute for Foundations and Donor Learning. B.A., Case Western Reserve University; M.S., Ph.D., North Carolina State University.

**Julie Couturier**, Financial Assistant. B.S., Central Michigan University.

**Matthew Downey**, Nonprofit Services Program Director. B.S., Butler University; M.P.A., Grand Valley State University.

**Amber Erickson**, Research Manager. B.A., M.S.N., University of Michigan.

**Patricia Flannery Robinson**, Associate Director for Special Projects, Community Research Institute. B.S., M.P.A., Grand Valley State University.

**Jason Franklin**, W.K. Kellogg Chair for Community Philanthropy. B.A., George Washington University; M.S., New School University; Ph.D., New York University.

**Beverly Grant**, Associate Director. B.A., Grambling State University; M.S.W., Atlanta University.

**Jerry Johnson**, Director of Community Research Institute. B.A., Columbia Pacific University; M.S.W., Grand Valley State University; Ph.D., Western Michigan University.

**Michael Moody**, Frey Chair for Family Foundations and Philanthropy. B.A., Indiana University; M.A., University of Chicago; Ph.D., Princeton University.

**Patricia Nanzer**, Associate Director for Special Projects, Community Research Institute. B.S., M.P.A., Grand Valley State University.

**Adriana Paz Santos**, Senior Database Administrator, Community Research Institute. B.S., Universidad Francisco Marroquin; M.S., Grand Valley State University.

**Jodi Petersen**, Director of Community Research Institute. B.A., University of Michigan; M.A., Ph.D., Michigan State University.

**Jeremy Pyne**, GIS Specialist, Community Research Institute. B.S., M.P.A., Grand Valley State University.

**Melyssa Tsai**, Research Manager. B.A., Occidental College; M.P.H., University of Michigan.

### College of Education

**Barry Kanpol**, Dean of the College of Education. B.A., Tel Aviv University; M.A., Ph.D., Indiana University – Purdue University at Fort Wayne.

**Joanna Allerhand**, Assistant Director, Center for Educational Partnerships. B.S., Northwestern University; M.S., Indiana University.

**Aliya Armstrong**, Director of the TRIO Teacher Preparation Student Support Services. B.A., M.Ed., Western Michigan University; M.Ed., Grand Valley State University.

**Caryn King**, Associate Dean of the College of Education. B.A., Alfred University; M.A., Slippery Rock University; Ph.D., University of Pittsburgh.

**David Bair**, Director of the Center for Educational Partnerships and Interim Chair for Educational Foundations. B.A., The College of Wooster; Ed.D., University of Michigan.

**Suzanne C. Bierlein**, Assistant to the Dean of Academic Scheduling and Enrollment. B.A., M.Ed., Grand Valley State University.

**Joshua Brandsen**, Director of TRiO Upward Bound. B.S., M.Ed., Grand Valley State University.

**Margarita Chappell**, Program Advisor, TRIO Upward Bound. B.A., Western Michigan University; M.S.W., University of Michigan.

**Jay Cooper**, Department Chair for Educational Leadership and Counseling. B.S., Oakland University; M.S., Southern Illinois University; Ed.D., Western Michigan University.

**Amy Dunn**, Educational Specialist Student Services Coordinator. B.S., Aquinas College; M.Ed., Grand Valley State University.

**Alexander Jacobsson**, Assistant Director of Administrative Services. B.A., Aquinas College.

**Amy Jasinski**, Assistant Director of the Student Information and Services Center. B.A., Central Michigan University; M.A., Spring Arbor College.

**Paula Lancaster**, Department Chair for Teaching and Learning. B.S., Western Illinois University; M.S., Northern Illinois University; Ph.D., University of Kansas.

**Sean Lancaster**, Department Chair for Literacy and Technology. B.S., M.S., Ph.D., University of Kansas.

**Sarah Lopez**, Director of TRIO Educational Talent Search. B.M., University of Miami; M.P.A., Grand Valley State University.

**Sharon Mah**, Associate Director, Center for Educational Partnerships. B.F.A., Michigan State University; M.S., Teachers College, Columbia University.

**Eutimio Marroquin**, Assistant Director of TRIO Educational Talent Search. B.S., Grand Valley State University; M.A., Central Michigan University.

**Denise McConnell-Brown**, Field Placement Coordinator, Student Information and Services Center. B.S., Central Michigan University; M.Ed., Grand Valley State University; Western Michigan University.

**Lisa Rene Norris**, Field Placement Coordinator, Student Information and Services Center. B.S., Wayne State University; M.Ed., Ed.S., Grand Valley State University.

**Thomas Owens**, Director of the Student Information and Services Center. B.A., M.A., Michigan State University.

**Clayton Pelon**, Associate Director of the Center for Educational Partnerships. B.A., M.A., Michigan State University.

**Michele Shannon-Wildt**, Coordinator of Graduate Field Practica and Advisor, Student and Information Services Center. B.S., Michigan State University; M.A., Western Michigan University; M.Ed., Grand Valley State University.

**Jesus Solis**, Program Advisor, TRIO Educational Talent Search. B.A., M.A., Eastern Michigan University.

**Kalee Steffens**, Program Advisor, TRIO Teacher Preparation Student Support Services. B.A., M.Ed., Grand Valley State University.

**Pia Thelen**, Associate Director of Graduate Programs, Student and Information Services Center. B.B.A, M.Ed., Grand Valley State University.

**Casey Thelenwood**, Director of Administrative Services. B.A., University of Michigan; M.Ed., Grand Valley State University.

**Keith Vree**, Associate Director of Undergraduate Programs, Student Information and Services Center. B.A., Hillsdale College; M.A., Central Michigan University.

**Brian Williams**, Field Placement Coordinator, Student Information and Services Center. B.A., Michigan State University; M.A., Western Michigan University.

### College of Health Professions

**Roy Olsson, Jr.**, Dean of the College of Health Professions. B.S., M.S., Kansas State College of Pittsburg; Ph.D., University of Oregon.

**Theresa Bacon-Baguley**, Associate Dean of the College of Health Professions. B.S.N., Michigan State University; Ph.D., Wayne State University.

**Teresa Beck**, Associate Dean of the College of Health Professions. B.S., Indiana University; M.S., Florida State University; Ph.D., University of North Texas.

**Andrew Booth**, Chair, Physician Assistant Studies. B.S., M.S., Central Michigan University.

**Ranelle Brew**, Chair, Public Health. B.S., Southern Connecticut State University; M.A., M.S., Ed.D., Columbia University.

**Michelle Cronk**, Senior Academic Advisor. B.A., Siena Heights University; M.Ed., Grand Valley State University.

**Jennie Glynn**, Academic Advisor, Student Services. B.S., Grand Valley State University; M.A., Central Michigan University.

**Julie Hall**, Associate Dean of the College of Health Professions. B.S., Ferris State University; M.S., Grand Valley State University.

**Dan Halling**, Chair, Communication Sciences and Disorders. B.S., Utah State University; M.A., University of Northern Colorado; Ph.D., Indiana University.

**Brianne Perez**, Senior Academic Advisor. B.A., M.Ed., Grand Valley State University.

**Michael Saldana**, Academic Advisor, Student Services. B.A., M.Ed., Grand Valley State University.

**Chad Sutcliffe**, Chair, Allied Health Sciences. B.A., Cornerstone University; M.Ed., M.H.A., Grand Valley State University.

**Scott Truskowski**, Interim Chair, Occupational Science and Therapy. B.S., M.S., Grand Valley State University.

**Daniel Vaughn**, Chair, Physical Therapy. B.S., East Carolina University; M.O.M.T., Ola Grimsby Institute; Ph.D., Michigan State University.

**J. Randy Wyble**, Chair, Diagnostic and Treatment Sciences. B.S., M.S., Michigan State University.

**Darlene Zwart**, Director of College of Health Professions Student Services. B.A., Calvin College; M.Ed., Grand Valley State University.

### College of Liberal Arts and Sciences

**Frederick Antczak**, Dean of the College of Liberal Arts and Sciences. B.A., University of Notre Dame; M.A., Ph.D., University of Chicago.

**Gretchen Galbraith**, Associate Dean for Faculty Resources and Scheduling. B.A., Connecticut College; M.A., Ph.D., Rutgers University.

**Zachary Hancock**, Science Computing Support Specialist. B.B.A., Grand Valley State University.

**Monica Johnstone**, Director of CLAS Communications and Advancement. B.A., M.A., Ph.D., University of California at Berkeley.

**Michelle McCloud**, Assistant Dean for Finance and Project Management. B.B.A., M.B.A., Davenport University.

**Shaily Menon**, Associate Dean for Professional Development and Administration. B.Sc., M.Sc., Bombay University; M.S., University of South Carolina; Ph.D., The Ohio State University.

**Aaron Perry**, Director of Laboratory Support. B.S., Central Michigan University.

**Elizabeth Schaner**, Assistant Dean for Advising and Student Services. B.A., Aquinas College; M.Ed., Grand Valley State University.

**James Seufert**, Laboratory Safety Specialist. B.S., Purdue University.

**Kevin Tutt**, Assistant Dean of Curriculum, Pedagogy, and Academic Opportunity. B.S., M.M., Ph.D., The Pennsylvania State University.

### Anthropology Department

**Deana Weibel**, Chair. B.A., University of California – Irvine; M.A., Ph.D., University of California – San Diego.

**Wesley Jackson**, Laboratory Supervisor. B.S., Grand Valley State University.

### Autism Education Center

**Jana Benjamin**, Grant Project Manager. B.A., J.D., University of Michigan.

**Kelly Dunlap**, Autism Training and Intervention Specialist. B.S., M.A., Psy.S., Central Michigan University.

**Kellie Fitzgerald**, Project Coordinator of Logistics and Communications. B.A., North Central College.

**Maureen Ziegler**, Autism Training and Intervention Specialist. B.S., M.S., Slippery Rock University; Ed.Spec., Eastern Michigan University.

### Biology Department

**Neil MacDonald**, Chair. B.S., University of Michigan; M.S., Ph.D., Michigan State University.

**Jodi DenUyl**, Laboratory Supervisor. B.S., M.S., Grand Valley State University.

**Christina Hipshier**, Greenhouse Supervisor. B.S., Michigan State University.

**Diane Laughlin**, Lead Laboratory Supervisor. B.S., Michigan Technological University.

**Star Santiago**, Laboratory Supervisor. B.S., University of Michigan.

### Biomedical Sciences Department

**Dan Bergman**, Chair. B.S., Ph.D., Bowling Green State University.

**Jeffrey Kozal**, Laboratory Supervisor, Anatomy and Physiology. B.S., Michigan State University.

**Joshua Stickney**, Lead Laboratory Supervisor, Microbiology. B.A., B.S., M.S., Grand Valley State University.

**Kimberly Wieber**, Laboratory Supervisor, Gross Anatomy. B.S., Michigan State University; M.S., College of Charleston.

### Cell and Molecular Biology Department

**Mark Staves**, Chair. B.S., M.S., Ph.D., University of Texas at Austin.

**Jodi DenUyl**, Laboratory Supervisor. B.S., M.S., Grand Valley State University.

**Dell Paielli**, Laboratory Supervisor. B.S., Eastern Michigan University.

### Chemistry Department

**George McBane**, Chair. B.S., North Carolina State University; Ph.D., Cornell University.

**Michelle DeWitt**, Laboratory Supervisor. B.S., Aquinas College.

**David Hikade**, Assistant Laboratory Supervisor. B.S., Calvin College; M.S., Ph.D., University of Michigan.

**James Krikke**, Laboratory Supervisor. B.S., Calvin College; M.S., Lehigh University.

**Karen Matchett**, Laboratory Supervisor. B.S., Georgia Institute of Technology.

**Jessica Schoenherr**, Laboratory Supervisor. B.S., Grand Valley State University; Ph.D., Purdue University.

**Mary Jo Smith**, Laboratory Supervisor. B.S., Ferris State University.

### CLAS Academic Advising Center

**Open**, Director. B.A.,

**Julia Amon-Mattox**, Senior Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Brian Eikenhout**, Senior Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Tom Fellows**, Senior Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Jo Ann Litton**, Assistant Director of Preprofessional Programs. B.A., Ball State University; M.A., Bowling Green State University.

**Doris Penn**, Academic Advisor. B.B.A., M.Ed., Grand Valley State University.

**Jason Prowant**, Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Nicholas Woodward**, Academic Advisor. B.A., Central Michigan University; M.Ed., Grand Valley State University.

### Classics Department

**Melissa Morrison**, Chair. B.A., University of Virginia; M.A., Indiana University; Ph.D., Boston University.

### Communications, School of

**Jonathan Hodge**, Interim Director. B.S., Calvin College; M.A., California State University – Dominguez Hills; M.A., Ph.D., Western Michigan University.

**Sally Langa**, Costume Shop Manager.

**Christopher Mahlmann**, Technical Director. B.A., Hope College.

**Jason Rutter**, Photography Imaging Systems Specialist. B.S., Grand Valley State University.

**Scott Vanderberg**, Communication Facilities Specialist. B.S., Ferris State University.

### English Department

**Ashley Shannon**, Chair. B.A., M.A., University of Notre Dame; Ph.D., University of Texas.

## Administrative Directory

### Geography and Sustainable Planning Department

**Elena Lioubimtseva**, Chair. B.S., M.S., Ph.D., Moscow State University.

### Geology Department

**Figen Mekik**, Chair. B.S., M.S., Middle East Technical University; Ph.D., Northern Illinois University.

**Gregory C. Wilson**, Laboratory Supervisor. B.S., Grand Valley State University; M.S., Southern Illinois University.

### History Department

**William Morison**, Chair. B.A., M.A., California State University, Fresno; M.A., Ph.D., University of California at Santa Barbara.

### Mathematics Department

**Karen Novotny**, Chair. B.S., Ph.D., Western Michigan University.

### Modern Languages and Literatures Department

**Jeremy Robinson**, Chair. B.A., M.A., University of Colorado, Boulder; Ph.D., University of Michigan.

**Veronica Clapp**, Assistant to the Laboratory Supervisor. B.A., Universidad De Deusto; B.A., Grand Valley State University.

**David Shultz**, Laboratory Supervisor. B.A., Principia College; M.A., Berklee School of Music, Webster University.

### Movement Science Department

**Christina Beaudoin**, Chair. B.A., Brandeis University; M.S., Kansas State University; Ph.D., University of North Carolina – Greensboro.

### Music, Theatre, and Dance, Department of

**Danny Phipps**, Chair. B.M., The Curtis Institute of Music; M.M., D.M.A., The Catholic University of America.

**Nathaniel Bliton**, Security Manager, Music. B.M., M.M., Michigan State University.

**Caitlin Cusack**, Publicity and Recruitment Coordinator. B.A., Grand Valley State University.

**Beth Gibbs**, Coordinator of Student Advising and Curriculum. B.S., The Pennsylvania State University; M.M.E., University of Hartford; Ph.D., The Pennsylvania State University.

**Jill Hamilton**, Facilities and Operations Manager/Designer. B.A., Butler University; M.A., University of Cincinnati.

**Jack Lane**, Box Office Manager. B.A., Western Michigan University; M.A., Grand Valley State University.

**Mark Williams**, Assistant Chair. B.M., Michigan State University; M.M., D.M.A., University of Texas at Austin.

### Philosophy Department

**John Uglietta**, Chair. A.B., University of Chicago; J.D., University of Michigan Law School; Ph.D., The Johns Hopkins University.

### Political Science Department

**Mark Richards**, Chair. M.S., University of Oregon; B.S., M.A., Ph.D., University of Wisconsin.

### Physics Department

**Richard Vallery**, Chair. B.A., Gustavus Adolphus College; M.S., Ph.D., University of Michigan.

**Timothy A. Evans**, Laboratory Supervisor. B.S., M.S. Michigan State University.

### Psychology Department

**Robert Hendersen**, Chair. B.A., Reed College; Ph.D., University of Pennsylvania.

### Regional Math and Science Center

**Kristofer Pachla**, Director. B.S., B.A., M.A., Grand Valley State University.

**Kathryn Agee**, Science Program Coordinator. B.S., M.A., Western Michigan University.

**Chelsea Ridge**, Mathematics Program Coordinator. B.A. Mathematics and Spanish (Secondary Ed.)

### Robert B. Annis Water Resources Institute

**Alan Steinman**, Director. B.S., University of Vermont; M.S., University of Rhode Island; Ph.D., Oregon State University.

**Anthony Fiore Jr.**, Fleet Captain.

**Michael Hassett**, Scientific Technician II. B.S., Michigan State University; M.S., Loyola University of Chicago.

**John Koches**, Associate Research Scientist. B.S., Grand Valley State University; M.S., Miami University.

**Maggie Oudsema**, Research Assistant I. B.S., Grand Valley State University.

**Brian Scull**, Research Assistant I. A.S., Santa Fe Community College.

**Kurt Thompson**, Research Associate I. B.S., Grand Valley State University.

**Janet Vail**, Research Scientist. B.S., University of Michigan; M.A., University of California Santa Barbara; Ph.D., Western Michigan University.

### Sociology Department

**Lisa Hickman**, Chair. B.A., Otterbein College; M.A., Ph.D., Ohio State University.

### Statistics Department

**Paul Stephenson**, Chair. B.S., Bob Jones University; M.S., Ph.D., Clemson University.

### Visual and Media Arts, Department of

**Virginia Jenkins**, Chair. B.F.A., Michigan State University; M.F.A., University of Utah.

**Sean Larson**, Laboratory Supervisor. B.F.A., University of Wisconsin – Stout; M.F.A., University of Nebraska.

**Yin-Fen Pao**, Visual Resource Curator. B.A., Tamkang University; M.A., The Ohio State University; M.L.I.S., Wayne State University.

**James Visser**, Laboratory Supervisor. B.A., Michigan State University.

### Writing Department

**Christopher Toth**, Chair. B.A., Hiram College; M.A., Ph.D., Iowa State University.

### Division of Inclusion and Equity

**Jesse Bernal**, Vice President for Inclusion and Equity. B.S., Westmont College; M.A., Ph.D., University of California at Santa Barbara.

**Marlene Kowalski-Braun**, Associate Vice Provost for Student Affairs and Inclusion and Equity. B.S., Central Michigan University; M.A., Ball State University; Ph.D., Western Michigan University.

**Taran McZee**, Special Associate for Inclusion and Equity. B.S., M.A., Central Michigan University.

**Open**, Assistant Vice President for Strategic Implementation.

**Relando Thompkins-Jones**, Social Justice Educator/Coordinator. B.S.W., Oakland University; M.S.W., University of Michigan.

**Kathleen VanderVeen**, Assistant Vice President for Equity, Planning and Compliance. B.S., M.Ed., Grand Valley State University; Ph.D., Western Michigan University.

### Equity, Planning and Compliance

**Scott Ayotte**, Director of Affirmative Action /Equal Employment Opportunity and Equity Officer. B.B.A., Grand Valley State University; J.D., Western Michigan University.

**Theresa Rowland**, Title IX Coordinator/Equity Officer/Director. B.A., Trevecca Nazarene University; M.Ed., Grand Valley State University.

### Disability Support Resources

**Shontaye Witcher**, Director, Disability Support Resources. B.S., M.S.W., Michigan State University; Ed.S., Grand Valley State University.

**Leijhi Koval**, Advisor, Disability Support Resources. B.S., M.Ed., Grand Valley State University.

**Jason Osborne**, Senior Disability Advisor, Disability Support Resources. B.S. Central Michigan University; M.Ed., Grand Valley State University.

**Jeffrey Sykes**, Assistive Technology Coordinator. B.S., Grand Valley State University.

**Etonia Todd**, Disability Resources Administrator. B.S., National Louis University.

### **Gayle R. Davis Center for Women and Gender Equity**

**Jessica Jennrich**, Social Justice Project Specialist and Director of Women's Center. B.A., Bowling Green State University; M.L.S., Eastern Michigan University; Ph.D., University of Missouri.

**Sharalle Arnold**, Associate Director of Women's Center. B.A., California State University; M.A., Washington State University

**Allison Montaña**, Assistant Director of Women's Center. B.A., University of California – Berkeley; M.S.W., University of Michigan.

**Ashley Schulte**, Victim Advocate. B.A., M.Ed., Grand Valley State University.

### **Milton E. Ford LGBT Resource Center**

**Jennifer Hsu**, Director of Milton E. Ford LGBT Resource Center. B.S., University of Michigan; M.P.A., Western Michigan University.

**Marla Wick**, Assistant Director of Milton E. Ford LGBT Resource Center. B.A., Montana State University; M.A., Ohio University; Ph.D., University at Buffalo.

### **Office of Multicultural Affairs**

**Constance Dang**, Director of Multicultural Affairs. B.S., Western Michigan University; M.P.A., Grand Valley State University.

**Juanita Davis**, Assistant Director of Multicultural Affairs. B.A., Grand Valley State University; M.A., Cornerstone University.

**Bobby Springer**, Associate Director of Multicultural Affairs. B.A., University of North Carolina; M.A., Western Michigan University.

### **Enrollment Development**

**Lynn Blue**, Vice President for Enrollment Development. B.S., M.P.A., Grand Valley State University.

**V<sup>o</sup>Lecea Hunter**, Enrollment Development Counselor. B.A., M.Ed., Grand Valley State University.

### **Admissions**

**Jodi Chycinski**, Director of Admissions. B.B.A., Davenport College; M.B.A., Western Michigan University.

**Adriana Almanza**, Admissions Counselor. B.A., Grand Valley State University.

**Elizabeth Arangure-Martinez**, Admissions/Financial Aid Counselor. B.A., Grand Valley State University.

**Elizabeth Bonnell**, Assistant Director of Admissions. B.A., Olivet College; M.A., Spring Arbor University.

**Michael Eichberger**, Assistant Director of Admissions. B.S., Grand Valley State University; M.P.A., Grand Valley State University.

**Maegan Frierson**, Admissions Counselor. B.A., Western Michigan University; M.Ed., Grand Valley State University.

**E. Chris Hendree**, Associate Director of Admissions. B.A., Taylor University; M.A., Webster University.

**Lauren Hills**, Data Communications Specialist. B.S., Grand Valley State University.

**Wallace Holder**, Assistant Director of Admissions. B.A., M.S., Grand Valley State University.

**Tracey James-Heer**, Associate Director of Admissions. B.A., Grand Valley State University; M.A., Michigan State University.

**Morgan Lind**, Admissions Counselor. B.S., Grand Valley State University.

**Salvador Lopez**, Associate Director of Admissions. B.A., Grand Valley State University.

**Michelle Loving-McKay**, Associate Director of Admissions. B.A., Western Michigan University; M.P.A., Ph.D., Wayne State University.

**Astin Martin**, Assistant Director of Admissions. B.S., Grand Valley State University.

**Mackenzie Prins**, Admissions Counselor. B.S., Grand Valley State University.

**Melanie Retberg**, Associate Director of Admissions. B.S., M.Ed., Grand Valley State University.

**Bonnie Ulmer-DeGraves**, Associate Director of Admissions. B.S., M.B.A., Grand Valley State University.

**Rachel Yarbrough**, Admissions Counselor. B.A., Lawrence Technological University; M.A., Valparaiso University.

### **Financial Aid Office**

**Michelle Rhodes**, Director of Financial Aid. B.B.A., Western Michigan University; M.B.A., Grand Valley State University.

**Matthew Allore**, Financial Aid Counselor. B.A., Grand Valley State University.

**Elizabeth Arangure-Martinez**, Admissions/Financial Aid Counselor. B.A., Grand Valley State University.

**Nicholas Bromley**, Assistant Director of Financial Aid. B.A., University of Texas at Austin.

**Robert Flannery**, Financial Aid Counselor. B.S., Grand Valley State University.

**Francesca Golden**, Associate Director of Financial Aid. B.A., Grand Valley State University.

**Suzanne Herman**, Assistant Director of Financial Aid. B.A., Dominican University; M.Ed., Grand Valley State University.

**Melissa Horning**, Assistant Director of Financial Aid. B.A.S., Davenport University.

**Detwann Johnson**, Financial Aid Counselor. B.S., Grand Valley State University.

**Lauren McElrath**, Associate Director of Financial Aid. B.S., M.P.A., Grand Valley State University.

**Samantha Mulder**, Financial Aid Counselor. B.S., Grand Valley State University.

**Audra Pretty-Smith**, Financial Aid Counselor. B.A., Hope College; M.A., Ball State University.

**Jenna Poll**, Associate Director of Financial Aid. B.A., Hope College.

**Benjamin Rhodes**, Assistant Director of Financial Aid. B.A., Cornerstone University.

**Christine Scott**, Associate Director of Financial Aid. B.S., M.B.A., Grand Valley State University.

**Maryelise White**, Assistant Director of Financial Aid. B.A., Michigan State University.

**Anne Zalud**, Assistant Director of Financial Aid. B.A., Grand Valley State University.

### **Information Technology**

**Susan Korzinek**, Director of Information Technology. B.S., Grand Valley State University.

**Daniel Barricklow**, Senior Network Systems Engineer. B.S., Grand Valley State University.

**Sheryl Barricklow**, eLearning and Instructional Technology Specialist. B.S., Grand Valley State University.

**Scott Benjamin**, Academic Systems Specialist. B.B.A., Cleary University.

**Thomas Beukema**, Infrastructure Project Engineer.

**Irene Bhaskaran**, Oracle Database Administrator. B.E., Government College of Engineering.

**Yvonne Bird**, Network Systems Engineer. A.S., Davenport College.

**Hunter Bridwell**, Digital Media Developer – eLearning and Emerging. B.F.A., Kendall College of Art and Design; M.S., Grand Valley State University.

**Karen Burchard**, Academic Systems Specialist. B.S., Grand Valley State University.

**Colleen Cameron**, Systems Analyst. B.F.A., M.B.A., Grand Valley State University.

**David Chapman**, AV Systems Specialist and Laboratory Supervisor. B.A., Michigan State University.

## Administrative Directory

**Katherine Clark**, Systems Analyst. B.S., Baker College.  
**John Cook**, Systems Analyst. B.S., Central Michigan University.  
**Kenneth Cott**, Help Desk Specialist. B.A., Grand Valley State University.  
**Melissa Cunningham**, Associate Director of Administrative Operations. B.S., Methodist College; M.Ed., Grand Valley State University.  
**Glenna Decker**, Instructional Design Specialist. B.S., Eastern Michigan University; M.Ed., Grand Valley State University.  
**Luke DeMott**, Senior Network Systems Engineer. B.S., Ferris State University.  
**Karen Denby**, Network Systems Engineer.  
**Jayne Dissette**, Academic Systems Supervisor. B.S., M.B.A., Grand Valley State University.  
**Cody Eding**, Network Systems Engineer. B.S., Grand Valley State University.  
**Elizabeth Eubanks**, Computer Operations Supervisor. B.S., Grand Valley State University.  
**William Fisher**, Associate Director, Technical Services. B.S., Grand Valley State University.  
**Robin Getz**, Laboratory Supervisor. B.S., University of Montevallo.  
**Michael Grannan**, Systems Analyst. B.S., Lawrence Technological University; M.A., Wayne State University; M.B.A., Grand Valley State University.  
**Heather Hardy**, Technology Supply Specialist. B.A., Western Michigan University; M.P.A., Grand Valley State University.  
**Paul Harmelink**, Helpdesk Specialist. B.A., Kalamazoo College.  
**Shannon Hatch**, Systems Analyst. B.S., Davenport University.  
**Mary Jo Hills**, Systems Analyst. B.S., M.S., Michigan Technological University; M.S., Grand Valley State University.  
**Robert Holcomb**, Desktop Support Supervisor. B.A., Central Michigan University.  
**Susan Johnson**, Systems Analyst. B.S., Bemidji State University.  
**Kimberly Kenward**, Instructional Design Specialist. B.A., Aquinas College; M.I.L.S., University of Michigan.  
**Patrick Kemp**, Network Systems Engineer. B.S., Central Michigan University.  
**John Klein**, Associate Director, Academic Services. B.S., M.S., Grand Valley State University.  
**David Krueger**, Senior Network Systems Engineer. B.S., Western Michigan University.  
**Eric Kunnen**, Associate Director of eLearning and Emerging Technologies. B.S., M.Ed., Grand Valley State University.  
**Jason Kunnen**, Network Systems Supervisor – Desktop/Server Architecture and Services. B.B.A., B.S., Grand Valley State University.  
**Joseph Langford, Jr.**, Systems Analyst. B.A., B.S., Michigan State University.  
**Edward Lindeman**, Associate Director, Administrative Systems. B.S., Ferris State University.  
**James McPherson**, Network Systems Supervisor – Infrastructure and Telecommunications. B.S., Lake Superior State University.  
**Justin Melick**, Digital Media Developer. B.S., M.Ed., Grand Valley State University.  
**Todd Michalski**, Systems Analyst. B.S., Aquinas College; M.S., Ferris State University.  
**Nicholas Nelson**, Systems Analyst. B.S., Grand Valley State University.  
**Kyle Nielsen**, Senior Network Systems Engineer. B.S., Baker College.  
**Pamela Potter**, Administrative Systems Specialist. B.S., Grand Valley State University.  
**Kenneth Radlick**, Administrative Systems Architect. B.S., University of Michigan. M.S., Grand Valley State University.  
**Mary Reimink**, Systems Analyst. B.S., Ferris State University.  
**Brandon Ridge**, Systems Analyst. B.S., Grand Valley State University.  
**Matthew Roberts**, Instructional Design Specialist. B.A., Calvin College; Ph.D., University of Minnesota.

**Joy Seeley**, Senior Network Systems Engineer. B.S., Grand Valley State University.  
**Brian Snyder**, Systems Analyst. B.S., Western Michigan University.  
**Vincent St. Germain**, eLearning and Instructional Technology Specialist. B.S., M.Ed., Grand Valley State University.  
**Bogdan Teodorescu**, Senior Systems Database Administrator. B.S., Davenport University.  
**Maria Thelen**, Administrative Systems Supervisor. B.S., Ferris State University.  
**Robert VanDusen**, Network Systems Engineer. B.S., Baker College.  
**David Van Sweden**, Senior Network Systems Engineer. B.A., Oakland University; M.P.A., Western Michigan University.  
**Gregory Vedders**, Information Security Analyst. B.S., Aquinas College.  
**Peter Voss**, Systems Analyst. B.S., Central Michigan University.  
**John Wezeman**, Helpdesk Supervisor. B.S., Calvin College.

## Institutional Analysis

**Philip Batty**, Director of Institutional Analysis. B.A., University of Illinois; M.A., Tulane University; Ph.D., The University of Memphis.  
**Rachael Passarelli**, Research Analyst. B.S., Grand Valley State University; M.S., Western Michigan University.

## Records and Registration

**Sherril Soman**, Registrar. B.Sc., Prairie View A&M University; Ph.D., Purdue University.  
**Mary Brittain**, Associate Registrar.  
**Jason Cronkrite**, Assistant Registrar. B.S., M.B.A., Ferris State University.  
**Stephanie Hughes**, Assistant Registrar. B.S.W., Hope College, M.Ed.; Grand Valley State University.  
**Haley Madaj**, Project Coordinator. B.S., Grand Valley State University.  
**Laura Przybytek**, Associate Registrar. B.A., University of Michigan.  
**Jennifer Okada**, Project Coordinator. B.A., Grand Valley State University.  
**Meagan Treadway**, Associate Registrar. B.S., M.Ed., Ed.S., Grand Valley State University.  
**Daniel Vainner**, Associate Registrar. Robert C. Pew Campus. B.B.A., Grand Valley State University; M.A., Michigan State University.  
**William Widmaier**, Associate Registrar. B.A., Grand Valley State University; M.A., Ball State University.

## Finance and Administration

**D. Scott Richardson**, Acting Vice President for Finance and Administration. B.S., M.S., Central Michigan University

## Business and Finance

**Brian Copeland**, Associate Vice President for Business and Finance. B.B.A., M.B.A., Western Michigan University. C.P.A.

## Accounting Services

**Pamela Brenzing**, Controller. B.S., Calvin College; M.B.A., Grand Valley State University. C.P.A.  
**Luanne Brown**, Director of Payroll Services. B.S., Cornerstone University.  
**Karen Chavez**, Director of Student Account Services. B.B.A., Western Michigan University.  
**Jean Conzelmann**, Billings Services Supervisor. B.B.A., Saginaw Valley State University; B.S., Grand Valley State University.  
**Audra Courtade**, Senior Accountant. B.A., Hope College; C.P.A.  
**Jennifer Kamradt**, Senior Accountant. B.B.A., M.B.A., Grand Valley State University.  
**Brenda Lindberg**, Associate Controller. B.S., B.A., Central Michigan University.  
**Martha Moore**, Senior Accountant. A.A., Grand Rapids Community College; B.B.A., M.P.A., Grand Valley State University.  
**Terra Muckenthaler**, Accountant. B.B.A., M.S. Grand Valley State University, C.P.A.

**Brenda Sain**, Payroll Tax and Process Accountant. B.S., University of Arkansas; M.B.A., Davenport University.  
**Jennifer Schick**, Associate Controller. B.B.A., Western Michigan University; M.B.A., Grand Valley State University.  
**Susan Votsch**, Collections Supervisor. B.A., Baker College.  
**Brian VanDoeselaar**, Associate Controller. B.S., Aquinas College; M.B.A., Grand Valley State University.  
**Andrea Westdorp**, Senior Accountant. B.B.A., Grand Valley State University; M.B.A., Grand Valley State University. C.P.A.

### Auxiliary Services

**Doug Wentworth**, Director of Auxiliary Services. B.S.B.A., Central Michigan University.

### Bookstore-Allendale Campus

**Jerrold Nickels**, Bookstore Manager. B.A., Aquinas College.  
**Christopher Boerma**, Associate Bookstore Manager.  
**Paul Cullen**, Assistant Bookstore Manager. B.S., Grand Valley State University.  
**Tony Glaab**, Associate Bookstore Manager. B.S., Slippery Rock University.  
**Nicole Greiner**, Assistant Bookstore Manager. B.B.A., Grand Valley State University.  
**Katherine Lomas**, Assistant Bookstore Manager (Technology and Supplies). B.B.A., Northwood University.  
**Liza Ollila-Guikema**, Auxiliary Services Marketing Manager. B.A., Grand Valley State University.

### Bookstore-DeVos Center

**Thomas Bevington**, Assistant Bookstore Manager. B.B.A., Siena Heights University.  
**Elizabeth Junglas**, Associate Bookstore Manager. A.A., Grand Rapids Community College; B.S., Grand Valley State University.

### Conference and Event Planning Services

**David VanderSloot**, Director of Conference Planning and Hospitality Services. A.A.A.S., Grand Rapids Community College; A.A.S., B.S., Johnson and Wales University; M.P.A., Grand Valley State University. C.M.P., C.M.M., C.A.S.P.  
**Martin Ashcraft**, Client Services Manager. B.S.B.A., Central Michigan University. C.M.P.  
**Kelly Damman**, Client Services Coordinator. B.S., Grand Valley State University.  
**Amy Dettwiler**, Client Services Manager. B.S., Grand Valley State University.  
**Lynn Krupansky**, Senior Financial Analyst.  
**Jennifer May**, Client Services Manager. B.S., Grand Valley State University.  
**Joyce Miller**, Client Services Coordinator. B.A., Michigan State University.  
**Erika Van Dyke**, Client Services Coordinator. B.S., Grand Valley State University.  
**Kathleen Wright**, Assistant Director of Conference Planning. B.A., Aquinas College. C.M.P.

### Procurement Services

**Kim Patrick**, Director of Procurement Services. B.A., Spring Arbor University.  
**Aaron Caccamo**, Senior Strategic Sourcing Specialist. B.A., Aquinas College; M.A., Central Michigan University.  
**Valerie Rhodes-Sorrelle**, Senior Strategic Sourcing Specialist. B.S., Ferris State University; M.P.A., Grand Valley State University; C.P.M., A.P.P.  
**Kip Smalligan**, Senior Strategic Sourcing Specialist. B.A., Calvin College.

### The Meadows Golf Club

**Terry Sack**, General Manager, Meadows Golf Club. B.S., Ferris State University; M.B.A., Grand Valley State University.  
**Jeffrey Bodziak**, Assistant Golf Course Superintendent. A.A., Grand Rapids Community College; Technology Certificate, Michigan State University.  
**Ronald Dahlin**, Golf Course Superintendent. B.S., M.S., Colorado State University; CGCS.  
**Donald Underwood**, Director of Golf Operations. B.S., Ferris State University; P.G.A. Class A certification.

### Facilities Planning

**James Moyer**, Associate Vice President for Facilities Planning. B.ARCH., Howard University.  
**Patricia Beck**, Project Manager 2. B.F.A., Kendall College of Art and Design.  
**James Flanders**, Project Manager 2. B.S., Ferris State University.  
**Karen Ingle**, Senior Project Manager 2. B.S., Michigan State University.  
**Paul Nederveld**, Space and Move Planner. B.S., Ferris State University.  
**Bradley Newman**, Project Manager 2. B.S., Lake Superior State University.  
**Shannon Sullivan**, Project Manager 2. B.S., Michigan State University.  
**Scott Whisler**, Project Manager 2. B.S., Lawrence Technological University.

### Facilities Services

**Timothy Thimmesch**, Associate Vice President for Facilities Services. B.S., Kansas Newman College; M.S., Grand Valley State University.  
**Janet Aubil**, Facilities Services Supervisor. B.S., Western Michigan University.  
**David Cox**, Safety Manager. B.S., Grand Valley State University; A.S., Michigan Technological University.  
**Richard Freehafer**, FSP Coordinator of Information Systems and Technology. B.A., Aquinas College.  
**Cathy Headley**, Assistant Facilities Services Supervisor. B.S., Cornerstone University.  
**Jeffrey Marcinkowski**, Maintenance Supervisor. B.S., Grand Valley State University.  
**Raven McClinton**, Assistant Facilities Services Supervisor. B.S., Grand Valley State University.  
**Lawrence Meredith**, Assistant Maintenance Supervisor. B.S., Western Michigan University; M.B.A., Grand Valley State University.  
**Gloria Myaard**, Facilities Services Supervisor.  
**Terry Pahl**, Facilities Engineer. B.S.E., Calvin College; B.S., Western Michigan University.  
**Edward Simon**, Grounds Operations Supervisor. A.S., Ferris State University; B.S., Grand Valley State University.  
**Steven Snell**, Arborist. B.S., Michigan State University.  
**Kenneth Stanton**, Landscape Operations Supervisor. B.A., Spring Arbor College.  
**Edward Wierzbicki**, Facilities Services Supervisor. B.S., Aquinas College.

### Human Resources

**D. Scott Richardson**, Associate Vice President for Human Resources. B.S., M.S.A., Central Michigan University.  
**Tara Bivens**, Benefits Manager. B.S., M.P.A., Grand Valley State University.  
**J. Devereaux Butler**, Director of Staff Relations and Development. B.S., Rhodes College; M.A., Ph.D., Emory University.  
**Lindsey DesArmo**, Health and Wellness Manager. B.A., M.P.A., Grand Valley State University.  
**Nicholas Ekstrom**, Benefits Specialist. B.B.A., Grand Valley State University.  
**Luis Lozano**, Employment Manager. B.A., University of Michigan.

## Administrative Directory

**Ruthanne Griffin**, Manager, e – HR Initiatives. B.B.A., Grand Valley State University.

**Bonnie Maka**, Human Resources Specialist.

**David Smith**, Director of Benefits and Wellness. B.A., Nazareth College.

**Natalie Trent**, Human Resources Representative. B.A., Michigan State University; M.S., Central Michigan University.

**Linda Yuhas**, Director of Compensation and Employment Services. B.S., Indiana University; M.P.A., Grand Valley State University.

## Intercollegiate Athletics

**Keri Becker**, Director of Athletics. B.A., Saginaw Valley State University; M.B.A., Ferris State University.

**Erika Wallace**, Associate Director of Athletics, Senior Woman Administrator. B.S., Grand Valley State University.

**Lou Andreadis**, Associate Head Track, Field, and Cross Country Coach. B.S., Butler University.

**Damon Arnold**, Director of Academic Advising for Athletic Programs. B.A., M.A., California State University; M.S., University of Idaho; Ph.D., Washington State University.

**Jared Alexander**, Assistant Director of Athletics for Sales and Marketing. B.S., Indiana University; M.S., University of Central Missouri.

**Jerry Baltes**, Head Track, Field, and Cross Country Coach. B.S., Butler University.

**Ryan Borchert**, Assistant Facilities Manager. B.S., Calvin College; M.P.A., Grand Valley State University.

**Andrew Boyce**, Head Men and Women's Swimming and Diving Coach and Coordinator of Aquatics. B.S., Ball State University.

**Dana Callihan**, Head Women's Softball Coach. B.S., Grand Valley State University.

**Jamie Detillion**, Head Baseball Coach. B.S., Ashland University.

**Alan Dunson**, Assistant Track and Field/Cross Country Coach. B.S., Ashland University.

**Donald Foster**, Director of Athletics Communications and Broadcasting. B.A., Ashland University.

**John Ginn**, Associate Head Football Coach. B.A., Emory and Henry College; M.S., University of Illinois at Urbana – Champaign.

**Alicia Groveston**, Head Women's Lacrosse Coach. B.A., M.B.A., Salisbury University.

**Kelly Hardy**, Assistant Athletic Trainer. B.S., James Madison University; M.Ed., Grand Valley State University.

**Michael Hatcher**, Assistant Football Coach. B.S., Grand Valley State University.

**Jeffrey Hosler**, Head Women's Soccer Coach. B.A., Alma College.

**Jason Johnson**, Associate Head Women's Volleyball Coach. B.S., Grand Valley State University.

**Taylor Johnson**, Assistant Men's Basketball Coach. B.A., Western Michigan University; M.A., North Carolina State University.

**Erin Kuester**, Athletics Marketing and Promotions Director. B.B.A., Grand Valley State University.

**Douglas Lipinski**, Deputy Director of Athletics for External Affairs. B.S., M.P.A., Grand Valley State University.

**James Louis**, Assistant Football Coach. B.S., M.S., St. Cloud State University.

**Garron Lucius**, Assistant Athletic Director for Games and Event Management. B.S., Grand Valley State University; M.Ed., University of West Florida.

**Rebecca Mailloux**, Head Women's Golf Coach. B.S., University of South Florida.

**Whitney Marsh**, Athletic and Recreation Facilities Manager. B.S., Aquinas College; M.Ed., Grand Valley State University.

**Matthew Mitchell**, Head Football Coach. B.S., Cornell College.

**Walter Moore**, Associate Director of Athletics. B.S., Central Michigan University; M.Ed., Grand Valley State University.

**Timothy Morrison**, Assistant Football Coach. B.A., Wartburg College; M.A., Viterbo University.

**Mark Nawrocki**, Assistant Facilities Manager. B.B.A., Western Michigan University.

**Timothy Nott**, Associate Director of Athletics for Communications. B.A., Central Michigan University.

**Kelsey Penland**, Athletic Community Relations Director for Marketing. B.S., Grand Valley State University.

**Nicholas Postma**, Assistant Football Coach. B.S., Saginaw Valley State University.

**Alison Reddick**, Assistant Athletic Trainer. B.S., Grand Valley State University; M.S., Illinois State University.

**Kathryn Rejc**, Assistant Athletic Trainer. B.S., Grand Valley State University; M.S., Eastern Michigan University.

**Jennifer Rivera**, Assistant Women's Softball Coach. B.S., Grand Valley State University.

**Phil Sayers**, Associate Women's Basketball Coach. B.S., Grand Valley State University.

**Deanne Scanlon**, Head Women's Volleyball Coach. B.S., Eastern Kentucky University.

**Mark Stoessner**, Associate Athletic Director/Director of Medical Services. B.S., Bowling Green State University; M.A., Northern Michigan University.

**Brent Tavis**, Athletic and Recreation Facilities Manager. B.B.A., Davenport University; M.P.A., Grand Valley State University.

**Justin Vasquez**, Associate Head Men and Women's Swimming and Diving Coach and Assistant Aquatics Coordinator. B.S., Grand Valley State University.

**Matthew Vitzthum**, Assistant Football Coach. B.A., Wartburg College.

**Kristen Walker**, Assistant Soccer Coach. B.S., Grand Valley State University.

**Bradley Wallace**, Director of Athletics/Recreational Facilities. B.S., Grand Valley State University; M.S., Southern Illinois University.

**Lawrence Wallace**, Assistant Men's Basketball Coach. B.S., Grand Valley State University.

**Rachel Ward**, Assistant Women's Lacrosse Coach. B.S., Lock Haven University of Pennsylvania.

**Richard Wesley**, Head Men's Basketball Coach. B.S., Central Michigan University.

**Emmanuel (E.J.) Whitlow**, Assistant Football Coach. B.A., University of Findlay.

**Michael Williams**, Head Women's Basketball Coach. B.S., University of Wisconsin – Stevens Point.

**James Winkler**, Associate Athletic Trainer. B.S., M.S., Northern Michigan University.

**Douglas Witte**, Digital Media Manager. B.A., Cornerstone University; M.Ed., Grand Valley State University.

**Del Young**, Assistant Baseball Coach. B.B.A., Northwood University; M.S., Eastern Michigan University.

## Muskegon Innovation Hub

**Kevin Ricco**, Director of the Muskegon Innovation Hub. B.S., University of Michigan; M.B.A., Eastern Michigan University.

**Thomas Hopper**, Associate Director for Business Development. B.S., Alma College; M.S., University of Detroit Mercy.

**Valerie Byrnes**, Business Incubator Manager. B.A., Davenport University.

## Pew Campus and Regional Centers-Operations

**Lisa Haynes**, Assistant Vice President. B.S., Grand Valley State University.

**Chad Kellogg**, Manager of Operations. B.B.A., Grand Valley State University.

**William Lucksted**, Assistant Director of Operations. B.S., Grand Valley State University.

**Chris Swank**, Manager of Operations. B.S., M.A., University of Michigan – Flint.

**Ronald Villanueva**, Manager of Operations. B.B.A., Grand Valley State University.

### Public Safety Services

**Renee Risher**, Director of Public Safety/Police Chief. B.A., Grand Valley State University.

**Brandon DeHaan**, Captain. B.S., Grand Valley State University.

### Pew Campus Security

**Russell Wolff**, Assistant Chief of Police. B.S., Grand Valley State University.

**Kourosh Khatir**, Security Manager. B.S., Arizona State University; M.A., Northern Arizona University.

### Strategic Initiatives

**James Bachmeier**, Associate Vice President. B.B.A., Black Hills State University; M.B.A., Chadron State College.

### University Budgets

**Star Raymond**, Director for University Budgets. B.B.A., Grand Valley State University.

**Davidpaul Lemmen**, Senior Budget Analyst. B.B.A., Davenport University.

**Terri Suess**, Senior Budget Analyst. B.B.A., Western Michigan University.

### Kirkhof College of Nursing

**Cynthia A. McCurren**, Dean of Kirkhof College of Nursing. B.S.N., M.S.N., University of Missouri; Ph.D., University of Kentucky.

**Karen Burritt**, Associate Dean, Graduate Programs. B.S.N., M.S.N., Ph.D., Michigan State University.

**Sandra Spoelstra**, Associate Dean, Research and Scholarships. B.S.N., M.S.N., Northern Michigan University; Ph.D., Michigan State University.

**Janet Winter**, Associate Dean, Undergraduate Programs. B.S.N., University of Michigan; M.P.A., Grand Valley State University; D.N.P., Rush University.

**Patricia Thomas**, Assistant Dean for Practice. B.S.N., M.S.N., University of Michigan; Ph.D., Walden University.

**Linda Buck**, Senior Academic Advisor. B.S., Nazareth College.

**Angela Caruso**, Senior Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Cassonya Carter**, Senior Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Evelyn Clingerman**, Executive Director, Bonnie Wesorick Center for Health Care Transformation. B.S.N., M.S., Old Dominion University; D.N.Sc., Ph.D., The Catholic University of America.

**Donna DeMann**, Family Nurse Practitioner. B.S.N., M.S.N., Michigan State University.

**Mariana Guzman**, Patient Services Manager. B.S., M.P.H., Grand Valley State University.

**Jamie Lamers**, Nurse Practitioner. B.S.N. Austin Peay State University; M.S.N., Michigan State University.

**Anne Markaity**, Staff Nurse. B.S., Grand Valley State University.

**Mary Jo Miedema**, Nurse Case Manager/Educator. B.S.N., Grand Valley State University.

**Kelley Monterusso**, Director of Communications and External Relations. B.B.A., Davenport University; M.S., Grand Valley State University.

**Kristin Norton**, Director of Office of Student Services. B.A., M.A., Central Michigan University.

**Mary Robinson**, Regional Nursing Program Coordinator, Northern Michigan. B.S.N., Grand Valley State University; M.S.N., University of Phoenix.

**Carrie Smucker**, Program Specialist: Technology Management and Evaluation. B.A., Grand Valley State University.

**Michael Stoll**, Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Tamara VanKampen**, Academic Community Liaison. B.S.N., Grand Valley State University; M.S.N., Ferris State University.

### Seidman College of Business

**Diana Lawson**, Dean of the Seidman College of Business. B.S., State University of New York at Cortland; M.A., M.B.A., Ph.D., Kent State University.

**Paul Isely**, Associate Dean. B.S., University of Wisconsin – Madison; M.S., Ph.D., Purdue University.

**Marianne Fischer**, Senior Academic Advisor. B.S., Grand Valley State University.

**Joy Gianakura**, Assistant Dean for Seidman Student Academic Services. B.S.Ed., Ed.D., Central Michigan University; M.Ed., Grand Valley State University.

**Christopher Gillespie**, SAP System Administrator. B.S., Grand Valley State University.

**Stephen Goldberg**, Interim Director of the School of Accounting. B.S., DePaul University; M.B.A., University of Chicago; Ph.D., University of Wisconsin – Madison; C.P.A.

**Lavonne Herrera**, Director of External Relations and Communications. B.A., Grand Valley State University.

**Tami Kraker**, Senior Academic Advisor. B.S., M.Ed., Grand Valley State University.

**Sonia Dalmia**, Interim Chair of the Department of Economics. B.A., M.A., B.Ed., University of Delhi; M.A., University of Oklahoma; Ph.D., University of Iowa.

**Koleta Moore**, Associate Director of Graduate Programs. B.A., University of California; M.P.A., Grand Valley State University.

**Jaideep Motwani**, Chair of the Department of Management. B.B.A., Bombay University; M.B.A., Sam Houston State University; Ph.D., University of North Texas.

**Douglas Robideaux**, Chair of the Department of Marketing. B.A., M.B.A., Northeast Louisiana University; D.B.A., Louisiana Tech University.

**Karen Ruedinger**, Assistant Dean of Budget and Administration. B.A., Alma College; M.B.A., University of Michigan.

**Claire Rose**, Academic Advisor. B.A., M.P.A., Grand Valley State University.

**Mary Stanko**, Academic Advisor. B.A., Marquette University; M.B.A., Davenport University.

**Barry Van Dyck**, Director of Executive Education Programs. B.S., University of Cincinnati; M.A., University of North Dakota; Ph.D., Indiana State University.

### Jay P. Van Andel Global Trade Center

**Sonja Johnson**, Executive Director. B.S., Mankato State University.

**Mark Bleckley**, Associate Director. B.S., Oral Roberts University; M.B.A., Western Michigan University.

**Katherine Dreyer**, Global Resource Specialist. B.B.A., Grand Valley State University.

### Michigan Small Business Development Center

**Keith Brophy**, Executive Director. B.S., University of Michigan; M.S.I.S., Strayer University.

**Anna Bier**, Technology Business Consultant. B.A., Virginia Polytechnic and State University; M.S., Texas A&M University.

**Daniel Brophy**, Business Growth Specialist. B.B.A., Georgetown University; M.B.A., University of Detroit.

**Toni Brownfield**, Business Development and Project Manager. B.A., University of Michigan.

**Hanna Burmeister**, Marketing Manager. B.A., Michigan State University.

**Jennifer Deamud**, Associate Director. B.S., Grand Valley State University.

**Richard Ewing**, Economic Inclusion Business Consultant. B.B.A., M.B.A., Western Michigan University.

## Administrative Directory

**Michael Gay**, Business Growth Specialist. B.B.A., Western Michigan University; M.B.A., University of Michigan.

**Robert Honeyman**, Technology Business Consultant. B.S., M.B.A., University of Michigan.

**Lindsay Klee**, Technology Business Consultant. B.A., M.H.S.A., University of Michigan.

**Kevin Kuhl**, Business Growth Specialist. B.S., Spring Arbor University.

**Joshua Marko**, Special Projects Coordinator. B.A., Aquinas College.

**Sienna Mavima**, Assistant Director. B.A., University of Zimbabwe; M.I.S.D., Florida State University.

**Kathy Miller**, Business Growth Specialist. B.S., Michigan State University; M.S., Eastern Michigan University.

**Jose Luis Navarrete**, Business Growth Specialist. B.S., Kettering University; M.B.A., Wayne State University.

**Alain Piette**, Technology Team Manager. B.S., M.B.A., Wayne State University.

**Andrew Popp**, Technology Business Consultant. B.B.A., Western Michigan University.

**Arcadio Ramirez**, Technology Business Consultant. B.A., University of Michigan; J.D., Stanford University Law School.

**Ian Rogers**, Training Manager. B.A., Michigan State University.

**Latchezara Smith**, Strategic Programs Manager. B.A., NWE University; M.B.A., Grand Valley State University.

**Mathew Sullivan**, Finance Manager. B.B.A., Western Michigan University.

**Scott Taylor**, Technology Business Consultant. B.S., M.S., University of Michigan.

**Philip Tepley**, Director of Technology Commercialization Services. B.A., University of Michigan.

### **Richard M. and Helen DeVos Center for Entrepreneurship and Innovation**

**Shorouq Al-Mallah**, Director of Center for Entrepreneurship and Innovation. B.A., M.I.S., Indiana University.

### **Small Business Development Center, West Michigan**

**M. Brooks Kindel**, Business Growth Specialist. B.B.A., M.B.A., Western Michigan University.

**Julie Oldham**, Business Growth Specialist. B.A., Michigan State University; M.S., Walsh College.

**Carolyn Rourke**, Business Growth Specialist. B.B.A., Western Michigan University; M.B.A., DePaul University.

**David Sayers**, Senior Business Counselor. B.A., Kalamazoo College; M.B.A., Grand Valley State University.

**Eric Seifert**, Business Growth Specialist. B.B.A., University of Michigan; M.B.A., Grand Valley State University.

### **Seymour and Esther Padnos College of Engineering and Computing**

**Paul D. Plotkowski**, Dean, Padnos College of Engineering and Computing. B.S., M.S., Ph.D., Oakland University.

**Charles Standridge**, Associate Dean, Padnos College of Engineering and Computing. B.S.A.M.C.S., Washington University in St. Louis; M.S.I.E., Ph.D., Purdue University.

**Ryan Aldridge**, Kennedy Hall Laboratory Supervisor.

**Timothy Born**, Professional Science Master's Program Coordinator. B.S., Calvin College; Ph.D., Mayo Graduate School.

**David Huizen**, Unit Head, Occupational Safety and Health. B.A., Hope College; M.A., University of Michigan.

**Elizabeth Brand**, Academic Advisor. B.A., Hope College; M.Ed., Grand Valley State University.

**Diane LaFreniere**, James R. Sebastian Endowed Chair, School of Engineering. B.S., Michigan Technological University.

**Paul Leidig**, Unit Head, School of Computing and Information Systems. B.S., Eastern Mennonite College; M.B.A., James Madison University; Ph.D., Virginia Commonwealth University.

**Sara Maas**, K-12 Outreach Coordinator. B.S., Ferris State University; M.S.E., Grand Valley State University.

**Wael Mokhtar**, Unit Head and Associate Professor, School of Engineering. B.S., M.S., Alexandria University; Ph.D., Old Dominion University.

**Michelle Lindale**, Assistant Dean, Padnos College of Engineering and Computing. B.S.E., Grand Valley State University; B.F.A., Aquinas College; M.B.A. Ferris State University.

**Brent Nowak**, Executive Director of the Applied Medical Device Institute. B.S., University of Illinois – Urbana; M.S., Illinois Institute of Technology; Ph.D., University of Texas – Austin.

**Mary Nuznov**, Academic Advisor. B.A., Grand Valley State University; M.A., Ball State University.

**Lawrence O'Boyle**, Laboratory Systems Administrator. B.S., Grand Valley State University.

**Carol Sloan**, Academic Advisor. B.S., Kettering University; M.A., Western Michigan University.

**Gerald Smant**, Keller Engineering Laboratory Supervisor.

**Carl Strebel**, Network Systems Supervisor. B.S., Michigan State University; M.S., Grand Valley State University.

**Sara Wheeler**, Director of Advising Center. B.S., M.Ed., Grand Valley State University.

### **The Graduate School**

**Jeffrey Potteiger**, Dean of The Graduate School. B.S., Indiana University of Pennsylvania; M.S., McDaniel College; Ph.D., Auburn University.

**Mark Luttenton**, Associate Dean of The Graduate School. B.S., Central Michigan University; M.S., University of Wisconsin – LaCrosse; Ph.D., Bowling Green State University.

### **University Relations**

**Matthew E. McLogan**, Vice President for University Relations. B.A., M.A., Western Michigan University.

### **Institutional Marketing**

**Rhonda Lubberts**, Associate Vice President for Institutional Marketing. B.A., Calvin College.

**Jennifer Allard**, Marketing Communications Manager. B.A., Michigan State University; M.A., Western Michigan University.

**Stephanie Aikens**, Graphic Designer. B.F.A., Grand Valley State University.

**Bryan Bickford**, Advertising and Communications Manager. B.S., Grand Valley State University.

**Nancy Crittenden**, Marketing Communications Manager. B.A., Hope College; M.Ed., Grand Valley State University.

**Richard Luce**, Creative Services Manager. B.F.A., Kendall College of Art and Design.

**Christine O'Brien**, Senior Graphic Designer. B.S., Grand Valley State University.

**Thomas Pikes**, Web Developer. B.S., M.S., Grand Valley State University.

**Dave Poortvliet**, Web Manager. B.S., Grand Valley State University.

**Benjamin Rapin**, Web Manager. B.S., Grand Valley State University, M.S., Ferris State University.

**Kelley Rogers**, Web Designer. B.A.S., Davenport University.

**Sally Schoen**, Marketing Communications Coordinator. B.S., Ferris State University.

**Daniel Slaughter**, Senior Web Developer. B.S., M.S., Grand Valley State University.

**Brent Swisher**, Web Developer. B.S., Grand Valley State University.

**Carrie Thrall**, Marketing Communications Coordinator. B.S., Ferris State University.

**Nick Viau**, Multimedia Project Coordinator. B.A., M.S., Grand Valley State University.

**Joseph Vugteveen**, Web Project Coordinator. B.B.A., Aquinas College; M.Ed., Grand Valley State University.

**John Zerfas**, Senior Graphic Designer. B.S., Ferris State University.

## Public Broadcasting: WGVU/WGVK-TV, WGVU-AM/FM

**Michael T. Walenta**, General Manager, WGVU Public Broadcasting.  
B.S., M.S., Central Michigan University.

**Richard Bierling**, Radio Program Manager, WGVU. B.S., Grand Valley State University.

**Patrick Center**, News and Public Affairs Manager, WGVU. B.S., Ohio University.

**Stephen Chappell**, Grant Writer, WGVU. B.A., Hope College.

**Megan Davey**, Business and Information Manager. B.A., DePaul University.

**George Davis**, Marketing and Special Events Coordinator. B.A., Oakland University.

**Timothy Eernisse**, Director of Development and Marketing, WGVU.

**Jennifer Moss Hawkins**, Reporter/Producer/Anchor. B.A., Eastern Michigan University.

**Shelley Irwin**, Producer - Anchor, WGVU. B.S., Indiana University; M.S., University of Indianapolis.

**Phil Lane**, Director of Content, WGVU. B.A., Indiana University.

**Zachary Liniewski**, Producer/Director. B.A., Grand Valley State University.

**James Lowe**, Assistant General Manager, WGVU. B.A., Michigan State University; M.S., Grand Valley State University.

**Robert Lumbert**, Director of Engineering, WGVU. B.S., Ferris State University.

**Kathryn Mosher**, Assistant Programming/Traffic Manager. B.S., Central Michigan University.

**David Oliver**, Engineering Supervisor, WGVU. A.A., University of Laverne.

**Van Orr, III**, Web and Graphic Designer. B.A., Olivet College.

**Kimberly Shefferly**, Assistant Business Development Manager, WGVU. B.A., Grand Valley State University.

**Jaclyn Sirianni**, Business Development Coordinator.

**Edward Spier Jr.**, Project Manager and Traffic Supervisor, WGVU. B.S., Grand Valley State University.

**Scott Vander Werf**, Music Director, WGVU. B.A., Aquinas College.

**Leodis William-Aaron Turner**, Development Manager. B.A., Michigan State University.

## University Communications

**Mary Eilleen Lyon**, Associate Vice President for University Communications. B.A., University of Georgia; M.S., Grand Valley State University.

**Dottie Barnes**, Associate Director of News. B.A.A., Central Michigan University; M.S. Grand Valley State University.

**Bernadine Carey-Tucker**, Director of Creative Services. B.A., Grand Valley State University.

**Michele Coffill**, Associate Director of Publications. B.A., Michigan State University; M.A., Delta State University.

**William Cuppy**, Creative Director. B.S., Grand Valley State University.

**Nathan Hoekstra**, Communications Specialist/Web Editor. B.S., Grand Valley State University; M.A., University of Illinois – Springfield.

**David LeFurge-McLeod**, Videographer.

**Elizabeth Lienau**, Photography Coordinator. B.S., Grand Valley State University.

**Matthew Makowski**, Communications Specialist. B.S., Grand Valley State University.

**Amanda Pitts**, Senior Photographer. B.S., Grand Valley State University.

**Leah Twilley**, Communications Specialist. B.A., Grand Valley State University.

## University Development

**Karen Loth**, Vice President for University Development. B.A., Michigan State University; M.A., Western Michigan University.

**Scott Blinkhorn**, Associate Vice President for Development Services. B.S., Central Michigan University.

**Andrew Bixel**, Development Officer for Nursing, Health, and Health Professions. B.A., Bluffton University; M.S., Miami University.

**Gina Bovee**, Director of Endowed and Planned Giving. B.S., University of Phoenix.

**Jennifer Benson**, Assistant Director for Creative and Production. B.F.A., Grand Valley State University.

**Amy Bross**, Assistant Director of Communications. B.A., Grand Valley State University.

**Briette Bryant**, Development Officer for Scholarship and Fellowship Giving. B.B.A., Northwood University; M.P.A., Grand Valley State University.

**Carolyn Clayton**, Director of Annual Giving. B.A., Messiah College; M.A., Geneva College.

**Mary Darrow**, Director of Systems and Training. B.S.B.A., Central Michigan University; M.B.A., Saginaw Valley State University.

**Steven de Polo**, Director of Foundation Giving. A.B., University of Michigan – Dearborn; M.A., Temple University.

**Megan Ellinger**, Manager of Student Philanthropy and Initiatives. B.A., Central Michigan University; M.Ed., Grand Valley State University.

**Nora English**, Director of Special Events and Donor Relations. B.B.A., Davenport University.

**Nancy French**, Senior Director of Communications. B.A., Michigan State University; M.S., Grand Valley State University.

**Rachel Hull**, Donor Relations Stewardship Manager. B.A., Grand Valley State University; J.D., University of Illinois, Urbana – Champaign.

**Katelyn Hanley Semelbauer**, Assistant Director of Annual Giving. B.A., Albion College.

**Daniel Hurwitz**, Assistant Vice President for Community Giving. B.S., Union College.

**Derek Johnson**, Annual Giving Manager. B.A., Central Michigan University.

**Jarrett Martus**, Major Gift Officer. B.B.A., Grand Valley State University.

**Brett Scott**, Assistant Director of Prospect Research and Development. B.A., Ohio State University; M.A., University of Denver.

**Amy TerHaar**, Assistant Director of Annual Giving. B.A., Central Michigan University; M.P.A., Monterey Institute of International Studies.

**Jennifer Wardrop**, Assistant Vice President for Development. B.A., Aquinas College.

**Shannon Small-Wilson**, Director of Corporate Giving. B.A., M.Ed., Grand Valley State University.

**Nicole Woody**, Assistant Director of Special Events and Donor Relations. B.S., Grand Valley State University.

**Kevin Yeomans**, Development Officer for Scholarship Giving. B.B.A., Grand Valley State University.

## Alumni Relations

**Christopher Barbee**, Director of Alumni Relations. B.S., Grand Valley State University.

**Courtney Geurink**, Assistant Director of Alumni Relations. B.S., Grand Valley State University.

**Susan Howard**, Assistant Director of Communications. B.A., M.A., Grand Valley State University.

**Kimberly Schmidt**, Associate Director of Alumni Relations. B.A., M.P.A., Grand Valley State University.

## Hauenstein Center for Presidential Studies

**Gleaves Whitney**, Director of Hauenstein Center for Presidential Studies. B.A., Colorado State University; M.A., University of Michigan.

**Chadd Dowding**, Program Manager. B.A., Michigan State University.

**Ann O'Keefe**, Assistant Director of Hauenstein Center for Presidential Studies. B.A., Saint Mary's College; M.S., Wayne State University.

## Faculty Directory

- Aboufadel, Edward F.** (1995), Assistant Vice President for Academic Affairs and Professor of Mathematics. B.S., Michigan State University; Ph.D., Rutgers University.
- Abramson, Marty** (1987), Associate Professor of Education. B.A., University of Wisconsin – Green Bay; Ph.D., University of Wisconsin – Madison.
- Adameczyk, Bogdan** (1999), Professor of Engineering. B.S., M.S., University of Nevada – Reno; Ph.D., Oakland University.
- Adamopoulos, John** (1992), Professor of Psychology. B.A., Yale University; A.M., Ph.D., University of Illinois.
- Adams, Allison R.** (1998), Assistant Professor of Hospitality and Tourism Management. B.S., M.B.A., Central Michigan University.
- Adams, Ellen** (2014), Assistant Professor of Art, Frederik Meijer Honors College. B.A., University of Delaware; M.A., Hunter College of the City University of New York; Ph.D., New York University.
- Adams, Robert D.** (1998), Associate Professor of Computing and Information Systems. B.S., Northern Kentucky University; M.S., Ph.D., University of Kentucky.
- Adrian, Daniel** (2014), Assistant Professor of Statistics. B.S., Valparaiso University; M.S., Northern Illinois University; Ph.D., Iowa State University.
- Akbulut, Asli Yagmur** (2003), Professor of Management. B.S., M.B.A., Ankara University, Turkey; M.S., Ph.D., Louisiana State University.
- Alaimo, Salvatore** (2009), Assistant Professor of Nonprofit Administration. B.S., Ramapo State College of New Jersey; M.S., Georgia State University; Ph.D., Indiana University.
- Alayont, Feryâl** (2006), Associate Professor of Mathematics. B.S., Bilkent University; Ph.D., University of Minnesota.
- Albrecht, Richard** (2000), Professor of Movement Science. B.S., M.A., Ph.D., Michigan State University.
- Alderink, Gordon** (1984), Associate Professor of Physical Therapy. B.A., Hope College; M.S., University of Michigan; Ph.D., Michigan State University.
- Aldrich, Naomi** (2013), Assistant Professor of Psychology. B.A., University of Tennessee; M.A., Brooklyn College – CUNY; M.Phil., Ph.D., The Graduate Center – CUNY
- Ali, Arjumand** (2015), Assistant Professor of Engineering. B.S.E., NED University of Engineering and Technology, M.S., M.S.c., University of Wisconsin Milwaukee, Ph.D., University of Wisconsin Milwaukee.
- Allen, Monica** (2006), Affiliate Faculty of Management. B.S., American University; M.A.S., The Johns Hopkins University.
- Al-Mallah, Majd** (2002), Professor of Modern Languages. B.A., University of Jordan; M.A., Ph.D., Indiana University.
- Alrebh, Abdullah** (2016), Assistant Professor of Sociology. B.A., King Saud University; M.A., Ph.D., Michigan State University.
- Alsabbagh, Jamal** (2000), Professor of Computing and Information Systems. B.Sc., M.Sc., University of Wales; M.S., Ph.D., University of Southwestern Louisiana.
- Alvarez, David** (1997), Professor of English. B.A., Polytechnic of Central London; M.A., Ph.D., University of Texas.
- Ambrose, Bradley S.** (1999), Associate Professor of Physics. B.S., Yale University; M.S., Ph.D., University of Washington.
- Anderson, Donovan** (2006), Associate Professor of German. B.A., University of Kansas; M.A., Ph.D., University of Michigan.
- Anderson, Kirk** (2003), Professor of Statistics. B.S., M.S., Ph.D., Western Michigan University.
- Anderson, Peter J.** (2004), Associate Professor of Classics. B.A., M.A., University of Ottawa; Ph.D., University of Cincinnati.
- Anderson, Rachel S.** (2004), Associate Professor of English. B.A., University of Iowa; M.A., Ph.D., Indiana University.
- Andrews, Gordon** (2009), Associate Professor of History. B.A., M.A., Western Michigan University.
- Antczak, Frederick J.** (2004), Dean of the College of Liberal Arts and Sciences and Professor of English. B.A., University of Notre Dame; M.A., Ph.D. University of Chicago.
- Anton, Corey** (1998), Professor of Communications. B.A., University of Wisconsin; M.S., Illinois State University; Ph.D., Purdue University.
- Anyaebechi, Princewill N.** (2001), Professor of Engineering. T.E.C. Higher Diploma, West Bromwich College of Commerce and Technology; M.Sc., Ph.D., Brunel University.
- Armstrong, Natalie** (2012), Affiliate Professor of Physics. M.Ed., Grand Valley State University.
- Arnold, Elizabeth R.** (2009), Associate Professor of Anthropology. B.A. and M.A., University of Manitoba; Ph.D., University of Calgary.
- Armstrong, Dorothy** (1983), Professor of Education. B.A., Wheaton College, Massachusetts; M.E.A.S., University of Wisconsin – Green Bay; Ph.D., Union Graduate School.
- Armstrong, Stephanie L.** (2016), Assistant Professor of Movement Science. B.S., Boston University; M.A.T., The Colorado College; Ph.D., University of New Mexico.
- Aschenbach, Todd** (2007), Associate Professor of Biology and Natural Resources Management. B.S., University of Wisconsin – Stevens Point; M.A., Ph.D., University of Kansas.
- Ashby, Blake** (2010), Associate Professor of Engineering. B.S., Utah State University; M.S., Ph.D., Stanford University.
- Austin, David M.** (1999), Professor of Mathematics. B.A., M.A., Rice University; Ph.D., University of Utah.
- BC, Bishal** (2016), Assistant Professor of Accounting. B.S., Southwest Minnesota University, MAcc, The George Washington University, Ph.D., The University of Texas at Dallas.
- Bacon-Baguley, Theresa** (1991), Professor, Physician Assistant Studies. B.S.N., Michigan State University; Ph.D., Wayne State University.
- Bailey, Kathleen** (1995), Professor of Criminal Justice. B.S., Central Michigan University; M.A., Ed.D., Western Michigan University.
- Bailey-Fakhoury, Chasity** (2013), Assistant Professor of Education. B.A., University of Michigan; M.Ed., Ph.D., Wayne State University.
- Baine, Nicholas** (2013), Assistant Professor of Engineering. B.S., M.S., Ph.D., Wright State University.
- Bair, David E.** (1997), Professor of Education. B.A., The College of Wooster; Ed.D., University of Michigan.
- Bair, Mary**, Associate Professor of Education. B.S., University of Delhi, India; M.S., University of Calicut, India; Ph.D., University of Michigan.
- Baird, Kristin** (2016), Affiliate Clinical Professor of Clinical Dietetics. B.S., Michigan State University; M.S., Texas Tech University.
- Baker, Barbara J.** (1990), Associate Professor of Physical Therapy. B.S., Furman University; M.P.T., Emory University; Ph.D., Western Michigan University.
- Baker-Clark, Charles** (2002), Associate Professor of Hospitality and Tourism Management. B.A., Quincy University; A.A.S., Grand Rapids Community College; M.S., Western Illinois University; M.S., Ph.D., Michigan State University.
- Balfour, Danny L.** (1996), Professor of Public Administration. B.A., Michigan State University; Ph.D., Florida State University.
- Bambini, Deborah R.** (2000), Associate Professor of Nursing. B.S.N., University of Evansville; M.S.N., Grand Valley State University; Ph.D., Michigan State University.
- Banghart Therrien, Mary** (2011), Assistant Professor of Social Work. B.A., Michigan State University; M.S.W., Grand Valley State University; A.B.D., Michigan State University.
- Barnes, Kyle R.** (2015), Assistant Professor of Movement Science. B.A., Hope College; M.S., Colorado State University; Ph.D., Auckland University of Technology.
- Barnhart, Katie** (2015), Assistant Professor of Public Health. B.S., Southern Illinois University Edwardsville; M.P.H., Saint Louis University; Ph.D., Indiana University Bloomington.

- Barrows, Nathan J.** (2007), Associate Professor of Chemistry. B.S., Montana State University; M.S., Ph.D., University of Northern Colorado.
- Barry, Jean** (2005), Associate Professor of Nursing. B.S.N., University of Iowa; M.S.N., University of Hawaii; Ph.D., University of Iowa.
- Bartz-Smith, Shari D.** (1999), Associate Professor of Movement Science. B.S., Grand Valley State University; M.A., University of Alabama – Birmingham; Ph.D., University of Alabama and University of Alabama at Birmingham.
- Basilieri, Jae** (2016), Assistant Professor of Women, Gender, and Sexuality Studies. B.A., Wells College; M.A., State University of New York at Buffalo; Ph.D., Indiana University.
- Battani, Marshall** (2000), Professor of Sociology. B.A., San Francisco State University; M.F.A., University of Arizona, M.A., Ph.D., University of California, Davis.
- Baum, Edward** (1983), Professor of Chemistry, Frederik Meijer Honors College. B.Sc., Ph.D., University of California.
- Baxter, M. Aaron** (2006), Associate Professor of Biomedical Sciences. B.S., Idaho State University; M.S., University of Arkansas; Ph.D., University of Iowa.
- Beasecker, Robert** (1970), Senior Librarian. A.B., Hillsdale College; A.M.L.S., University of Michigan.
- Beasley, Jeanine A.** (2004), Professor of Occupational Therapy. B.A., Western Michigan University; M. Ed., Grand Valley State University; Ed.D., Eastern Michigan University.
- Beaudoin, Christina M.** (2008), Associate Professor of Movement Science. B.A., Brandeis University; M.S., Kansas State University; Ph.D., University of North Carolina at Greensboro.
- Beaubien, Sarah** (2011), Assistant Librarian. B.S., Northern Michigan University; M.L.S., Indiana University.
- Beck, Teresa** (1995), Professor of Therapeutic Recreation. B.S., Indiana University; M.S., Florida State University; Ph.D., University of North Texas.
- Beckmann, Charlene E.** (1988), Professor of Mathematics. B.S., Marquette University; M.A., Ph.D., Western Michigan University.
- Beel-Bates, Cynthia A.** (2004), Associate Professor of Nursing. B.S.N., Nazareth College; M.S.N., Wayne State University; Ph.D., University of Michigan.
- Beery, Lawrence** (2000), Associate Professor of Communications. B.A., M.A., Michigan State University.
- Bell, James** (2007), Associate Professor of Communications. B.A., Brigham Young University; Ph.D., Florida State University.
- Bender, John** (1998), Professor of Chemistry. B.S., Baldwin – Wallace College; Ph.D., Brown University.
- Bender, Stephanie** (2012), Affiliate Professor of Biomedical Sciences. B.S., Northern Arizona University; M.S., Wright State University.
- Benet, Suzanne B.** (1992), Associate Professor of Marketing. B.S., Jacksonville State University; Ph.D., University of North Carolina.
- Benjamin, Craig** (2003), Associate Professor of History, Frederik Meijer Honors College. B.A., Ph.D., Macquarie University.
- Bergman, Daniel A.** (2007), Associate Professor of Biomedical Sciences. B.S., Ph.D., Bowling Green State University.
- Berlin, Scott** (2006), Assistant Professor of Social Work. B.S., Michigan State University; M.S.W., Wayne State University; Ph.D., Michigan State University.
- Bettinghaus, Bruce** (2008), Associate Professor of Accounting. B.B.A., Grand Valley State University; Ph.D., Pennsylvania State University.
- Bhagwat, Yatim, N.** (1992), Professor of Finance. B.Sc., M.M.S., University of Bombay; M.Sc., University of Baroda; M.B.A., University of Akron; Ph.D., University of Tennessee at Knoxville.
- Biddanda, Bopi** (2002), Professor of Water Resources. B.Sc., St. Joseph's College; M.S., Karnatak University; Ph.D., University of Georgia.
- Biese, Jeanine A.** (2004), Assistant Professor of Occupational Therapy. B.A., Western Michigan University; M.Ed., Grand Valley State University.
- Billings, Esther M.** (1998), Associate Professor of Mathematics. B.S., Wheaton College; M.S., Ph.D., Northern Illinois University.
- Biros, Shannon M.** (2008), Associate Professor of Chemistry. B.A., B.S., Grand Valley State University; Ph.D., The Scripps Research Institute.
- Blackman, Sheila A.** (1998), Professor of Biology and Cell and Molecular Biology. B.Sc., University of Calgary; Ph.D., Queen's University.
- Bloem, Patricia** (2000), Professor of English. B.A., Calvin College; M.Ed., Harvard University; Ph.D., Kent State University.
- Blose, Laurence** (1997), Professor of Finance. B.S., M.B.A., Gannon University; Ph.D., University of Texas at Austin.
- Blossom, Frank** (2011), Affiliate Professor of Communication. B.A., Ohio Wesleyan University.
- Blumreich, Kathleen** (1988), Professor of English. B.A., M.A., Ph.D., Michigan State University.
- Boelkins, Matthew R.** (1998), Professor of Mathematics. B.S., Geneva College; M.S., Western Washington University; Ph.D., Syracuse University.
- Bovee, Wallace** (2000), Associate Professor of Physician Assistant Studies. B.S., Grand Valley State University; M.S., Baylor College of Medicine; Ed.D., Eastern Michigan University.
- Bolea, Patricia Stow** (1997), Associate Professor of Social Work. B.S., Ball State University; M.S.W., Indiana University; Ph.D., Michigan State University.
- Boles, Brett** (2009), Assistant Professor of Physics. B.S., University of Evansville; M.S., Ph.D., University of Mississippi.
- Bollman, Mary** (2005), Affiliate Faculty of Nursing. B.S.W., University of Nebraska; B.S.N., Creighton University; M.S.N., Grand Valley State University.
- Booth, Andrew** (2007), Assistant Professor of Physician Assistant Studies. B.S., M.S., Central Michigan University.
- Borst, Joan** (2003), Assistant Professor of Social Work. B.A., Calvin College; M.S.W., Grand Valley State University. Ph.D., Michigan State University.
- Borders, Stephen B.** (2003), Associate Professor of Health Administration. B.A., University of North Carolina at Chapel Hill; M.S.H.P., Southwest Texas State University; Ph.D., Texas A&M University.
- Boring, Frank** (2010), Affiliate Professor of Communication. State University of New York at Geneseo.
- Bossemeyer, Robert** (2011), Associate Professor of Engineering. B.S., B.Sc., M.S., M.Sc., Ph.D., University of Michigan.
- Bostrom, Andrea C.** (1989), Associate Professor of Nursing. B.S., University of Michigan; M.A., Western Michigan University; Ph.D., University of Illinois at Chicago.
- Bowdle, Brian** (2005), Associate Professor of Psychology. B.S., University of Michigan; M.S., Ph.D., Northwestern University.
- Bradley, Sarah** (2016), Affiliate Faculty of Therapeutic Recreation. B.S., Michigan State University; M.Ed., University of Georgia.
- Brashler, Janet G.** (1990), Professor of Anthropology. B.A., Northwestern University; M.A., Ph.D., Michigan State University.
- Brege, Brad** (2006), Affiliate Faculty of Computing and Information Systems. B.S., Northern Michigan; M.S., Pacific Lutheran University.
- Brew, Ranelle** (2009), Associate Professor of Public Health. B.S., Southern Connecticut State University; M.A., M.S., Ed.D., Columbia University.
- Brice, Colleen** (2003), Associate Professor of English. B.S., Bowling Green University; M.A., Ph.D., Purdue University.
- Brakora, Karl** (2014), Affiliate Professor of Engineering. B.S., University of Michigan, M.S., University of Michigan, Ph.D., University of Michigan.
- Britsch, Richard** (2010), Affiliate Professor of Music. B.A., University of South Florida at Tampa.
- Brown Bayus, Debra** (2004), Affiliate Faculty of Nursing. B.S.N., Ursuline College; M.S.N., Grand Valley State University.

## Faculty Directory

- Brown, Carl** (2014), Affiliate Faculty of Communications. B.A., M.A., East Tennessee State University; Ph.D., University of Southern Mississippi.
- Brueck Morris, Carrie** (2011), Associate Professor of Dance. B.A., Kenyon College; M.F.A., Temple University.
- Buckridge, Steeve** (1998), Professor of History and Director of Area and Global Studies. B.A., Barry College; M.A., University of Miami; Ph.D., Ohio State University.
- Buckwalter, Neal D.** (2012), Assistant Professor of Public Administration. B.A., M.P.A., Brigham Young University; Ph.D., Indiana University.
- Buist, Carrie** (2016), Assistant Professor of Criminal Justice. B.S., M.A., Eastern Michigan University; Ph.D., Western Michigan University.
- Bullock, Kurt** (2003), Associate Professor of English. B.A., B.S., Taylor University; M.A., Ph.D., Ball State University.
- Bultsma, Shawn** (2006), Associate Professor of Education. B.A., Calvin College; M.Ed., William Patterson University; Ph.D., Western Michigan University.
- Burg, Debra L.** (1999), Associate Professor of Biomedical Sciences. B.A., Hope College; Ph.D., University of Iowa.
- Burg, Martin G.** (2001), Professor of Biomedical Sciences. B.A., Hope College; Ph.D., University of Iowa.
- Burns, Lawrence R.** (1996), Professor of Psychology. B.S., California Maritime Academy; M.A., Ph.D., State University of New York at Stony Brook.
- Burns-Ardolino, Wendy A.** (2011), Professor of Liberal Studies. B.A., University of Hull, UK; M.A., Ph.D., George Mason University.
- Burritt, Karen** (2011), Assistant Professor of Nursing. B.S.N., M.S.N., Ph.D., Michigan State University.
- Busman, Douglas** (2003), Associate Professor of Education. B.S., Eastern Michigan University; M.A., University of Michigan; Ph.D., Michigan State University.
- Butler, Karyn** (2011), Assistant Professor of Nursing. B.F.A., Cleveland Institute of Art; B.S.N., Wayne State University; M.S., University of Michigan; Ph.D., Wayne State University.
- Byrens, Robert** (2002), Senior Affiliate Professor of Music. B.A. in Music, Olivet College.
- Cadena, Cara** (2014), Assistant Librarian. B.A., Montana State University; M.L.S., University of Arizona.
- Cai, Meghan** (2016), Assistant Professor of Chinese, East Asian Studies, and Chinese Studies. B.S., University of Minnesota; M.A., University of Wisconsin – Madison; Ph.D., Arizona State University – Tempe.
- Caillaud, Anne** (1990), Associate Professor of French. M.A., Ph.D., Michigan State University.
- Callahan, Caitlin** (2015), Assistant Professor of Geology. B.A., Mount Holyoke College; M.S., University of New Mexico; Ph.D., Western Michigan University.
- Callison, Kevin R.** (2013), Assistant Professor of Economics. B.A., The Ohio State University; M.A., Ph.D., University of Illinois at Chicago.
- Campbell, Amy** (2008), Associate Professor of Psychology. B.S., Grand Valley State University; M.S., Ph.D., University of Oregon.
- Campbell, Anna** (2006), Associate Professor of Art and Design. B.A., College of Wooster; MFA, University of Wisconsin – Madison.
- Campbell, Arthur** (1997), Professor of Music. B.M., Mount Allison University; M.M., D.M., Northwestern University.
- Campbell, Rachel** (2009), Assistant Professor of Sociology. B.A., M.A., Ph.D., University of Alberta.
- Cannon, David** (2000), Assistant Professor of Accounting. B.S., The University of the State of New York; M.S., State University of New York at Albany; Ph.D., Kent State University. C.P.A. (Ohio and Illinois).
- Capodilupo, John G.** (1996), Professor of Biomedical Sciences. B.S., Mercy College of Detroit; M.S., Ph.D., Wayne State University.
- Carlson, Nancy G.** (2006), Affiliate Faculty of Nursing. A.D.N., Kalamazoo Valley Community College; B.S.N., University of Michigan; M.S., University of California.
- Carlson, Paul** (2012), Assistant Professor of Music. B.M., University of Illinois; M.M., University of New Mexico; D.M., Indiana University Jacobs School of Music.
- Carlson, Todd A.** (1986), Professor of Chemistry. B.S., Valparaiso University; Ph.D., Michigan State University.
- Carpenter, Heather** (2012), Assistant Professor of Nonprofit Management. B.S., San Diego State University; M.M., North Park University; Ph.D., University of San Diego.
- Carpentier, Elisabeth** (2011), Clinical Faculty, Medical Laboratory Science, B.S., Michigan Technological University.
- Carson, Susan** (2001), Professor of Education. B.A., Antioch West; M.A., Antioch University; Ph.D., Union Institute.
- Castelão-Lawless, Teresa** (1993), Professor of Philosophy. B.A., M.A., Classic University of Lisboa, Portugal Sciences of Education, Superior School of Education, Lisboa; Science and Technology Studies, M.S., Ph.D., Virginia Polytechnic Institute and State University.
- Castellanos, Rebeca** (2012), Assistant Professor of Spanish. B.A., M.A., Florida International University; Ph.D., University of Texas at Austin.
- Cata, Isabelle M.** (1993), Professor of French. B.A., Université de Paris III; M.A., Ph.D., University of Southern California.
- Cataldo, Jeremiah.** (2011), Associate Professor of History, Frederik Meijer Honors College. B.A., M.A., Bethel College; Ph.D., Drew University.
- Centers, David** (2008), Senior Affiliate Faculty. B.B.A., M.B.A., Western Michigan University.
- Chamberlain, Jeffrey S.** (2007), Professor of History, Meijer Honors College. B.A., Bryan College; M.A., Trinity Evangelical Divinity School; Ph.D., University of Chicago.
- Chang, George Y.** (2007), Associate Professor of Finance. B.S., Chung – Yuan University, Taiwan; M.A., M.B.A., The Ohio State University; Ph.D., University of Iowa.
- Chapman, Alice** (2006), Assistant Professor of History. B.A., Utah State University; M.A.R. Yale, Ph.D., Cambridge.
- Choudhuri, Shabbir** (2004), Professor of Engineering. B.S., Bangladesh University of Engineering and Technology; M.S., Ph.D., Pennsylvania State University.
- Chen, Hsiao-Ping** (2006), Associate Professor of Art and Design. B.A., Zhong Guo Gon Shan College, Taipei, Taiwan; B.A., M.A., and Ph.D., The Ohio State University.
- Chen, Jing** (1999), Associate Professor of Psychology. B.A., Beijing Normal University; M.A., Ph.D., Washington University.
- Chesla, Sarah** (2010), Affiliate Faculty of Biomedical Sciences. B.S., Ferris State University; M.A., Wayne State University.
- Chaponniere, Paulette** (2011), Assistant Professor of Nursing. B.A., Wheaton College; B.S.N., Columbia University; M.P.H., The John Hopkins University; Ph.D., Trident University International.
- Chesser, Brianna** (2016), Assistant Professor of Physical Therapy. B.S., Loyola University of Chicago; M.P.T., Northwestern University.
- Chillag, Erin** (2009), Affiliate Faculty of Nursing. B.S.N., M.S.N., Grand Valley State University.
- Cho, Sookyung** (2015), Assistant Professor of Music. B.M., The Juilliard School; M.M., The Johns Hopkins University; D.M.A., The Juilliard School.
- Choi, Beomyku** (2017), Assistant Professor of Education. B.A., Chunchon National University of Education; M.A., Korea National University of Education; Ph.D., The University of Connecticut.
- Christians, Matthew J.** (2013), Assistant Professor of Cell and Molecular Biology. B.S., Calvin College; Ph.D., University of California – Riverside.
- Chycinski, Breanna** (2014), Affiliate Faculty in Occupational Science and Therapy. B.S., M.S., Grand Valley State University.

- Cid, Ernesto** (2008), Affiliate Faculty in Spanish. B.A., M.A., University of South Florida.
- Cimitile, Maria C.** (1999), Associate Vice President for Academic Affairs and Associate Professor of Philosophy. B.A., College of the Holy Cross; M.A., Villanova University; Ph.D., University of Memphis.
- Clark, Patricia** (1989), Professor of Writing. B.A., University of Washington; M.F.A., University of Montana; Ph.D., University of Houston.
- Clark, Sarah** (2014), Affiliate Faculty of Chemistry. B.S., Michigan Technological University; M.S., University of Wisconsin – Madison.
- Cleghorn, Susan** (2008), Assistant Professor of Occupational Therapy. B.S., Illinois State University; M.S., Grand Valley State University; Dr. OT, Creighton University.
- Cleveland, Rosemary** (2002), Affiliate Professor of Education. B.A., Nazareth College; M.A., Ed.D., Western Michigan University.
- Cline, Gregory** (2008), Assistant Professor of Public and Health Administration. B.S., University of Toledo; Ph.D., Michigan State University.
- Coffey, David** (2000), Professor of Mathematics. B.S., Pepperdine University; M.S., University of Michigan; Ph.D., Western Michigan University.
- Cole, Kevin C.** (1989), Associate Professor of Geology. B.S., M.S., University of Washington; Ph.D., University of Arizona.
- Cole, Roy** (1992), Professor of Geography and Sustainable Planning. B.A., Northern Michigan University; M.S., Ph.D., Michigan State University.
- Colgan, Patrick** (2003), Professor of Geology. B.S. University of Missouri – Kansas City; M.S., University of Kansas; Ph.D., University of Wisconsin – Madison.
- Colley, Brett** (2004), Associate Professor of Art and Design. B.F.A., Grand Valley State University; M.A., M.F.A., University of Iowa.
- Conrad, Dianne M.** (2012), Assistant Professor of Nursing. B.S.N., M.S., Northern Illinois University; D.N.P., Madonna University.
- Constantelos, John** (1996), Professor of Political Science. B.A., Tufts University; M.A., The Johns Hopkins University; M.S., Tufts University; Ph.D., Duke University.
- Cook, Paul** (2013), Assistant Professor of Chemistry. B.S., Grand Valley State University; Ph.D., University of Wisconsin – Madison.
- Cooley, Richard** (2001), Associate Professor of History. B.A., State University at Cortland, NY; M.A., Wichita State University; Ed.D., Kansas State University.
- Coolidge, Grace** (2001), Associate Professor of History. B.A., Saint Olaf College; M.A., Ph.D., Indiana University.
- Cooper, Jay** (1988), Associate Professor of Education. B.S., Oakland University; M.S., Southern Illinois University; Ed.D., Western Michigan University.
- Cooper, Kristin, M.** (2004), Affiliate Faculty of Nursing. B.S.N., M.S.N., Grand Valley State University.
- Copenhaver, Lee** (1985), Associate Professor of Music. B.S., Mansfield State University; M.M., Ithaca College; M.A., Ph.D., University of Iowa.
- Corker, Katherine S.** (2016), Assistant Professor of Psychology. B.A., University of Northern Iowa; M.A., Ph.D., Michigan State University.
- Corneal, Lindsay** (2011), Associate Professor of Engineering. B.S., B.S.c, University of Windsor; M.B.A., Lawrence Technological University; Ph.D., Michigan State University.
- Cornelius, Tara** (2004), Professor of Psychology. B.S., Santa Clara University; M.A., Ph.D., Western Michigan University.
- Cornish, Paul J.** (2003), Associate Professor of Political Science. B.A., Geneseo State College; M.A., Ph.D., State University of New York at Buffalo.
- Cotter, Michael J.** (1990), Associate Professor of Marketing. B.S., M.B.A., Central Michigan University; D.B.A., Mississippi State University.
- Coviak, Cynthia** (1995), Professor of Nursing. B.S.N., Michigan State University; M.S.N., Grand Valley State University; Ph.D., University of Michigan.
- Crampton, Suzanne** (1994), Professor of Management. B.B.A., M.B.A., Grand Valley State University; Ph.D., Michigan State University.
- Crane, David C.** (2014), Assistant Professor of Classics. A.B., University of Chicago; M.A., Ph.D., University of California, Berkeley.
- Crouthamel, Jason** (2003), Associate Professor of History. B.A., University of California Santa Cruz; M.A., Ph.D., Indiana University.
- Crowell, Gregory** (2008), Senior Affiliate Professor of Music. D.M.A., M.M. University of Cincinnati College – Conservatory of Music; B.M. New England Conservatory of Music.
- Cunningham, Norine M.** (1998), Affiliate Faculty of Nursing. B.S.N., Winona State University; M.S.N., University of Illinois.
- Curtiss, Phyllis J.** (1998), Professor of Statistics. B.S., M.S., Western Michigan University; Ph.D., Bowling Green State University.
- Cwick, Jaelyn** (2016), Assistant Professor of Criminal Justice. B.A. Eastern Illinois University; M.A., Northern Illinois University.
- Dalela, Vivek** (2009), Associate Professor of Marketing. B.S., St. Stephen's College; M.S., University of Lucknow, India; Ph.D., University of Alabama.
- Daley, Matthew** (2004), Associate Professor of History. B.A., University of Detroit Mercy; M.A., Wayne State University; Ph.D., Bowling Green State University.
- Dalmia, Sonia** (1999), Professor of Economics. B.A., M.A., B.Ed., University of Delhi; M.A., University of Oklahoma; Ph.D., University of Iowa.
- Damstra, Kelli M.** (2009), Affiliate Faculty of Nursing. B.S.N., University of Michigan; M.S.N., University of Texas.
- Daniels, Jeffrey** (2010), Assistant Librarian. B.S., Grand Valley State University; M.L.I.S., Wayne State University.
- Danielson, Sigrid** (2004), Associate Professor of Art and Design. B.A., Macalaster College; M.A., Ph.D., Indiana University.
- Danko, Dori** (2001), Instructor of Accounting. B.S., Michigan State University; M.B.A., Grand Valley State University.
- Davis, Alisha** (2010), Assistant Professor of Allied Health Sciences. B.S., M.A., Western Michigan University.
- Davis, Rebecca** (2001), Associate Professor of Nursing. B.S.N., Georgia State University; M.S.N., Grand Valley State University; Ph.D., University of Michigan.
- De, Kuhelika** (2017), Assistant Professor of Economics. B.A., University of Delhi; M.A., University of Manchester; Ph.D. (ABD), University of Georgia.
- Dean, Kristy** (2009), Associate Professor of Psychology. B.A., Michigan State University; M.S., Ph.D., Northwestern University.
- Deaner, Robert** (2006), Associate Professor of Psychology. B.A., Colgate University; Ph.D., Duke University.
- DeBruine, Marinus** (1991), Associate Professor of Accounting. B.B.A., Grand Valley State University; Ph.D., The Ohio State University.
- de la Rosa, Denise** (2003), Associate Professor of Accounting. B.A., Wayne State University; M.A., University of Southern California; M.A., Ferris State University; Ph.D., University of North Texas.
- DeFrance, Nancy** (2009), Associate Professor of Education. B.S., Ohio University; M.A., Cleveland State University; Ph.D., University of Michigan.
- DeMuth, Danielle** (2006), Associate Professor and Chair of Women, Gender, and Sexuality Studies. B.A., Heidelberg College; M.A., University of Toledo; Ph.D., University of Toledo.
- DeVries, Dawn** (2013), Assistant Professor of Therapeutic Recreation. B.S.R., Calvin College; M.P.A., Grand Valley State University; D.H.A., Central Michigan University.
- DeWilde, Michael** (2000), Associate Professor of Philosophy. B.A., William James College; M.T.S., Harvard University.

## Faculty Directory

- Deyo, Brian** (2013), Assistant Professor of English. B.A., Miami University; M.A., University of Chicago; Ph.D., Vanderbilt University.
- deYoung, Mary** (1985), Professor of Sociology. B.S., Grand Valley State University; M.A., University of Chicago; Ph.D., Western Michigan University.
- Diarrassouba, Nagnon** (2008), Assistant Professor of Education, B.A., M.A., University of Abidjan; Ed.D., Northern Arizona University.
- Dickerson, Sarah** (2007), Affiliate Professor of Writing. B.S., M.A., Central Michigan University; M.F.A., University of Iowa.
- Dickinson, William** (2000), Associate Professor of Mathematics. B.A., Cornell University; M.S.E., Ph.D., University of Pennsylvania.
- Dietrich, Margaret** (2003), Associate Professor of Biology and Cell and Molecular Biology. B.S., University of Wisconsin – Madison; Ph.D., University of Minnesota – Twin Cities.
- Dillard, Amanda** (2009), Associate Professor of Psychology. B.A., The Ohio State University; M.S., Ph.D., North Dakota State University.
- Dimkoff, Gregg K.** (1975), Professor of Finance. B.S., Michigan State University; M.B.A., Saint Louis University; Ph.D., Michigan State University.
- Diven, Polly** (1994), Professor of Political Science. B.A., Hamilton College; M.A.L.D., Fletcher School of Law and Diplomacy, Tufts University; Ph.D., University of North Carolina at Chapel Hill.
- Dobson, Christopher** (2003), Professor of Biology. B.S., Oregon State University; M.S., Portland State University; D.A., Idaho State University.
- Doğru, Filiz** (2003), Associate Professor of Mathematics. B.S., Ankara University; M.S., Brown University; M.S., Virginia Tech University; M.A., University of Toledo; Ph.D., Pennsylvania State University.
- Dondzila, Christopher J.** (2015), Assistant Professor of Movement Science. B.S., Grand Valley State University; M.S., Ph.D., University of Wisconsin.
- Downer, Robert** (2005), Professor of Statistics. B.Sc., Memorial University; M.Math, University of Waterloo; Ph.D., Dalhousie University.
- Downey, Davia Cox** (2011), Assistant Professor of Public Administration. B.A., Albion College; M.P.A., Eastern Michigan University; Ph.D., Michigan State University.
- Doyon-Martin, Jacquelynn** (2012), Assistant Professor of Criminal Justice. B.A., Carthage College; M.A., Ph.D., Western Michigan University.
- Drake, Brian** (2009), Associate Professor of Mathematics. B.A., University of Michigan; Ph.D., Brandeis University.
- Driscoll, Rachel** (2015), Affiliate Faculty of Chemistry. B.S., Michigan State University; M.S., Central Michigan University.
- Du, Jie** (2013), Assistant Professor of Computing and Information Systems. B.S., Southwest Jiaotong University; M.S., Beijing Jiaotong University; M.S., Ph.D., University of Maryland Baltimore County.
- Dueker, Gwenden** (2002), Associate Professor of Psychology. B.A., Quincy University; M.S., Ph.D., Duke University.
- Dueweke, Thomas** (2012), Affiliate Faculty of Chemistry. B.A., Kalamazoo College; Ph.D., University of Illinois.
- Duitman, Henry** (2008), Associate Professor of Music. B.M.E., Florida State University; M.A., University of South Florida; Ph.D., The Ohio State University.
- Dulimarta, Hans** (2002), Associate Professor of Computing and Information Systems. B.S., Institute of Technology Bandung, Indonesia; M.S., Ph.D., Michigan State University.
- Dunn, Cheryl** (2005), Associate Professor of Accounting. B.A., M.B.A., Ph.D., Michigan State University.
- Dunn, James P.** (1998), Professor of Biology. B.S., University of Michigan; M.S., Ph.D., University of Kentucky.
- Dunne, Bruce** (2003), Professor of Engineering. B.S.E.E., M.S.E.E., University of Illinois; Ph.D., Illinois Institute of Technology.
- Eaton, David** (2009), Associate Professor of History. B.A., Trent University; M.A., Queen's University; Ph.D., Dalhousie University.
- Edwards, Susan** (2000), Associate Professor of Finance. B.S., Purdue University; M.B.A., Ph.D., Kent State University.
- Eggers, Jill** (2000), Associate Professor of Art and Design. B.F.A., Western Michigan University; M.F.A., Yale University.
- Ellenberger, Kurt** (2005), Professor of Music, Frederik Meijer Honors College. B.A., University of Windsor; M.M., University of Northern Colorado; D.M.A., University of Texas at Austin.
- Ellis, Lindsay M.** (2007), Associate Professor of English. B.A., Wheaton College; M.A., University of Chicago; Ph.D., University of Michigan.
- Ellis, Roger** (1975), Professor of Communications. B.A., M.A., University of Santa Clara; Ph.D., University of California, Berkeley.
- El-Said, Mostafa M.** (2004), Associate Professor of Computing and Information Systems. B.E.E., M.E.E., Zagazig University; M.S., Ph.D., University of Louisville.
- Engelsma, Jonathan R.** (2009), Associate Professor of Computing and Information Systems. B.S., Grand Valley State University; M.S., Ph.D., Michigan State University.
- Espitia-Fonseca, H. Fabio** (2004), Affiliate Faculty in Spanish. B.A., Universidad Pedagógica Nacional, Bogota, Colombia; M.A., Carthage College.
- Estrada, Javier** (1992), Professor of Physics. B.S., Universidad Nacional de Colombia; M.S., Ph.D., University of South Carolina.
- Evans, Dawn M.** (2009), Assistant Professor of English. B.P.E., Memorial University of Newfoundland; M.Ed., University of Utah; Ph.D., University of Rochester.
- Evans, Timothy** (2008), Associate Professor of Biology. B.S., M.S., University of Wyoming, Laramie; Ph.D., University of Wisconsin, Madison.
- Fanning, Kurt** (2000), Professor of Accounting. B.B.A., Hofstra University; B.S., Iowa State University; M.B.A., Pace University; Ph.D., University of Kansas; C.M.A., C.P.A.
- Farris, John** (1998), Professor of Engineering. B.S., M.S., Lehigh University; Ph.D., University of Rhode Island.
- Fauvel, Anne Marie** (2010), Affiliate Faculty of Liberal Studies. B.A., Université de Montréal; M.A., Rhode Island College.
- Feedback, Matthew R.** (2016), Assistant Professor of Movement Science. B.S., Kent State University; M.S., The University of Akron; Ph.D., Kent State University.
- Felker, Kyle** (2012), Associate Librarian. B.A., University of Southern Mississippi; M.L.I.S., Louisiana State University; M.A., University of Louisiana – Lafayette.
- Fenik, Anton** (2015), Assistant Professor of Marketing. B.S., M.B.A., University of South Carolina; Ph.D., University of Tennessee.
- Ferguson, Roger C.** (1998), Professor of Computing and Information Systems. B.S., Michigan Technological University; M.S., Central Michigan University; Ph.D., Wayne State University.
- Fernández-Tardani, Sandra L.** (2008), Affiliate Faculty in Spanish. B.A., Universidad Pedagógica Nacional, Bogotá, Colombia; M.A., Michigan State University.
- Feurzeig, Lisa** (1998), Professor of Music. B.A., Harvard College; M.M., University of Maryland; Ph.D., University of Chicago.
- Fidalgo-Eick, Maria** (2003), Associate Professor of Spanish. M.A., Ph.D., University of Iowa.
- Fifić, Mario** (2011), Associate Professor of Psychology. B.A., University of Belgrade; M.A., Ph.D., Indiana University.
- Fishback, Paul** (1993), Professor of Mathematics. A.B., Hamilton College; Ph.D., University of Wisconsin.
- Fisher, Joseph B.** (1996), Professor of Education. B.S., M.Ed., Grand Valley State University; Ph.D., University of Kansas.
- Fisher, Timothy** (2000), Associate Professor of Art and Design. B.A., M.A., Central Washington University; M.F.A., University of Cincinnati.
- Fitzpatrick, Coeli** (2002), Professor of Philosophy and Middle East Studies, and Chair of Frederik Meijer Honors College. B.A., Regis University; M.A., Ph.D., Binghamton University.

- Flandreau, Elizabeth I.** (2015), Assistant Professor of Psychology. B.A., Lawrence University; Ph.D., Emory University.
- Fleischmann, Shirley T.** (1989), Professor of Engineering. B.S., M.S., Ph.D., University of Maryland.
- Flemming, Tracy** (2012), Assistant Professor of African/African American Studies. B.A., Morehouse College; M.A., Ph.D., University of Michigan.
- Floyd-Slabaugh, Carla** (2015), Visiting Professor of Occupational Science and Therapy. B.S., Northeast Louisiana University; DrOT, Chatham University.
- Fortes Gonzalez, Mayra** (2009), Associate Professor of Spanish. B.A., Universidad de las Américas – Puebla, México; M.A., Ph.D., Vanderbilt University.
- Fox, Laura** (2000), Assistant Professor of Spanish. B.A., College of Wooster; M.A., Indiana University.
- Fox, Regis** (2016), Assistant Professor of English. B.A., Clark Atlanta University; M.A., Ph.D., University of California, Riverside
- Franciosi, Robert** (1988), Professor of English. B.A., New York University; M.A., Ph.D., University of Iowa.
- Freudigmann, Megan** (2012), Affiliate Professor of Education. B.A., Hope College; M.S., Walden University.
- Frey, Robert** (2005), Assistant Professor of Management. B.S., Colorado State University; J.D., Duke University School of Law; AMP, Harvard University.
- Friedlmeier, Mihaela** (2007), Associate Professor of Psychology. M.A., Cuza University; Ph.D., University of Konstanz.
- Friedlmeier, Wolfgang** (2004), Professor of Psychology. M.A., University of Bamberg; Ph.D., University of Konstanz.
- Friesema, Jennifer** (2015), Assistant Professor of Occupational Science and Therapy. B.S., Grand Valley State University; M.S., OTD, University of Illinois – Chicago.
- Frigo, Emily** (2007), Associate Librarian. B.A., M.L.S., University of Wisconsin – Madison.
- Frobish, Daniel J.** (2006), Associate Professor of Statistics. B.S., University of Illinois, Urbana; M.S., Illinois State University, Normal; Ph.D., Northern Illinois University.
- Froncek, Timothy** (2002), Affiliate Professor of Music.
- Furton, Douglas** (2002), Professor of Physics. B.E., M.S., Ph.D., University of Toledo.
- Gabrosek, John** (1999), Professor of Statistics. B.A., M.S., University of Akron; Ph.D., Iowa State University.
- Galbraith, Gretchen** (1992), Associate Dean and Professor of History. B.A., Connecticut College; Ph.D., Rutgers University.
- Galen, Luke** (1999), Professor of Psychology. B.A., University of Nebraska; M.A., Ph.D., Wayne State University.
- Gansen, Elizabeth** (2016), Professor of Spanish. B.A., M.S., University of Illinois, Urbana; M.A., M. Phil., Ph.D., Yale University.
- Gasim, Gamal** (2009), Associate Professor of Middle East Studies and Political Science. B.Sc. (Honors), University of Khartoum, Sudan; M.A., International Institute of Islamic Thought and Civilization, Kuala Lumpur, Malaysia; M.A., Kansas State University; Ph.D., Texas Tech University.
- Gautreau, Abigail** (2017), Assistant Professor of History. B.A., Randolph – Macon Woman’s College; M.St., University of Oxford; Ph.D., Middle Tennessee State University.
- Geisel, Rick** (2002), Professor of Education. B.S., Liberty University; M.A., Aquinas College; J.D., Ph.D., Regent University.
- Gerkin, Patrick** (2007), Associate Professor of Sociology/Criminology. Ph.D., Western Michigan University.
- Gerson, Hope** (2012), Assistant Professor of Mathematics. B.A., Whittier College; M.S., University of Iowa; Ph.D., University of New Hampshire.
- Ghiasvand, Noor** (2006), Assistant Professor of Biology. B.S., Tabriz University; Ph.D., University of California – Davis.
- Ghosh, Abhishek** (2015), Assistant Professor of Liberal Studies and Religious Studies. B.S., University of Calcutta; M.St., University of Oxford; M.A., University of Chicago; Ph.D., University of Chicago.
- Giardina, Nancy M.** (1999), Professor of Movement Science. B.S., University of Rhode Island; M.A., Montclair State College; Ed.D., Columbia University.
- Gibbons, Teresa** (2002), Senior Affiliate Professor of Writing. B.A., M.A.E., Ball State University.
- Gibbs, Beth** (2009), Associate Professor of Music. B.S., The Pennsylvania State University; M.M., The Hartt School, University of Hartford; Ph.D., The Pennsylvania State University.
- Giedeman, Daniel C.** (2001), Professor of Economics. B.A., M.S., Southern Illinois University; M.A., Ph.D., Washington University in St. Louis.
- Gilles, Roger** (1992), Professor of Writing. B.A., Carnegie – Mellon University; M.F.A., Ph.D., University of Arizona.
- Gipson, Karen** (1999), Associate Professor of Physics. B.S., North Texas State University; M.S., University of North Texas; Ph.D., Washington State University.
- Glass, Stephen** (2001), Professor of Movement Science. B.S., North Dakota State University; M.A., Ball State University; Ph.D., Southern Illinois University.
- Gleason, Mark** (2013), Assistant Professor of Hospitality and Tourism Management. B.S., Grand Valley State University; M.P.A., Western Michigan University; M.S., Michigan State University; Ph.D., Michigan Technological University.
- Glupker, Christian G.** (2015), Clinical Affiliate Faculty of Economics. B.B.A., Grand Valley State University; M.B.A., Western Michigan University.
- Goehring, Meri T.** (2010), Associate Professor of Physical Therapy. B.S.P.T., M.H.S., Wichita State University; Ph.D., Nova Southeastern University.
- Goerisch, Denise** (2016), Assistant Professor of Liberal Studies. B.A., University of California, Riverside; M.A., San Diego State University; Ph.D., San Diego State University and University of California, Santa Barbara.
- Goldberg, Stephen R.** (1996), Professor of Accounting. B.Sc., DePaul University; M.B.A., University of Chicago; Ph.D., University of Wisconsin – Madison; C.P.A.
- Golden, John** (1998), Associate Professor of Mathematics. B.S., Michigan State University; M.S., University of Pennsylvania; Ph.D., Pennsylvania State University.
- Goldstein, Julie** (2016), Assistant Professor of Communications. B.A. University of Wisconsin; MFA, The School of the Art Institute Chicago; Wharton Small Business Development Center, Philadelphia, PA.
- Golembeski, Dan** (1999), Associate Professor of Modern Languages. B.S., B.A., Oakland University; M.A., Ph.D., Indiana University.
- Gomez, Natalia** (2000), Associate Professor of Spanish. B.A., Western Michigan University; M.A., Arizona State University; Ph.D., Indiana University.
- Gondhalekar, Vijay** (2003), Professor of Finance. B.S., University of Bombay, India; M.B.A., University of Akron; Ph.D., University of Pittsburgh.
- Goode, James** (1986), Professor of History. B.S., Georgetown University; M.A., University of Massachusetts; Ph.D., Indiana University.
- Goodyear, Michele L.** (2009), Instructor of Medical Laboratory Science. B.S., Ferris State University.
- Gopal, Yasmin** (2016), Assistant Professor of Communications. B.A., M.A., Patna University, India; M.A., Bowling Green State University; Ph.D., University of Georgia.
- Gottlieb, Gabriele** (2005), Assistant Professor of History. B.A., University of Augsburg; M.A., Ph.D., University of Pittsburgh.

## Faculty Directory

- Graham, Douglas** (2003), Associate Professor of Biomedical Sciences. B.A., Denison University; M.A., University of Florida; Ph.D., Colorado State University.
- Grant Jr., George** (1996), Associate Professor of Social Work. B.S.W., Marygrove College; M.S.W., Grand Valley State University; Ph.D., Western Michigan University.
- Grant, James** (1980), Professor of Education. B.A., Hope College; M.A., Western Michigan University; Ph.D., University of Michigan.
- Grant, Rita H.** (1980), Associate Professor of Accounting. B.A., Hope College; M.B.A., Michigan State University; C.P.A.
- Grapczynski, Cynthia A.** (1995), Professor of Occupational Therapy. B.S., Wayne State University; M.S., University of Wisconsin; Ed.D., Teachers College – Columbia University.
- Graser, Dan** (2014), Assistant Professor of Music. B.M., SUNY Potsdam; M.M., D.M.A., The University of Michigan.
- Green, Mary** (1996), Assistant Professor of Physical Therapy. B.A., LeMoyne College; M.S., Beaver College; J.D., Michigan State University, College of Law.
- Green, Scott** (2013), Assistant Professor/Dosimetry Program Director and RT Faculty. B.S., Thomas Edison State; M.S., Southern Illinois University.
- Green-Smith, Dianne** (2002), Associate Professor of Social Work. B.A., Xavier University; M.S.W., Tulane University; Ph.D., Loyola University – Chicago.
- Greer, Gary** (2003), Professor of Biology. B.A., University of Northern Colorado; M.A., Humboldt State University; Ph.D., Ohio University.
- Griffin, Carol B.** (1996), Professor of Biology and Natural Resources Management. B.S., North Dakota State University; M.S., Indiana University; M.S., Ph.D., State University of New York.
- Grissom, Scott B.** (1999), Professor of Computing and Information Systems. B.E.D., Texas A&M University; M.S., Ph.D., The Ohio State University.
- Gross, Jennifer** (1998), Professor of Psychology. B.A., Oakland University; M.A., Ph.D., Wayne State University.
- Guevara, Julia A.** (1989), Professor of Social Work. B.S., Grand Valley State University; M.S.W., Western Michigan University; Ph.D., Michigan State University.
- Gu, Wei** (2006), Associate Professor of Education. B.A., Nanjing University; M.A., Ph.D., Pennsylvania State University.
- Gulgin, Heather** (2008), Associate Professor of Movement Science. B.S., University of Alabama at Birmingham; M.A.E., University of Alabama at Birmingham; Ph.D., University of Toledo.
- Gyorkos, Amy** (2014), Assistant Professor of Movement Science. B.S., Central Michigan University; M.A., Ph.D., Western Michigan University.
- Haidar, Salim M.** (1992), Professor of Mathematics. B.S., St. Vincent College; M.S., Ph.D., Carnegie – Mellon University.
- Hall, Julie S.** (2007), Assistant Professor of Medical Laboratory Science. B.S., Ferris State University; M.S., Grand Valley State University.
- Halling, Dan C.** (2011), Associate Professor, Director of Audiology and Speech – Language Pathology. Ph.D., Indiana University.
- Hamilton, Erica** (2014), Assistant Professor of Education. B.A., M.A., Ph.D., Michigan State University.
- Harper, Christopher** (2014), Clinical Affiliate Faculty. B.B.A., Grand Valley State University; M.B.A., Michigan State University.
- Harrington, Susan** (2012), Assistant Professor of Nursing. B.S.N., College of St. Teresa; M.S.N., Oakland University; Ph.D., Wayne State University.
- Harris, Monica** (2008), Associate Professor of Education. B.S., M.A., Eastern Michigan University; Ph.D., University of Kansas.
- Harro, Cathy** (2006), Assistant Professor of Physical Therapy. B.S., University of Illinois; M.S., University of North Carolina – Chapel Hill.
- Hart, Dawn** (2008), Associate Professor of Cell and Molecular Biology. B.S., University of Michigan; Ph.D., Wayne State University.
- Hart, Matthew** (2005), Associate Professor of Chemistry. B.S., Michigan State University; Ph.D., University of California, Irvine.
- Hasenbank, Jon** (2012), Assistant Professor of Mathematics. B.S., Michigan Technological University; M.S., Ph.D., Montana State University.
- Harvey, Barbara** (2013), Assistant Librarian. B.S., M.A., University of Northern Iowa; M.A., University of Iowa.
- Harvey, Eric** (2015), Assistant Professor of Communications. B.A., M.A., Ph.D., Indiana University.
- Hatzel, Brian** (2002), Associate Professor of Movement Science. B.S., University of Florida; M.S., Ball State University; Ph.D., University of Florida.
- Haven, Chris** (2002), Associate Professor of Writing. B.A., M.A., University of Kansas; M.F.A., Southwest Texas State University; Ph.D., University of Houston.
- Hawk, Laura M.** (2017), Assistant Professor of Chemistry. B.S., University of Wisconsin – Madison; Ph.D., University of Chicago.
- Heid, Kelly** (2012), Affiliate Professor of Geology. B.A., University of Missouri – Kansas City; M.Ed., Cambridge College; M.S., Mississippi State University.
- Helder, Doreen** (2002), Affiliate Professor of Education. B.A., M.A., Calvin College.
- Henderleiter-Aldrich, Julie** (2002), Associate Professor of Chemistry. B.S., University of Wisconsin – Madison; Ph.D., University of Northern Colorado.
- Hendersen, Robert** (1994), Professor of Psychology. B.A., Reed College; Ph.D., University of Pennsylvania.
- Henderson-King, Donna H.** (1997), Professor of Psychology. B.A., Simon Fraser University; M.A., Ph.D., University of Michigan.
- Henderson-King, E Aaron I.** (1997), Associate Professor of Psychology. B.A., University of California at Santa Barbara; M.A., Ph.D., University of Michigan.
- Henke, Dellas R.** (1985), Professor of Art and Design. B.S., State University of New York; M.A., M.F.A., University of Iowa.
- Henshaw, Michael T.** (2007), Associate Professor of Biology. B.S., Grand Valley State University; M.A., Ph.D., Rice University.
- Herlands, Jason** (2013), Assistant Professor of Japanese. B.A., Middlebury College; Ph.D., University of Michigan.
- Herrington, Deborah** (2003), Professor of Chemistry. B.S., Wilfrid Laurier University; M.S., University of Waterloo; Ph.D., Purdue University.
- Hewitt, Avis G.** (2001), Professor of English. B.A., College of Wooster; M.A., Ph.D., Ball State University.
- Hindeleh, Firas** (2009), Associate Professor of Mathematics. B.A., The University of Jordan; M.A., Ph.D., The University of Toledo.
- Hinsch, Andrew Christian** (2011), Assistant Professor of Marketing. B.S., M.B.A., University of Missouri – St. Louis; Ph.D., University of Missouri – Columbia.
- Hipp, Sally** (2002), Associate Professor of Education. B.S., M.A., Michigan State University; Ed.D., Western Michigan University.
- Hiskes, Richard** (2013), Professor of Political Science and Human Rights and Director of Human Rights. A.B. Hope College; M.A., Ph.D., Indiana University.
- Hittepole, Philip** (2017), Affiliate Faculty of Engineering. B.S., Illinois Institute of Technology; M.S., Michigan Technological University; M.S., University of South Florida.
- Hodge, John** (1977), Professor of Management. B.A., M.A., Ed.D., Western Michigan University; M.L.I.R., Michigan State University.
- Hodge, Jonathan** (2002), Professor of Mathematics. B.S., Calvin College; M.A., California State University – Dominguez Hills; M.A., Ph.D., Western Michigan University.
- Hoekstra, Ryan** (2016), Affiliate Faculty of Chemistry. B.S., Grand Valley State University; Ph.D., University of California, Los Angeles.

- Hoffman, Mark C.** (1999), Associate Professor of Public and Nonprofit Administration. B.A., College of Wooster; M.A., Ph.D., Cleveland State University.
- Holder, Benjamin P.** (2013), Assistant Professor of Physics. B.A., Wesleyan University; Ph.D., University of Texas at Austin.
- Hollister, Robert** (2006), Professor of Biology. B.S., M.S., Ph.D., Michigan State University.
- Holahan, Kevin** (2012), Assistant Professor of Education. B.A., DePaul University; Ph.D., Michigan State University.
- Hoogenboom, Barbara** (2000), Professor of Physical Therapy. B.S., Calvin College; M.H.S., Grand Valley State University; Ed.D., Eastern Michigan University.
- Hooper, Barbara L.** (2008), Affiliate Faculty of Nursing. B.S.N., Nazareth College; M.S.N., Grand Valley State University.
- Hoogstra, Eric** (2012), Clinical Affiliate of Finance. B.S., Aquinas College; M.B.A., Grand Valley State University; Ph.D., Capella University.
- Hornik, Joseph G.** (2001), Instructor of Computing and Information Systems. B.S., M.S., Grand Valley State University.
- Horrocks, Caitlin** (2008), Associate Professor of Writing. B.A., Kenyon College; M.F.A., Arizona State University.
- Hosterman, William** (2001), Associate Professor of Art and Design. B.F.A., The Pennsylvania State University; M.F.A., Indiana University.
- Houghton-Rahrig, Lori** (2012), Assistant Professor of Nursing. B.S.N., M.S.N., Grand Valley State University; Ph.D., Michigan State University.
- Howard, Peggy** (2009), Affiliate Professor of Communications. B.S., Andrews University; M.S.A., University of Notre Dame.
- Hu, Xiangling** (2008), Associate Professor of Management. B.S., Fudan University; M.A., Tongji University; M.S., Ph.D., Washington State University.
- Huang, Lihua** (2012), Assistant Professor of Social Work. B.A., M.A., Nanjing University; M.S.W., Grand Valley State University; Ph.D., Michigan State University.
- Huey, Amorak** (2011), Assistant Professor of Writing. B.A., Birmingham – Southern College; M.F.A., Western Michigan University.
- Huizen, David L.** (2009), Assistant Professor of Occupational Safety and Health Management. B.A., Hope College; M.A., University of Michigan.
- Hulst, Craig** (2002), Senior Affiliate Professor of Writing. B.A., Grand Valley State University; M.A., Western Michigan University; Ph.D., Indiana University of Pennsylvania.
- Huner, Michael** (2012), Assistant Professor of History. B.A., Valparaiso University; M.A., Ph.D., University of North Carolina at Chapel Hill.
- Hunt, Jodee** (1995), Professor of Biology. B.S., University of Arizona; M.S., San Diego State University; Ph.D., University of Kansas.
- Hussain, Azfar** (2010), Associate Professor of Liberal Studies. B.A., M.A., Dhaka University; M.A., Ph.D., Washington State University.
- Iadonisi, Rick** (2002), Senior Affiliate Professor of Writing. B.A., Framingham State College; M.A., Boston College; Ph.D., Indiana University.
- Ihrman, David** (1995), Associate Professor of English. B.A., Kalamazoo College; M.A., Ph.D., University of New York at Binghamton.
- Isely, Paul** (1997), Professor of Economics. B.S., University of Wisconsin – Madison; M.S., Ph.D., Purdue University.
- Jack, Kristen** (2003), Assistant Professor of Hospitality and Tourism Management. B.S., M.Ed., CHA, Grand Valley State University; Ph.D., Western Michigan University.
- Jacquot, Joseph J.** (1999), Associate Professor of Biology. B.S., M.S., Bowling Green State University; Ph.D., Miami University.
- Jager, Lorie** (2009), Affiliate Professor of Communications. B.A., Central Michigan University; M.A., Western Michigan University.
- James, Jennifer** (2014), Affiliate Professor of Psychology. B.A., Hope College; M.Ed., Ph.D., Loyola University.
- Janes, Patricia** (2012), Professor of Hospitality and Tourism Management. B.A., M.S.A., Central Michigan University; Ph.D., Michigan State University.
- Jarchow, Susan** (2005), Affiliate Faculty of Nursing. B.S.N., Michigan State University; M.S.N., Andrews University.
- Jaskiewicz, Lara J.** (2012), Assistant Professor of Health Administration. B.A., University of Illinois; M.B.A., M.P.H., University of Minnesota.
- Jeliet, Richard W.** (1995), Professor of Public Administration. B.A., B.S., M.A., Ph.D., Michigan State University.
- Jenkins, Virginia** (2008), Professor of Art and Design. B.F.A., Michigan State University; M.F.A., University of Utah.
- Jiao, Lihong** (2004), Professor of Engineering. B.S., M.S., Nankai University; Ph.D., Pennsylvania State University.
- Jin, Min** (2010), Affiliate Professor of Music. B.M., Chongshin University; M.M., Mannes College of Music; D.M.A., Eastman School of Music.
- Jinn, Jann-Huei** (1991), Professor of Statistics. B.S., National Chengchi University; M.S., Ph.D., State University of New York at Albany.
- Johnson, Brian** (1994), Professor of Criminal Justice. B.A., University of Wisconsin; M.S., M.L.I.R., Ph.D., Michigan State University.
- Johnson, Brian** (2011), Affiliate Professor of Education. B.A., Hampton University; M.T., Hampton University; J.D., Thomas M. Cooley Law School; Ph.D., Michigan State University.
- Johnson, Ingrid L.** (2009), Associate Professor of Movement Science. B.S., M.Ed., University of Minnesota; Ph.D., University of New Mexico.
- Johnson, Jerry L.** (1997), Associate Professor of Social Work. M.S.W., Grand Valley State University; Ph.D., Western Michigan University.
- Johnson, Paul** (1986), Professor of Engineering. B.A., Houghton College; M.S., Ph.D., University of Notre Dame.
- Johnson, Sherry R.** (2010), Assistant Professor of English. B.Ed., B.A., York University; M.A., Ph.D., University of Wisconsin – Madison.
- Johnson, Sidney A.** (2016), Affiliate Faculty in Economics. B.S.B.A., M.B.A., University of Detroit Mercy; M.A., Wayne State University.
- Jones, Tonisha** (2012), Assistant Professor of Criminal Justice. B.A., M.A., Ph.D., Washington State University.
- Jones-Rikkers, Catherine** (1994), Associate Professor of Management. B.S., M.B.A., Grand Valley State University; J.D., University of Notre Dame Law School.
- Joo, Sung-Hwan** (2008), Associate Professor of Engineering. B. Eng. Dong – A University; M.S., Ph.D., University of Oklahoma.
- Jordan, Tessa M.** (2015), Assistant Professor of Psychology. B.A., M.S., Ph.D., University of New Mexico.
- Jorgensen, Paul C.** (1988), Professor of Computing and Information Systems. B.A., North Central College; M.A., University of Illinois; Ph.D., Arizona State University.
- José, Laurence** (2010), Associate Professor of Writing. M.A., University Marc Bloch (France); Ph.D., Michigan Technological University.
- Joshi, Mahendra** (2007), Associate Professor of Management. B.Ph., University of Delhi; M.F.T. Central Food Technological Research Institute; M.B.A., Ph.D., University of Arkansas.
- Kaitany, Andrea** (2004), Affiliate Professor of Writing. B.A., M.A., Iowa State University; Ph.D., Michigan State University.
- Kalafut, Andrew** (2010), Associate Professor of Computing and Information Systems. B.S., Bradley University; M.S., Ph.D., Indiana University.
- Kaletka, Cheryl** (2007), Affiliate Professor of Education. B.A., Hope College; M.A., Grand Valley State University.
- Kanaboshi, Naoki** (2012), Assistant Professor of Criminal Justice. B.A., Aoyama Gakuin University; M.A., Waseda University; M.L.I., LL.M., S.J.D., University of Wisconsin.
- Kandalaf, Nabeeh** (2016), Assistant Professor of Engineering. B.A., Iowa State University; M.S., Iowa State University; Ph.D., University of Windsor.

## Faculty Directory

- Kaneko, Todd** (2009), Assistant Professor of Writing. B.A., University of Washington; M.F.A., Arizona State University.
- Kantner, Christopher** (2011), Affiliate Professor of Music. M.M., State University of New York – Stony Brook; B.M., University of Michigan.
- Kapitula, Laura** (2011), Associate Professor of Statistics. B.A., State University of New York at Fredonia; M.S., University of New Mexico; M.A., University of New Mexico; Ph.D., University of New Mexico.
- Karasinski, Courtney** (2011), Assistant Professor of Speech – Language Pathology. B.S., Illinois State University; M.A., Western Michigan University; Ph.D., University of Wisconsin – Madison.
- Karpen, Mary E.** (1995), Professor of Chemistry. B.S., Clarkson University; B.A., State University of New York; M.S., Ph.D., Case Western Reserve University.
- Kasmer, Lisa** (2010), Associate Professor of Mathematics. B.A., Michigan State University; M.A., Ph.D., Western Michigan University.
- Kautz, Cheryl** (2014), Affiliate Professor of Computing and Information Systems. B.S., University of Wisconsin – Stout; M.B.A., Cornerstone University.
- Keegan, Cael** (2014), Assistant Professor of Women, Gender, and Sexuality Studies and Liberal Studies. B.A., St. Bonaventure University; M.A., Ph.D., University at Buffalo.
- Keider, R. Charles** (2012), Instructor and Clinical Coordinator of Radiation Therapy. B.S., M.S., Grand Valley State University; R.T. (Certificate), William Beaumont School of Radiation Therapy.
- Keenlance, Paul W.** (2007), Assistant Professor of Biology and Natural Resources Management. B.S., M.S., University of Wisconsin – Stevens Point; Ph.D., Michigan State University.
- Kegley, Anthony** (2009), Associate Professor of Biomedical Sciences. B.A., Arizona State University; M.S., Ph.D., University of the Witwatersrand.
- Kelder, Shaunna** (2013), Assistant Professor of Occupational Therapy. B.S., Eastern Michigan University; OTD, Chatham University.
- Kelley-Lafata, Kim** (2002), Affiliate Professor of Writing. B.A., Hope College; M.A., Western Michigan University.
- Kelly Lowenstein, Jeffrey** (2016), Assistant Professor of Communications. B.A., Stanford University; M.S., Northwestern University.
- Kennedy, Devereaux** (2003), Professor of Sociology. B.A., Washington University in St. Louis; M.A., Ph.D., SUNY.
- Kennedy, Eric** (2017), Assistant Professor of Marketing. B.S., University of Phoenix; M.B.A., Ph.D., University of North Texas.
- Kenyon, Lisa K.** (2010), Associate Professor of Physical Therapy. B.S., University of Vermont; M.H.S., University of Indianapolis; Ph.D., DPT, Nova Southeastern University.
- Kessler, Lara** (2007), Associate Professor of Accounting. B.A., Northern Arizona University; M.S.A., Grand Valley State University; J.D., Vanderbilt University School of Law; C.P.A.
- Khoo, Sok Kean** (2016), Associate Professor of Cell and Molecular Biology. B.Sc., M.Sc., University of Science, Malaysia; Ph.D., Tokyo University of Marine Science and Technology.
- Kierkus, Christopher** (2004), Professor of Criminal Justice. M.A., University of Western Ontario; M.A., Ph.D., SUNY Albany.
- Kierzek, Jennifer** (2008), Affiliate Professor of Writing. B.A., University of Washington; M.F.A., Arizona State University.
- Kilbourne, John** (2004), Professor of Movement Science. B.A., California State University – Long Beach; M.A., UCLA; Ph.D., The Ohio State University.
- Kilburn, Howard W.** (2007), Associate Professor of Political Science. B.A., Grinnell College; M.P.Aff., University of Texas at Austin; Ph.D., University of North Carolina at Chapel Hill.
- Kimboko, Priscilla** (2000), Professor of Public and Health Administration. B.A., M.A., Ph.D., Portland State University.
- Kimoto, Diane M.** (2002), Associate Professor of Public and Nonprofit Administration. B.A., M.A., California State University at Long Beach; Ph.D., University of California at Los Angeles.
- Kindschi, Douglas P.** (1976), Professor of Mathematics and Philosophy. B.A., Houghton College; M.A., Ph.D., University of Wisconsin.
- King, Caryn M.** (1991), Professor of Education. B.A., Alfred University; M.A., Slippery Rock University; Ph.D., University of Pittsburgh.
- King, Erika** (1995), Professor of Political Science. A.B., Oberlin College; M.A., Ph.D., Northwestern University.
- King, Sarah J.** (2012), Associate Professor of Liberal Studies and Religious Studies. B.Sc., University of Guelph; M.A., Wilfrid Laurier University; Ph.D., University of Toronto.
- Kingshott, Brian** (2003), Professor of Criminal Justice. B.A., M.A., Ph.D., University of Exeter, England.
- Kinne, Bonni L.** (2010), Assistant Professor of Physical Therapy. B.S., M.A., Western Michigan University; M.S., P.T., Grand Valley State University; DHSc., A.T. Still University.
- Kipp, Brian** (2002), Professor of Biomedical Sciences. B.S., Saginaw Valley State University; Ph.D., Wayne State University.
- Kneeshaw, Tara** (2014), Assistant Professor of Geology. B.A., Albion College; Ph.D., Texas A&M University.
- Koch, Bradley** (2007), Associate Professor of Management. Associate degree, Illinois Central College; B.S., Virginia Commonwealth University; M.B.A., Virginia Commonwealth University; M.A., Economics and Sociology, University of Arizona; Ph.D., University of Arizona.
- Kocharian, Ted** (2016), Affiliate Professor of Engineering. B.Sc., Tehran Polytechnic (Amir Kabir) University; M.S.E., University of Toronto.
- Koches, John** (1988), Associate Research Scientist. B.S., Grand Valley State University; M.S., Miami University.
- Kohrman, Rita** (1996), Senior Librarian. B.A., St. Andrews Presbyterian College; M.S.L.S., Wayne State University.
- Kong, Haiying** (2010), Assistant Professor of Communications. B.A., Liaoning Normal University; M.A., Missouri State University; Ph.D., University of Oklahoma.
- Kopperl, Sheldon J.** (1970), Professor of Biomedical Sciences and Liberal Studies. B.S., Case Institute of Technology; Ph.D., University of Wisconsin.
- Korich, Andrew** (2011), Assistant Professor of Chemistry. B.S., Saint Michael's College; Ph.D., University of Vermont.
- Kosalge, Parag Uma.** (2003), Professor of Management. Bachelor of Engineering, College of Engineering, Aurangabad, India; Ph.D., Indian Institute of Management, Bangalore, India.
- Koste, Lori** (1999), Associate Professor of Management. B.A., University of Virginia; M.B.A., Clemson University; Ph.D., University of South Carolina.
- Kotman, Larry** (1985), Associate Professor of Computing and Information Systems. A.B., Calvin College; M.S., Ph.D., Purdue University.
- Kovacs, Dalila** (2003), Associate Professor of Chemistry. B.S., Babes – Bolyai University; Ph.D., Michigan State University.
- Kraft Frederic** (2002), Professor of Marketing. B.A., Wabash College; M.B.A., Washington University; D.B.A., Indiana University.
- Krauss, Ryan** (2016), Associate Professor of Engineering. B.S., Michigan Technological University, M.S., Virginia Polytechnic Institute & State University, Ph.D., Georgia Institute of Technology.
- Krcmar, Maja** (2006), Associate Professor of Physics. B.S., University of Belgrade; M.S., Ph.D., Texas A&M University.
- Krohmer, Stanley** (1996), Senior Affiliate Faculty, Liberal Studies. B.A., Wilmington College of Ohio; Certificate in Fine Arts, Maryland Institute of College of Art; M.D.S., (M.F.A.), The Johns Hopkins University.
- Kumar, Ashok** (1992), Professor of Management. B.Sc., Agra University; B.Tech., Indian Institute of Technology; M.S., University of Birmingham, U.K.; Ph.D., Purdue University.
- Kurby, Christopher** (2010), Associate Professor of Psychology. B.S., M.A., Ph.D., Northern Illinois University.

- Kurjiaka, David** (2009), Associate Professor of Biomedical Sciences. B.S., Lebanon Valley College; M.S., University of Oklahoma; Ph.D., Pennsylvania State University.
- Kurmas, Zachary A.** (2004), Associate Professor of Computing and Information Systems. B.S./B.A., Grand Valley State University; M.S., Ph.D., Georgia Institute of Technology.
- Kurthen, Hermann** (2004), Professor of Sociology. B.A., M.A., and Ph.D., Freie Universitat Berlin.
- LaFevor, Meghan E.** (2017), PhD Michigan State (anticipated completion May 2017); M.S. Ohio University; B.S. Athens State University; B.S. Lincoln Memorial University.
- LaFreniere, Diane** (2014), James R. Sebastian Chair Assessment, Accreditation and Cooperative Education, School of Engineering. B.S.E.E., Michigan Technological University.
- Lai, Sufen** (1992), Professor of English. B.A., Tunghai University; M.A., Ph.D., University of Illinois.
- Laidlaw, Susan** (2009), Affiliate Professor of Writing. B.A., Hope College; M.Ed., Aquinas College; M.A., Colorado State University.
- Lake, Danielle** (2011), Assistant Professor of Liberal Studies. B.S., Grand Valley State University; M.A., University of Toledo; Ph.D., Michigan State University.
- Lakey, Brian** (2005), Professor of Psychology. B.A., Arizona State University; Ph.D., Indiana University.
- Lancaster, Paula E.** (2000), Professor of Education. B.S., Western Illinois University; M.S., Northern Illinois University; Ph.D., The University of Kansas.
- Lancaster, Sean J. C.** (2000), Professor of Education. B.S., M.S., Kansas University; Ph.D., University of Kansas.
- Lane, Paul M.** (1998), Professor of Marketing. B.A., Earlham College; M.B.A., Stetson University; Ph.D., Michigan State University.
- Lange, David K.** (2001), Instructor of Computing and Information Systems. B.S., University of Iowa; M.B.A., University of Phoenix.
- Lanier, Jolanta** (2014), Affiliate Professor of Biomedical Sciences. B.S., M.S., Grand Valley State University.
- Lantz, Andrew W.** (2007), Associate Professor of Chemistry. B.A., St. Olaf College; Ph.D., Iowa State University.
- Laughlin, David D.** (2015), Assistant Professor of Movement Science. B.A., William Jewell College; M.S., Ithaca College; Ph.D., University of Tennessee.
- Lawrence, Christopher** (2004), Associate Professor of Chemistry. B.S. University of California – Los Angeles; Ph.D., University of Wisconsin – Madison.
- Lawson, Diana R.** (2014), Professor of Marketing. B.S., State University of New York at Cortland; M.A., M.B.A., Ph.D., Kent State University.
- Lee, Hoon** (2004), Associate Professor of Art and Design. B.A., M.A., Seoul National University of Technology; M.F.A., New York State College of Ceramics at Alfred University.
- Lehnert, Kevin** (2010), Associate Professor of Marketing. B.A., Saint Louis University; M.A., Boston College; M.B.A., Loyola University; Ph.D., Saint Louis University.
- Leidig, Jonathan P.** (2012), Assistant Professor of Computing and Information Systems. B.S., Grand Valley State University; M.S., Ph.D. Virginia Polytechnic Institute and State University.
- Leidig, Paul M.** (1991), Professor of Computing and Information Systems. B.S., Eastern Mennonite College; M.B.A., James Madison University; Ph.D., Virginia Commonwealth University.
- Leiras-Laubach, Claudia** (2008), Assistant Professor of Physician Assistant Studies/Allied Health Studies. B.S., College of Mount Saint Vincent; M.S., University at Buffalo; Ph.D., University of Pittsburgh.
- Lenters, Geoffrey** (2003), Associate Professor of Physics. B.S., Calvin College; M.S., Ph.D., University of Alabama in Huntsville.
- Leon, Paola (Mirta)** (2012), Assistant Professor of Social Work. B.S., University of Puerto Rico; M.S.W., Ph.D., University of Illinois Urbana – Champaign.
- Leonard, David A.** (1998), Professor of Chemistry. B.S., Bucknell University; Ph.D., Cornell University.
- Leonard, Susan** (2013), Affiliate Professor of Biomedical Sciences. B.S., Cornell University; M.S., State University of New York College at Cortland.
- Levenburg, Nancy** (2000), Professor of Management. B.S., Miami University; M.B.A., Western Michigan University; Ph.D., The Union Institute.
- Lewis, Colleen A.** (2007), Associate Professor of Movement Science. B.S., Denison University; M.S., Wright State University; Ph.D., Indiana University.
- Liang, Yan.** (2009), Associate Professor of Chinese, East Asian Studies, and Chinese Studies. B.A., Nankai University, Tianjin, China; M.A., Peking University, Beijing, China; Ph.D., University of California, Santa Barbara.
- Libman, Karen** (1999), Professor of Communications. B.F.A., Virginia Commonwealth University; M.F.A., Arizona State University.
- Licari, Gisella** (2007), Affiliate Professor of Italian. M.A., University of Palermo, Italy.
- Lima, Vinicius** (2014), Assistant Professor of Art and Design. B.Arch., Federal University of Rio de Janeiro; M.A., M.F.A., The University of Iowa.
- Linde, Sebastian** (2017), Assistant Professor of Economics. B.Sc., Cardiff University, UK; M.Phil., King's College, University of Cambridge, UK; M.Sc., Loyola University at Chicago; Ph.D. (ABD), Purdue University.
- Linford, Bret G.** (2015), Assistant Professor of Spanish. B.S., Brigham Young University; M.A. University of Montana; M.A., Ph.D., Indiana University.
- Lingwood, Chad** (2000), Associate Professor of History. B.A., University of Colorado at Boulder; M.A., Washington University in St. Louis; Ph.D., University of Toronto.
- Linn, David** (2004), Associate Professor of Biomedical Sciences. Ph.D., University of Texas.
- Lioubimtseva, Elena** (2000), Associate Professor of Geography and Sustainable Planning. B.S., M.S., Ph.D., Moscow State University.
- Lipford, John** (2011), Affiliate Professor of Hospitality and Tourism Management. B.A., Miami University (OH); J.D., Michigan State University College of Law.
- Little, Joseph** (2010), Associate Professor of Marketing. B.G.S., M.B.A., Indiana University Southeast; Ph.D., Saint Louis University.
- Locher, Alexandra** (2011), Associate Professor of Biology and Natural Resources Management. B.S., M.S., Ph.D., Michigan State University.
- Lockerd Jr., Benjamin G.** (1986), Professor of English. B.S., University of Wyoming; M.A., University of Toronto; Ph.D., University of Connecticut.
- Loeffler, Ronald** (2004), Associate Professor of Philosophy. M.A., University of London; M.A., Free University Berlin; Ph.D., Northwestern University.
- Lombardo, Michael** (1991), Professor of Biology. B.S., The Ohio State University; M.S., Ph.D., Rutgers University.
- Long, Valeria** (2000), Associate Librarian. B.A., Central Michigan University; M.L.I.S., Wayne State University.
- Lopez-Arias, Salvador** (2006), Assistant Professor of Social Work. B.S.W., M.S.W., Grand Valley State University; Ph.D., Western Michigan University.
- Lord, Richard** (2012), Assistant Professor of Chemistry. B.S., University of Southern Indiana; Ph.D., Indiana University.
- Losey, Kay** (2004), Professor of Writing. B.A., Michigan State University; M.A., Ph.D., University of California, Berkeley.
- Lou, Leon L.** (2001), Associate Professor of Psychology. B.S., Fudan University; M.A., Institute of Psychology, Chinese Academy of Science; Ph.D., University of California, San Diego.
- Lowe, Charles** (2006), Associate Professor of Writing. B.A., Computer Science; M.A., Ph.D., Florida State University.

## Faculty Directory

- Lowell, Rodd** (2014), Affiliate Professor of Computing and Information Systems. B.S., Michigan State University; M.A., Grand Valley State University.
- Lowen, Aaron** (2003), Professor of Economics. B.A., University of Northern Iowa; M.A., Ph.D., University of Iowa.
- Lown, Deborah** (2008), Associate Professor of Biomedical Sciences. B.S., M.S., Ph.D., University of Michigan.
- Lubic, Barbara** (1999), Associate Professor of Education. B.A., M.A., Michigan State University; Ed.D., University of Cincinnati.
- Lubic, Tamara** (2002), Senior Affiliate Professor of Writing. B.A., Western Michigan University; M.A., University of Minnesota.
- Lundskow, George** (1999), Professor of Sociology. B.A., Boston University; M.A., University of New Orleans; Ph.D., University of Kansas.
- Luttenton, Mark** (1989), Professor of Biology and Water Resources. B.S., Central Michigan University; M.S., University of Wisconsin – LaCrosse; Ph.D., Bowling Green State University.
- Luttenton-Knoll, Meagan** (2006), Clinical Faculty of Management. B.A., Grand Valley State University; M.B.A., Spring Arbor University.
- Ma, Kin** (2003), Assistant Professor of Geography and Sustainable Planning. B.A., Williams College; M.S., Ph.D., Michigan State University.
- Macauley, Beth L.** (2010), Associate Professor of Speech-Language Pathology. B.A., M.A., Ph.D., University of Florida.
- MacDonald, Neil W.** (1994), Professor of Biology and Natural Resources Management. B.S., University of Michigan; M.S., Ph.D., Michigan State University.
- Machajewski, Szymon** (2013), Affiliate Faculty of Computing and Information Systems. B.S., M.S., Grantham University.
- Machnik, Kelly** (2014), Affiliate Faculty of Occupational Science and Therapy. B.S., M.S., Grand Valley State University.
- Mack, Faite R-P** (1972), Professor of Education. B.S., Indiana University; M.A., Roosevelt University; Ed. Spec., Michigan State University; Ph.D., University of Illinois.
- Mack, Kristina** (2008), Affiliate Professor of Chemistry. B.S., M.S., Western Michigan University.
- Mack, Nancy** (2001), Professor of Mathematics. B.S., M.A., University of Texas; Ph.D., University of Wisconsin – Madison.
- MacQuillan, Elizabeth** (2016), Assistant Professor of Clinical Dietetics. B.S., Michigan State University; M.A., Western Michigan University.
- Madden, Gwyn** (2006), Associate Professor of Anthropology. B.A., M.A., Oregon State University; Ph.D., University of Nevada.
- Magal, Simha** (2000), Professor of Management. Bachelor of Commerce, University of Delhi; M.B.A., Valdosta State College; Ph.D., University of Georgia.
- Mahave-Veglia, Pablo** (2003), Professor of Music. B.M., The Eastman School of Music; M.M., Indiana University; D.M.A., University of Wisconsin – Madison.
- Maisel, Sebastian** (2005), Associate Professor of Arabic and Middle East Studies. B.A., M.A., Ph.D., Leipzig University, Germany.
- Majumdar, Kingshuk** (2007), Associate Professor of Physics. B.S., Presidency College; M.S., University of Calcutta; Ph.D., University of Florida.
- Malaret, Dennis** (1995), Associate Professor of Sociology. B.S., University of Puerto Rico; M.A., Ph.D., Western Michigan University.
- Mangala, Jack**, (2005), Professor of African African/American Studies and Political Science. B.A., University of Kinshasa; M.A., L.L.M., Ph.D., Catholic University of Louvain, Belgium.
- Mansour, Samah** (2008), Affiliate Faculty of Computing and Information Systems. B.A., Ain Shams University; M.A., Ph.D., University of Louisville.
- Maodush-Pitzer, Diane** (2003), Senior Affiliate Faculty, Liberal Studies; Program Coordinator, Religious Studies. B.S., Northern Illinois University; M.Div. Western Theological Seminary; M.A., University of Notre Dame.
- Maouene, Josita** (2009), Associate Professor of Psychology. B.A., Ph.D., University of Lausanne.
- Margot, Kelly** (2017), Assistant Professor of Education. B.S., M.S., Texas A&M University; Ph.D., University of North Texas.
- Margulus, Lisabeth S.** (1999), Associate Professor of Education. B.S., University of Missouri; M.A., Ed.D., Western Michigan University.
- Marlais, Helen** (1998), Associate Professor of Music. B.M., University of Toledo; M.F.A., Carnegie Mellon University; D.M., Northwestern University.
- Martin, Barry** (1994), Professor of Music. B.M.E., University of Akron; M.S.M.E., University of Illinois.
- Martin, Elizabeth** (Beth) (2013), Assistant Librarian. B.A., Western Michigan University; M.L.I.S., Wayne State University.
- Martin, John T.** (2009), Associate Professor of Music. B.M., M.M., University of Tennessee; D.M.A., University of Southern Mississippi.
- Masko, Amy** (2003), Associate Professor of English. B.S., Eastern Michigan University; M.Ed., Lesley University; Ph.D., University of Denver.
- Mason, Julia** (2007), Associate Professor of Women, Gender, and Sexuality Studies. B.A., William Smith College; M.A., The University of Arizona; Ph.D., Bowling Green State University.
- Matchett, Stephen** (1991), Professor of Chemistry. B.S., University of Miami, Florida; Ph.D., Colorado State University.
- Mather, Sarah** (2010), Affiliate Faculty of Spanish. B.S., Florida State University; M.A., University of South Florida.
- Matthews, Amy** (1998), Professor of Psychology. B.A., University of California at Santa Barbara; M.A., Ph.D., Binghamton University.
- Matthews, Patricia** (2001), Assistant Professor of Biology. B.S., M.E., Grand Valley State University.
- Mattox, Stephen R.** (1998), Professor of Geology. B.S., Indiana University; M.S., Ph.D., Northern Illinois University.
- Mayers, Leifa** (2016), Assistant Professor of Women, Gender, and Sexuality Studies. B.S., University of California, Davis; M.S., University of California, Santa Cruz; Ph.D., University of California, Santa Cruz.
- Mays, Jane** (2000), Instructor of Mathematics. B.S., M.S., Michigan State University.
- Maytan, Gregory S.** (2010), Associate Professor of Music. B.M., The Royal University of Music, Stockholm; M.M., D.M.A., Indiana University.
- McBane, George** (2001), Professor of Chemistry. B.S., North Carolina State University; Ph.D., Cornell University.
- McCann, Dana** (2016), Clinical Faculty of Management. B.B.A., Saginaw Valley State University; M.B.A., Central Michigan University, D.B.A., Argosy University; Ph.D. (ABD), Central Michigan University.
- McCargar, Joseph** (2002), Affiliate Professor of Communications. B.S., Central Michigan University.
- McClure, Hazel** (2009), Assistant Librarian. B.S., Central Michigan University; M.F.A., St. Mary's College of California; M.L.S., State University of New York – Buffalo.
- McCurren, Cynthia A.** (2007), Professor of Nursing. B.S.N., M.S.N., University of Missouri; Ph.D., University of Kentucky.
- McCurren, J. Kevin** (2016), Clinical Faculty of Management. B.S., University of Missouri – Columbia; M.S.P.H., University of Missouri – Columbia.
- McFarland, Amy** (2014), Assistant Professor of Honors and Environmental Studies. B.A., Rice University; M.Ed., Texas State University; Ph.D., Texas A&M University.
- McGinnis, Thomas** (2011), Assistant Professor of Management. B.S., Bentley College; M.B.A., Central Michigan University; Ph.D., University of North Texas.
- McKee, Kimberly** (2014), Assistant Professor of Liberal Studies. B.A., George Washington University; M.Sc., London School of Economics; Ph.D., The Ohio State University.

- McKendall, Marie A.** (1988), Professor of Management. B.B.A., M.B.A., Grand Valley State University; Ph.D., Michigan State University.
- McLeod, Corinna** (2003), Associate Professor of English. B.A., University of Tulsa; M.A., Ph.D., University of South Carolina, Columbia.
- McNair, James** (2009), Associate Professor of Water Resources. B.A., Davidson College; Ph.D., University of Pennsylvania.
- Mehall, Christopher** (2014), Affiliate Professor of Education. B.S., Eastern Illinois University; M.Ed., Northern Arizona University.
- Mekik, Figen** (2000), Professor and Chair of Geology. B.S., M.S., Middle East Technical University; Ph.D., Northern Illinois University.
- Menon, Shaily** (1998), Associate Dean and Professor of Biology and Natural Resources Management. B.Sc., M.Sc., Bombay University; M.S., University of South Carolina; Ph.D., The Ohio State University.
- Merkle, Bart** (2016), Distinguished Professor of Education. B.A., Hope College; M.A., Ed.D., Western Michigan University.
- Metz, Allison** (2010), Associate Professor of Communications. B.A., University of Wisconsin at Madison; M.F.A., University of Texas at Austin; Ph.D., University of Wisconsin at Madison.
- Meyer-Looze, Catherine** (2013), Assistant Professor of Education. B.A., Saginaw Valley State University; M.A., Central Michigan University; Ed.D., Eastern Michigan University.
- Miller, Blair E.** (1990), Professor of Chemistry. B.A., Manchester College; Ph.D., Miami University.
- Miller, Jo** (1991), Associate Professor of English. B.A., University of Oregon; M.A., Colorado State University; Ph.D., University of Utah.
- Miller, Sandra L.** (1995), Associate Professor of Education. B.S., Western Michigan University; M.Ed., Ph.D., University of Pittsburgh.
- Miller-Adams, Michelle** (2006), Professor of Political Science. B.A., University of California; M.A., Ph.D., Columbia University.
- Mishra, Jitendra M.** (1972), Professor of Management. B.A., Delhi University; M.S., Northern Michigan University; M.B.A., Western Michigan University; F.Ph.S., Philosophical Society of England, London; Ph.D., Lucknow University.
- Mitchell Jr., Donald** (2012), Assistant Professor of Education. B.S., Shaw University; M.S., Minnesota State University, Ph.D., University of Minnesota.
- Mlynarczyk, Susan** (2005), Assistant Professor of Nursing. B.S.N., Wayne State University; M.S.N., University of Wisconsin; Ph.D., Michigan State University.
- Moes, Mark M.** (1991), Associate Professor of Philosophy. B.A., University of Notre Dame; M.A., Aquinas Institute School of Theology; Ph.D., University of Notre Dame.
- Mohammadzadeh, Alireza** (1985), Associate Professor of Engineering. B.S., Aryamehr University; M.S., Ph.D., University of Michigan.
- Moiles, Roger** (2010), Senior Affiliate Professor of Political Science. B.A., Saginaw Valley State University; M.A., Michigan State University.
- Mokhtar, Wael** (2009), Associate Professor of Engineering. B.S., M.S., Alexandria University; Ph.D., Old Dominion University.
- Molla, Azizur** (2008), Associate Professor of Public Health. B.S.S., University of Dhaka, Bangladesh; M.P.H., University of North Carolina – Chapel Hill; M.A., Ph.D., Pennsylvania State University.
- Montagna, Douglas** (2003), Associate Professor of History. B.A., Hamilton College; M.A., Northern Illinois University; M.B.A., SUNY Binghamton, Ph.D., Northern Illinois University.
- Moore, Jennifer** (2012), Assistant Professor of Biology and Natural Resources Management. B.S., Northern Michigan University; M.S., Central Michigan University; Ph.D., University of Wellington, New Zealand.
- Moore, Louis** (2008), Associate Professor of History and African/African American Studies. B.A., California State University, Sacramento; M.A., California State University, Sacramento; Ph.D., University of California, Davis.
- Moret, Zulema** (2004), Professor of Spanish. M.A., University of Buenos Aires; Ph.D., University of Basque Country (Spain).
- Morgan, Roderick M.** (1997), Professor of Biology. B.S., M.S., Central Michigan University; Ph.D., Virginia Commonwealth University.
- Morison, Melissa** (2001), Associate Professor of Classics. B.A., University of Virginia; M.A., Indiana University; Ph.D., Boston University.
- Morison, William** (2004), Associate Professor of History. Ph.D., University of California Santa Barbara.
- Morris, Jill** (2008), Affiliate Professor of Chemistry. B.S., Central Michigan University; M.S., Michigan State University.
- Morrow, Deborah** (1991), Senior Librarian. B.A., Earlham College; M.S.L.I.S., University of Illinois.
- Mothersell, William M.** (2002), Professor of Management. B.S., Master of Labor in Industrial Relations, Ph.D., Michigan State University.
- Motwani, Jaideep G.** (1990), Professor of Management. B.B.A., Bombay University; M.B.A., Sam Houston State University; Ph.D., University of North Texas.
- Mudde, Paul A.** (2002), Associate Professor of Management. B.S., Calvin College; M.S., Ph.D., Purdue University.
- Mueller, Aiman** (2016), Affiliate Professor of Writing. B.A., M.Ed., Grand Valley State University.
- Mukherjee, Oindrila** (2011), Assistant Professor. B.A. Jadavpur University, India; B.A., M.A., University of Cambridge, UK; M.F.A., University of Florida; Ph.D., University of Houston.
- Mulally, Dauvan** (2002), Senior Affiliate Professor of Writing. B.A., M.Ed., Grand Valley State University; Ph.D., Indiana University of Pennsylvania.
- Mulder, Cray** (2005), Associate Professor of Social Work. B.A., Calvin College; M.S.W., Grand Valley State University; Ph.D., University of Illinois at Urbana – Champaign.
- Mullendore, Kristine** (1995), Professor of Criminal Justice/Legal Studies. B.S., Michigan State University; J.D., Boston University.
- Muller, Leslie** (2013), Assistant Professor of Economics. B.A., Calvin College; Ph.D., Michigan State University.
- Munk, Dana** (2004), Associate Professor of Movement Science. B.S., Grand Valley State University; M.A., Central Michigan University; Ph.D., Michigan State University.
- Mupepi, Sylvia** (2005), Associate Professor of Nursing. B.Ed.Ad.Ed., M.Ed.Ad.Ed., University of Zimbabwe; Ph.D., University of Michigan.
- Murphy, Paul** (1999), Professor of History. B.A., Hanover College; M.A., Ph.D., Indiana University.
- Nagelkerk, Jean** (1993), Professor of Nursing. B.S.N., Nazareth College; M.S.N., Wayne State University; Ph.D., University of Florida.
- Nandigam, Jagadeesh** (2003), Professor of Computing and Information Systems. B.S., Sri. Venkateswara; B.S., Grambling State University; M.S., Ph.D., University of Louisiana at Lafayette.
- Nash, Robert** (2009), Associate Professor of Hospitality and Tourism. B.S., New Hampshire College; M.S., University of Birmingham; Ph.D., Robert Gordon University.
- Navarro, Janet** (2010), Affiliate Professor of English. B.A., Ohio Wesleyan University; M.A., Ph.D., Michigan State University.
- Neitzert, Kevin** (2009), Affiliate Faculty in German. B.A., M.A., Michigan State University.
- Nesterenko, Alexander** (1984), Professor of Communications. B.A., M.A., Ph.D., University of Iowa.
- Ngassa, Felix** (2004), Associate Professor of Chemistry. B.S., University of Yaounde I; Ph.D., University of North Dakota.
- Ni, Peimin** (1992), Professor of Philosophy. B.A., M.A., Fudan University; Ph.D., University of Connecticut.
- Nieuwkoop, Anthony** (1995), Professor of Biomedical Sciences. A.B., Hope College; Ph.D., University of Michigan.

## Faculty Directory

- Nikitin, Alexey** (2001), Professor of Biology. M.S., Kiev State University; Ph.D., Bowling Green State University.
- Nikkel, Harvey** (1974), Professor of Chemistry. B.S., Southwestern State College; Ph.D., Purdue University.
- Niu-Cooper, Rui** (2017), Associate Professor of Education. B.A., Sichuan University; M.A., Acadia University; Ph.D., Michigan State University.
- Nizielski, Steven E.** (2001), Associate Professor of Biomedical Sciences. B.S., M.S., Ph.D., University of Minnesota.
- Nochera, Carmen L.** (1989), Professor of Biomedical Sciences. B.A., College of Notre Dame; R.D., M.A., Ph.D., University of Rhode Island.
- Nordman, Erik** (2006), Associate Professor of Biology and Natural Resources Management. B.S., M.S., Ph.D., State University of New York.
- Norkus, Amy** (2013), Affiliate Professor of Writing. B.A., M.F.A., Western Michigan University.
- Norris, Charles E.** (1998), Professor of Music. B.S., Indiana State University; M.S., Ed.D., University of Illinois.
- Northup, Melvin L.** (1972), Professor of Biology and Natural Resources Management. B.S., Parsons College; M.S., Purdue University; Ph.D., University of Missouri, Columbia.
- Novotny, Karen S.** (1989), Professor of Mathematics. B.S., Ph.D., Western Michigan University.
- Nowak, Brent M.** (2013), Associate Professor of Engineering. B.S., University of Illinois, Urbana; M.S., Illinois Institute of Technology; Ph.D., University of Texas, Austin.
- Nyamai, Priscilla A.** (2015), Assistant Professor of Biology and Natural Resources Management. B.S., Egerton University; M.S., University of Idaho; Ph.D., The Ohio State University.
- Ogura, Laudo** (2005), Associate Professor of Economics. B.A., University of Sao Paulo, Brazil; M.A., University of Brasilia, Brazil; Ph.D., University of Illinois at Urbana – Champaign.
- O’Kelly, Leonard A.** (2015), Assistant Professor of Communications. B.E.S., Lewis University; M.S., Grand Valley State University; Ph.D., Michigan State University.
- O’Kelly, Mary** (2009), Assistant Librarian. B.A., University of Michigan; M.L.I.S., University of Wisconsin.
- Oliver, Keith** (2004), Associate Professor of Physics. B.S., Utah State University; Ph.D., The Ohio State University.
- Olsson Jr., Roy H.** (2008), Professor of Therapeutic Recreation. B.S., M.S., Kansas State College of Pittsburgh; Ph.D., University of Oregon.
- O’Neill, Sean** (1991), Professor of History. B.A., University of California, Berkeley; M.S., Ph.D., University of California, Santa Barbara.
- Ostrow, Bruce** (2002), Professor of Biology. B.A., Boston University; Ph.D., Northwestern University.
- Otieno, Sango** (2003), Associate Professor of Statistics. B.S., M.S., Egerton University; Ph.D., Virginia Polytechnic Institute and State University.
- Owen-DeSchryver, Jamie** (2004), Associate Professor of Psychology. B.A., Kalamazoo College; M.S., The Johns Hopkins University; M.A., Ph.D., State University of New York at Stony Brook.
- Ozga, Karen L.** (1990), Assistant Professor of Physical Therapy. B.S., Wayne State University; M.M.Sc., Emory University.
- Page, Pamela** (2001), Affiliate Professor of Education. B.S., Michigan State University; B.A., Grand Valley State University; M.A., Western Michigan University.
- Palmer, LeShell** (2011), Assistant Professor and Program Director of Radiation Therapy. B.S., Virginia Commonwealth University; M.S., Thomas Jefferson University.
- Pandel, Dirk** (2010), Assistant Professor of Physics. B.S., Humboldt University of Berlin; M.S., University of California, Irvine; Ph.D., University of California, Santa Barbara.
- Parikh, Chirag** (2007), Associate Professor of Engineering, B.E., Fr Agnel College of Engineering, Mumbai, University; M.S., Ph.D., University of Texas at San Antonio.
- Park, Ernest** (2011), Associate Professor of Psychology. B.A., University of Virginia; M.A., University of Oregon; Ph.D., Michigan State University.
- Parker, Darren** (2009), Associate Professor of Mathematics. B.A., Ph.D., University of Wisconsin.
- Parker, Kelly A.** (1992), Professor of Philosophy, Environmental Studies, and Liberal Studies. B.A., Texas A&M University; M.A., Ph.D., Vanderbilt University.
- Parker, Tonya** (2006), Associate Professor of Movement Science. B.S., Texas Christian University; M.S., Ph.D., University of Oregon.
- Partridge, Charlyn** (2015), Assistant Professor of Water Resources. B.S., Nicholls State University; M.S. University of South Alabama; Ph.D., Texas A&M University.
- Paszek, Donald** (1984), Associate Professor of Psychology. B.A., University of Wisconsin – Milwaukee; M.A., Ph.D., University of Iowa.
- Patel, Osman** (2008), Associate Professor of Cell and Molecular Biology. B.S., University of Zambia; M.S. University of Glasgow; Ph.D., University of Tokyo.
- Patterson, Nancy** (2002), Associate Professor of Education. B.S., Michigan State University; M.Ed., Grand Valley State University; Ph.D., Michigan State University.
- Pawloski, Janice** (2007), Assistant Professor of Engineering. B.S., Michigan Technological University; M.S., Iowa State University; Ph.D., Iowa State University.
- Pazdernik, Charles F.** (2001), Professor of Classics. B.A., Cornell University; M.Phil., Oxford University; M.A., Ph.D., Princeton University.
- Pearson, Christen** (2000), Associate Professor of English. B.M., University of Miami; M.A., Southern Illinois University; Ph.D., Indiana University.
- Pearson, Robert** (2016), Assistant Professor of Statistics. B.S., University of Minnesota – Duluth; M.S., Ph.D., University of Northern Colorado.
- Pednekar-Magal, Vandana** (1999), Professor of Communications. M.A., Bombay University; Ph.D., Bowling Green State University.
- Pellathy, Daniel A.** (2016), Assistant Professor of Management. B.A., Cornell University; M.P.I.A., M.B.A., University of Pittsburgh; Ph.D., University of Tennessee – Knoxville.
- Pelon, Sally** (2013), Assistant Professor of Social Work. B.A., Hope College; M.S.W., Western Michigan University; Ph.D., Michigan State University.
- Penn, James** (2003), Associate Professor of Geography and Sustainable Planning. B.A., University of Illinois; M.A., Ph.D., University of Florida.
- Penning, Timothy** (2001), Professor of Communications. B.A., Central Michigan University; M.A., Western Michigan University, Ph.D., Michigan State University.
- Pentecost, Thomas** (2009), Associate Professor of Chemistry. B.S., University of Tennessee – Martin; M.S., Louisiana State University; Ph.D., University of Northern Colorado.
- Perhamus, Lisa** (2011), Assistant Professor of Education. B.A., William Smith College; M.A., The New School for Social Research; Ph.D., University of Rochester.
- Perrine, Toni** (1989), Professor of Communications. B.A., M.A., University of Michigan; Ph.D., Northwestern University.
- Persoon, James** (1984), Professor of English. B.S., Iowa State University; M.A., M.Phil., Ph.D., University of Kansas.
- Pestana, Mark S.** (1990), Professor of Philosophy. B.A., Colby College; M.A., University of Kentucky; Ph.D., University of Chicago.
- Peterman, Teresa M.** (2001), Instructor of Computing and Information Systems. B.S., M.S., Central Michigan University.
- Peters, Steven G.** (2012), Affiliate Faculty in Art and Design. B.F.A., Ball State University; M.F.A., Southern Illinois University at Carbondale.

- Peterson, Bethany** (2014), Assistant Professor of Writing. B.A., University of Wisconsin – Eau Claire; M.A., Wheaton College; M.F.A., University of Wyoming; Ph.D., University of Missouri.
- Peterson, Rachel** (2008), Associate Professor of Liberal Studies. B.A., Southern Illinois University; M.A., Washington State University; Ph.D., University of Michigan.
- Peterson, Valerie** (2004), Professor of Communications. B.A., University of Virginia; M.A., University of Virginia; Ph.D., University of Iowa.
- Peterson, Virginia** (2003), Professor of Geology. B.A., Grand Valley State University; M.S., Ph.D., University of Massachusetts.
- Pettes Guikema, Janel** (2006), Associate Professor of French. B.A., Calvin College; M.A., Bowling Green State University; Ph.D., Pennsylvania State University.
- Pettibone, Justin** (2012), Affiliate Faculty of Liberal Studies. B.A., Grand Valley State University; M.A., Miami University, Ohio.
- Pezzetti, Karen** (2016), Assistant Professor of English. B.A., M.A., University of California at Berkeley; Ph.D., Temple University.
- Philbin, John** (1997), Associate Professor of Communications. B.A., University of Iowa, M.F.A., Southern Illinois University.
- Phillips, Brian** (2000), Professor of Sociology. B.A., State University of New York, Utica; M.A., Rutgers University, Ph.D., State University of New York, Binghamton.
- Phipps, Danny** (2006), Professor and Chair of Music. B.M., Curtis Institute of Music; M.M., D.M.A., Catholic University of America.
- Picard, Joerg** (2016), Assistant Professor of Finance. M.S.C.E., University of Technology Aachen, Germany; M.B.A., University of California Irvine; Ph.D., Michigan State University.
- Pickett, Linda** (2012), Associate Professor of Education. B.A., M.A., Ph.D., University of New Mexico.
- Place, Mitchell D.** (2006), Affiliate Faculty in German. B.A., Central Michigan University; M.A., The Ohio State University; Ph.D., Michigan State University.
- Plotkowski, Paul D.** (1991), Professor of Engineering. B.S., M.S., Ph.D., Oakland University.
- Plouff, Christopher.** (2008), Associate Professor of Engineering. B.S., M.S., Michigan Technological University; Ed.D., Eastern Michigan University.
- Pool, Ellen** (1983), Associate Professor of Music. B.M., M.M., University of Michigan.
- Pope, Jennifer** (2003), Associate Professor of Marketing. B.A., College of Wooster; M.B.A., Ph.D., University of Texas – Pan American.
- Posada, Ana** (2002), Affiliate Faculty of Computing and Information Systems. B.S., Universidad EAFIT; M.S., Western Michigan University.
- Potteiger, Jeffrey** (2010), Dean of Graduate Studies. B.S., Indiana University of Pennsylvania; M.S., McDaniel College; Ph.D., Auburn University.
- Powers, Rachel** (2006), Associate Professor of Chemistry. B.S.T., Michigan State University; Ph.D., Northwestern University Medical School.
- Pozzi, Gabriela** (1994), Professor of Spanish. B.A., McGill University; M.A., Ph.D., University of Pennsylvania.
- Preston, Marilyn** (2013), Assistant Professor of Liberal Studies. B.A., Goddard College; M.A., Ph.D., University of Missouri.
- Psyck, Elizabeth** (2009), Assistant Librarian. B.A., Barnard College, Columbia University; M.L.I.S., University of Pittsburgh.
- Pung, Christopher** (2007), Associate Professor of Engineering. B.S., M.S., Michigan State University; Ph.D., Lawrence Technological University.
- Qi, Huihui** (2014), Assistant Professor of Engineering, B.S., B.S.c., Beijing Institute of Technology; Ph.D., Rutgers State University of New Jersey.
- Qi, Min** (1994), Professor of Chemistry. B.S., M.E., Beijing Polytechnic University; Ph.D., State University of New York.
- Quamme, Joel R.** (2008), Associate Professor of Psychology. B.A., Jamestown College; M.A., Ph.D., University of California.
- Raaymakers, Susan A.** (2005), Instructor of Radiologic and Imaging Sciences. B.S.I.B., Aquinas College.
- Rabourn, Karyn** (2016), Assistant Professor of Education. B.A., M.A., Michigan State University; Ph.D., Indiana University.
- Rahman, M. Azizur** (2002), Professor of Engineering. B.S., M.S., Bangladesh University of Engineering and Technology; Ph.D., University of Victoria.
- Rakovic, Milun** (2003), Associate Professor of Physics. B.S., M.S., Ph.D., University of Belgrade.
- Ramey, Emma** (2007), Affiliate Professor of Writing. B.A., Western Washington University; M.F.A., University of Alabama.
- Ramsson, Eric** (2011), Assistant Professor of Biomedical Sciences. B.S., Bradley University; Ph.D., Illinois State University.
- Ranger, Kim** (1990), Senior Librarian. B.A., Western Michigan University; M.I.L.S., University of Michigan.
- Ratliff-Miller, Paulette** (2007), Associate Professor of Accounting. B.S., M.B.A., Central Michigan University; Ph.D., University of Oklahoma, C.P.A., C.G.M.A.
- Rayor, Diane** (1991), Professor of Classics. B.A., Colorado College; Ph.D., University of California, Santa Cruz.
- Rediske, Richard** (1994), Professor of Water Resources. B.S., Bowling Green State University; M.S., Ph.D., University of Michigan.
- Reed, James C.** (2007), Associate Professor of Biomedical Sciences. B.A., Mississippi State University; M.A., University of South Carolina; Ph.D. University of Pittsburgh.
- Reffeor, Wendy** (2012), Associate Professor of Engineering. B.S., Kettering University; M.S., Purdue University; Ph.D., Michigan State University.
- Reidsma, Matthew** (2010), Assistant Librarian. B.A., Grand Valley State University; M.T.S., Harvard Divinity School; M.L.I.S., University of Wisconsin.
- Reischman, Diann** (1998), Professor of Statistics. B.S., Clarke College; M.S., University of Iowa; Ph.D., University of Missouri.
- Remlinger, Kathryn A.** (1995), Associate Professor of English. B.A., M.A., Moorehead State University; Ph.D., Michigan Technological University.
- Renner, Christine** (2009), Professor of Chemistry. B.S., Michigan State University; Ph.D., Northwestern University.
- Reynolds, John** (2002), Associate Professor of Computing and Information Systems. B.R.E., Th.B., A.A., Hannibal – LaGrange College; M.A., Criswell College; Ph.D., University of Northern Texas.
- Reynolds, Ross A.** (1990), Professor of Physics. B.S., Michigan State University; M.S., Ph.D., University of Oregon.
- Rhoads, Russell D.** (1994), Associate Professor of Anthropology. B.A., University of Oregon; M.A., Ph.D., University of Kentucky.
- Rhodes, Samhita** (2008), Associate Professor of Engineering. B.E., Maharashtra Institute of Technology; M.S., Ph.D., Marquette University.
- Richards, Mark J.** (1999), Professor of Political Science. M.S., University of Oregon; B.S., M.A., Ph.D., University of Wisconsin.
- Richards, Suzanne** (2015), Affiliate Professor of Education. B.S., M.Ed., Michigan State University.
- Richardson, Mary** (2002), Professor of Statistics. B.S., Southwest Missouri State University; M.A., Ph.D., University of Missouri.
- Richiert, Dawn** (2006), Associate Professor of Biomedical Sciences. B.S., Oakland University; Ph.D., Wayne State University.
- Richter, Jessalyn** (2012), Affiliate Professor of Writing. B.A., Michigan State University; M.A., Ph.D., University of Wisconsin – Madison.
- Riemersma, Peter E.** (1999), Associate Professor of Geology. B.S., University of Michigan; M.S., University of Utah; Ph.D., University of Wisconsin – Madison.

## Faculty Directory

- Riggleman, Samantha** (2017), Assistant Professor of Education. B.S., Shenandoah University; M.A.T., Mary Baldwin University; Ph.D., University of Nevada, Las Vegas.
- Roberts, Kim** (2000), Professor of Communications. B.F.A., Kendall College of Art and Design; M.F.A., The School of the Art Institute of Chicago.
- Robbins, Donijo** (2001), Professor of Public Administration. B.S., Central Michigan University; M.A., Ph.D., Rutgers University.
- Robideaux, Douglas** (2001), Associate Professor of Marketing. B.A., M.B.A., Northeast Louisiana University; D.B.A., Louisiana Tech University.
- Robins, Robert R.** (2008), Senior Affiliate Professor of Hospitality and Tourism Management. A.A., Northwood University., B.B.A., Northwood University., M.S.A., Central Michigan University.
- Robinson, Jeremy** (2008), Associate Professor of Japanese, East Asian Studies, and Chinese Studies. B.A., M.A., University of Colorado, Boulder; Ph.D., University of Michigan.
- Rogness, Neal** (1994), Professor of Statistics. B.S., University of Minnesota; M.S., University of Houston; Ph.D., University of Northern Colorado.
- Rohn, Amy** (2010), Affiliate Faculty of Nursing. B.S.N., M.S.N., Michigan State University.
- Rood, A. Scott** (2005), Assistant Professor of Hospitality and Tourism. B.S., University of Michigan; M.P.A., Central Michigan University.
- Rose, Jonathan** (2013), Assistant Professor or Physical Therapy. B.A., Boston University; M.S., Eastern Illinois University.
- Rosener, Ashley** (2012), Assistant Librarian. B.A., Iowa State University; M.L.I.S., University of Illinois, Urbana – Champaign.
- Ross, Sally** (2012), Associate Professor of Sport of Movement Science. B.S., M.S., Ph.D., University of Illinois.
- Roth, Patrick** (2010), Assistant Librarian. B.S., Grand Valley State University; M.L.I.S., Wayne State University.
- Rothstein, Jeffrey S.** (2007), Associate Professor of Sociology. B.A., University of London; M.A., Ph.D., University of Wisconsin – Madison.
- Rowe, Stephen C.** (1972), Professor of Philosophy. B.A., Colgate University; M.Th., A.M., Ph.D., University of Chicago.
- Royer, Dan** (1995), Professor of Writing. B.A., Washburn University; M.A., Kansas State University; Ph.D., University of Kansas.
- Rozema, Robert** (2004), Associate Professor of English. B.A., Calvin College; M.A., Michigan State University; Ph.D., Western Michigan University.
- Ruen, Matthew** (2014), Assistant Librarian. B.A., Carleton College; M.L.I.S., M.A.S., University of British Columbia.
- Ruetz III, Carl** (2002), Professor of Water Resources. B.S., Lake Superior State University; M.S., University of Georgia; Ph.D., University of Minnesota.
- Russa, Mary E. Bower** (1997), Professor of Psychology. B.S., Michigan State University; M.A., Ph.D., University of Iowa.
- Russell, Amy** (2008), Associate Professor of Biology. B.S., M.S., Bowling Green State University; Ph.D., University of Tennessee, Knoxville.
- Ryan, Bill** (2005), Professor of Music. B.M., SUNY Potsdam; M.M., D.M.A., University of Illinois at Urbana – Champaign.
- Ryan, Maureen** (1990), Assistant Professor of Nursing. B.S.N., St. Mary's College; M.S.N., Michigan State University.
- Ryan, Sheila** (2006), Senior Affiliate Faculty of Chemistry. B.S., Purdue University; M.S., Indiana University.
- Rybczynski, Stephen** (2012), Assistant Professor of Biology. B.S., M.S., Northern Michigan University; Ph.D., Miami University.
- Sá, Walter** (1999), Associate Professor of Psychology. B.A., University of Western Ontario; M.A., Ph.D., University of Toronto.
- Salas, Nora** (2014), Assistant Professor of History. B.A., University of Michigan; M.S.W., Michigan State University.
- Saleem, Mohammed** (2017), Assistant Professor of Education. B.S., M.Ed., University of Central Oklahoma; Ph.D., University of Wisconsin.
- Sanchez, Carol** (1995), Professor of Management. B.I.S., School for International Training; D.B.A., Southern Illinois University.
- Sanchez, Thomas A.** (2009), Affiliate Faculty of Nursing. B.S.N., University of Wisconsin; M.S.N., Grand Valley State University.
- Sanford, James** (1980), Professor of Business Law. B.S., J.D., Indiana University; C.P.A.
- Sass, Georgette** (2008), Associate Professor of Biology. B.S., Kent State University; Ph.D., University of North Carolina, Chapel Hill.
- Scantlebury, Michael** (2010), Associate Professor of Hospitality and Tourism Management. B.A., University of the West Indies Mona; M.Phil., University of the West Indies Mona; Ph.D., University of Waterloo.
- Schaertel, Stephanie** (1994), Associate Professor of Chemistry. B.A., Swarthmore College; M.S., Ph.D., Cornell University.
- Schaub, Gayle** (2013), Assistant Librarian. B.A., Lakeland College; M.A., American University in Cairo; M.L.I.S., University of Wisconsin Milwaukee.
- Schaub, Mark F.** (1999), Associate Professor of Writing. B.A., Lakeland College; M.F.A., Wichita State University; Ph.D., Purdue University.
- Schelling, Amy** (2007), Associate Professor of Education. B.S., M.Ed., Grand Valley State University; Ed.D., Western Michigan University.
- Schendel, Ellen** (2000), Professor of Writing. B.A., Birmingham Southern College; M.A., Florida State University; Ph.D., University of Louisville.
- Schiller, Ellen** (2001), Professor of Education. B.S., M.Ed., Grand Valley State University; Ph.D., Michigan State University.
- Schlewitz, Andrew** (2008), Assistant Professor of Latin American and Latino/a Studies and Political Science. B.A., Oregon State University; M.A., Ph.D., New School University.
- Schlicker, Steven** (1991), Professor of Mathematics. B.A., Michigan State University; M.A., Ph.D., Northwestern University.
- Schneider, Barbara Kane** (1998), Associate Professor of English. B.A., M.Ed., University of Pittsburgh; Ph.D., Kent State University.
- Schneider, Laura** (2008), Associate Professor of Political Science, B.A., Skidmore College; M.A., Ph.D., Purdue University.
- Schnyders, Harold S.** (2004), Associate Professor of Physics. B.S., Calvin College; Ph.D., Michigan State University.
- Schoofs, Nancy** (2001), Associate Professor of Nursing. B.S.N., Olivet Nazarene University; M.S.N., Loyola University; Ph.D., The University of Iowa.
- Schoofs, Robert** (2001), Associate Librarian. B.A., Indiana University; M.L.S., Rosary College.
- Schott, Elaine** (1987), Professor of Social Work. B.S., Bluffton College; M.S.W., University of Michigan; Special Education Supervisor Certification, Grand Valley State University; Ph.D., Michigan State University.
- Schrauben, Kristen S.** (2014), Assistant Professor of Psychology. B.A., Fairfield University; M.A., Ph.D., Michigan State University.
- Schriemer, Dale** (1988), Professor of Music. B.M., North Carolina School of the Arts; B.A., Michigan State University.
- Schuurman, Shelley D.** (2008), Assistant Professor of Social Work. B.A., Calvin College; M.S.W., Western Michigan University; Ph.D., Michigan State University.
- Schwartz, Mark** (2004), Associate Professor of Anthropology. B.A., Swarthmore College; M.A., Ph.D., Northwestern University.
- Schymik, Gregory B.** (2012), Assistant Professor of Computing and Information Systems. B.S.E., University of Michigan; M.S., University of Detroit – Mercy; Ph.D., Arizona State University.
- Sciarini, Michael** (2011), Professor of Hospitality and Tourism Management. B.S., MA., Ph.D., Michigan State University.

- Scott, Linda D.** (1998), Associate Professor of Nursing. B.S.N., Michigan State University; M.S.N., Grand Valley State University; Ph.D., University of Michigan.
- Scripps, Jerry** (2001), Associate Professor of Computing and Information Systems. B.A., Taylor University; M.B.A., Boston College; M.S., Ph.D., Michigan State University.
- Scripps-Hoekstra, Lindy** (2012), Assistant Librarian. B.A., Calvin College; M.L.I.S., Dominican University.
- Seidel, Hannah** (2015), Assistant Professor of Dance. B.A., Pomona College; M.F.A., The College of Brockport, SUNY.
- Sergeant, Anne** (2008), Associate Professor of Accounting. B.S., State University of New York, Buffalo; M.B.A., University of Washington; Ph.D., University of Arizona.
- Serrata, Médar** (2009), Associate Professor of Spanish. B.A., Florida International University; M.A., Ph.D., University of Texas at Austin.
- Seley, Beverly** (1972), Professor of Art. B.S., B.F.A., M.F.A., Michigan State University.
- Shah, Anal** (2014), Assistant Professor of Communications. B.F.A., Maharaja Sayajirao University, India; B.A., M.F.A., California Institute of the Arts.
- Shan, Patrick Fuliang**, (2003), Associate Professor of History, B.A., Henan University, M.A., Liaoning University, M.A., McMaster University, Ph.D., McMaster University.
- Shang, Geling** (2001), Associate Professor of Philosophy. B.A., Fudan University; M.A., Old Dominion University; Ph.D., Temple University.
- Shannon, Ashley** (2005), Associate Professor of English. B.A., M.A., University of Notre Dame; Ph.D., University of Texas.
- Shapiro-Shapin, Carolyn G.** (1993), Professor of History. B.A., Adelphi University; M.A., Ph.D., Yale University.
- Shaw, Luanne, M.** (2003), Affiliate Faculty of Nursing. B.S.N., Calvin College; M.A., Trinity Theological Seminary; M.S.N., Indiana State University.
- Sheehan, Lynn** (2008), Associate Librarian. B.G.S., University of Michigan; M.L.I.S., University of South Carolina.
- Sheffer, Joshua** (2016), Assistant Professor of Criminal Justice. B.A., Calvin College; J.D., Notre Dame Law School.
- Sheffield, Alfred** (1997), Associate Professor of Communications. B.F.A. Illinois Wesleyan University; M.F.A. Northwestern University.
- Shell-Weiss, Melanie** (2011), Associate Professor and Chair of Liberal Studies. B.A., University of Michigan; M.A., Ph.D., Michigan State University.
- Shelton, Mary** (2004), Affiliate Professor of Education. B.A., Hope College; M.A., Michigan State University.
- Shelton, Samantha** (2015), Affiliate Professor of Dance. B.A., M.F.A., University of Michigan.
- Sherman, Ross** (2008), Associate Professor of Movement Science. B.Sc., University of Sunderland; M.Sc. Loughborough University; Ph.D., University of Bath.
- Shinsky, John** (2001), Professor of Education. B.A., M.A., Ph.D., Michigan State University.
- Shoemaker, Michael J.** (2006), Associate Professor of Physical Therapy. B.S., Calvin College; D.P.T., Slippery Rock University; Ph.D., Western Michigan University.
- Shoultz, Gerald** (2005), Associate Professor of Statistics. B.S., University of Alabama; M.S., Texas Tech University; M.S., Florida State University; Ph.D., University of South Carolina.
- Shreiner, Tamara** (2015), Assistant Professor of History. B.S., Eastern Michigan University; M.A., Ph.D., University of Michigan.
- Shupe, Ellen** (1997), Associate Professor of Psychology. B.S., Eckerd College; M.A., Ph.D., University of Illinois at Urbana – Champaign.
- Sicilian, Paul** (1987), Professor of Economics. B.A., Tulane University; M.S., Ph.D., University of Illinois.
- Simons, Gerald** (1995), Professor of Economics. B.Soc.Sci., University of Birmingham, England; M.A., Ph.D., University of Kansas.
- Simpson, Thuy H.** (2012), Assistant Professor of Finance. B.S., B.A., University of Nebraska – Lincoln; Ph.D., University of Nebraska – Lincoln.
- Siu, Ellen** (2004), Senior Affiliate Faculty of Chemistry. B.S., Colorado State University; M.S., Colorado State University.
- Sisson, Lisa G.** (2005), Assistant Professor of Hospitality and Tourism Management. B.S., Central Michigan University; M.M., Aquinas College.
- Slater, Angela L.** (2014), Affiliate Faculty of Integrated Science. B.S., Hope College; M.Ed., Grand Valley State University.
- Smart, Robert** (1996), Professor of Chemistry. B.A., Albion College; Ph.D., Michigan State University.
- Smith, Brent A.** (2012), Assistant Professor of Liberal Studies. B.A., Hanover College; M.A., Divinity School of the University of Chicago; D. Min., Meadville Lombard Theological School.
- Smith, Christine** (1995), Professor of Psychology. B.A., Indiana University; M.A., Ph.D., Loyola University.
- Smith, Cynthia** (2008), Associate Professor of Education. B.S., Grand Valley State University; M.A., Ph.D., Michigan State University.
- Smith, Regina M.** (2002), Associate Professor of German. B.A., Washington University in St. Louis; M.A., Ph.D., University of Wisconsin – Madison.
- Smith, Robert** (1996), Professor of Chemistry. B.A., Albion College; Ph.D., Michigan State University.
- Smith, Shelly** (2004), Associate Professor of Mathematics. B.A., Willamette University; B.A., Portland State University; M.A., Arizona State University; Ph.D., Arizona State University.
- Smith, Stafford Hiroshi** (2008), Associate Professor of Communications. B.A., Wesleyan University; M.F.A., Cornell University.
- Smith, Steven** (2005), Assistant Professor of Social Work. B.A., Indiana University; M.S.W., Ph.D., Western Michigan University.
- Smith-Colton, Robin L.** (2000), Associate Professor of Social Work. B.S., M.S.W., Grand Valley State University; Ph.D., Loyola University – Chicago.
- Smith Kelly, Claudia** (2006), Associate Professor of Economics. B.A., M.S., University of the West Indies, Jamaica; Ph.D., Syracuse University.
- Smither, James** (1990), Professor of History. B.A., University of Chicago; M.A., Ph.D., Brown University.
- Snyder, Eric** (2002), Professor of Biology. B.S., Manchester College; M.S., Central Michigan University; Ph.D., Idaho State University.
- Sobeck, Corey M.** (2008), Assistant Professor of Physical Therapy. B.S., M.S., Grand Valley State University; O.M.P.T., D.Sc.P.T., Oakland University.
- Soljan, Ivo** (1992), Professor of English. B.A., Sarajevo University; M. Philosophy, Nottingham, England; Ph.D., Belgrade University.
- Soman, Sherril** (2000), Associate Professor of Chemistry. B.Sc., Prairie View A&M University; Ph.D., Purdue University.
- Sopariwala, Parvez R.** (1992), Professor of Accounting. B.A., Bombay University; M.B.A., Bowling Green State University; Ph.D., Michigan State University.
- Sozen, Mehmet** (2007), Professor of Engineering. B.S., Middle East Technical University; M.S., University of Petroleum and Minerals; Ph.D., The Ohio State University.
- Spear, Andrew** (2008), Associate Professor of Philosophy. B.A., University of Wisconsin Green Bay; M.A., State University of New York; Ph.D., State University of Buffalo.
- Spring, Robin** (2014), Assistant Professor of Communications. B.A., M.S., Grand Valley State University.
- Stabler, Scott** (2004), Associate Professor of History. M.A., University of Houston; Ph.D., Arizona State University.
- Standridge, Charlie** (1999), Associate Dean and Professor of Engineering. B.S., Washington University; M.S., Ph.D., Purdue University.

## Faculty Directory

- Stansbie, Paul** (2003), Associate Professor of Hospitality and Tourism Management. B.S., Southern New Hampshire University; M.B.A., University of Nottingham, Ph.D., The University of Plymouth.
- Stark, David** (2001), Associate Professor of History and Coordinator for Latin American and Latino/a Studies. B.A., M.A., Ph.D., Indiana University.
- Staves, Mark** (1996), Professor of Biology and Cell and Molecular Biology. B.S., M.S., Ph.D., University of Texas at Austin.
- Stearns, Michael** (2007), Associate Professor of Education. B.S., Ball State University; M.A., Columbia University; Ed.D., Eastern Michigan University.
- Steinman, Alan D.** (2001), Professor of Water Resources. B.S., University of Vermont; M.S., University of Rhode Island; Ph.D., Oregon State University.
- Stephens, Ronald** (2003), Associate Professor of African/American Studies. B.A., M.A., Wayne State University; M.A., Ph.D., Temple University.
- Stephenson, Paul** (1995), Professor of Statistics. B.S., Bob Jones University; M.S., Ph.D., Clemson University.
- Stevens, Ruth** (2008), Associate Professor of Criminal Justice. B.A., Harvard University; J.D., University of Michigan Law School; M.L.S., Wayne State University.
- Stevens, Terry** (2016), Affiliate Professor of Engineering. B.S.E.E., University of Michigan.
- Stevenson, John** (2000), Professor of Physical Therapy. B.A., Vassar College; M.S., The Pennsylvania State University; M.S., Central Michigan University; Ph.D., Indiana University.
- Stewart, Jennifer** (2001), Associate Professor of Sociology. B.A., Michigan State University; M.A., Ph.D., University of South Carolina.
- Stickler, Laurie G.** (2009), Associate Professor of Physical Therapy. B.S., M.S., Grand Valley State University; D.H.S., University of Indianapolis.
- Stieler, Kathryn** (2003), Professor of Music. B.M., Western Michigan University; M.M., Bowling Green State University; D.M.A., Cincinnati College – Conservatory of Music.
- Stillerman, Joel P.** (2002), Professor of Sociology. B.A., Bennington College; M.A., Ph.D., New School for Social Research.
- Stipe, John** (2009), Affiliate Professor of Communications. B.S., Central Michigan University; M.S., Grand Valley State University.
- Stockdale, Sally S.** (2007), Affiliate Faculty of Nursing. B.S.N., M.S.N., Grand Valley State University.
- Stockton, Terry** (2009), Affiliate Professor of Education. B.S., Grand Valley State University; M.Ed., Aquinas College.
- Stolle, Elizabeth** (2007), Associate Professor of Education. B.A., University of Michigan; M.Ed., Arizona State University; Ph.D., Arizona State University.
- Stolley, Amy Ferdinandt** (2016), Associate Professor of Writing. B.A., St. Norbert College; M.A., Marquette University; Ph.D., Purdue University.
- Storey, Elizabeth** (1987), Assistant Professor of Education. B.A., M.Ed., Arizona State University.
- Stovall, Dennis** (2006), Instructor of Accounting. B.S., Central Michigan University; M.B.A., Grand Valley State University.
- Strickler, Timothy L.** (1980), Professor of Biomedical Sciences. B.S., Pennsylvania State University; Ph.D., University of Chicago.
- Stroik, Laura** (2014), Assistant Professor of Biomedical Sciences. B.S., University of San Diego; M.A., Ph.D., Arizona State University.
- Strom, Kirsten** (2000), Associate Professor of Art and Design. B.A., University of Illinois; M.A., School of the Art Institute of Chicago; Ph.D., University of Iowa.
- Strychar, Kevin** (2012), Associate Professor of Water Resources. B.S., M.S., University of New Brunswick; Ph.D., Central Queensland University.
- Suh, Jiyeon** (2008), Associate Professor of Mathematics. M.S., Ph.D., University of Illinois.
- Sultana, Rahat** (2016), Affiliate Professor of Engineering. M.S.E., Grand Valley State University.
- Sun, Wei** (2005), Associate Professor of Economics. B.A., Beijing Foreign Studies University, China; M.S., Ph.D., University of Kentucky.
- Sun, Wanxiao** (2006), Associate Professor of Geography and Sustainable Planning. B.S., Nanjing University; M.S., Chinese Academy of Sciences; Ph.D., Johannes Gutenberg University of Mainz.
- Sunden, Susan** (2012), Assistant Professor of Therapeutic Recreation. B.S., M.Ed., Grand Valley State University.
- Swantek, Paul** (2008), Senior Affiliate Professor of Music. B.M., Boston University; M.M., The Catholic University of America.
- Swets, Benjamin** (2008), Associate Professor of Psychology. B.A., Hope College; M.A., Ph.D., Michigan State University.
- Swieringa, Robert** (2005), Assistant Professor of Communications. B.A., M.A., Ph.D., University of Illinois.
- Swift, Maris** (2000), Associate Professor of Business Law. B.S.W., Nazareth College; M.L.I.R., Michigan State University; J.D., Cooley Law School.
- Syfert, Timothy J.** (2006), Clinical Faculty of Management. B.S., Oklahoma State University; M.B.A., Rensselaer Polytechnic Institute; Ph.D., Capella University.
- Sylvester, Frank** (2004), Professor of Biomedical Sciences. B.S., Cornell University; M.A., Drake University; Ph.D., Medical College of Wisconsin.
- Szarecka, Agnieszka** (2009), Associate Professor of Cell and Molecular Biology. M.Sc., Ph.D., Adam Mickiewicz University.
- Tafel, Heather Leigh** (2004), Associate Professor of Political Science. B.A., Eckerd College; A.M., Ph.D., University of Illinois at Urbana – Champaign.
- Talbert, Robert** (2011), Associate Professor of Mathematics. B.S., Tennessee Technological University; M.S., Ph.D., Vanderbilt University.
- Tallman, Melissa** (2012), Assistant Professor of Biomedical Sciences. B.A., George Washington University; Ph.D., City University of New York.
- Talon, Durwin** (2015), Assistant Professor of Art and Design. B.F.A., Savannah College of Art and Design; M.A., Syracuse University; M.F.A., University of Hartford.
- Tao, Yonglei** (1990), Professor of Computing and Information Systems. B.S., Beijing University; M.S., North China Institute of Computing Technology; M.S., Ph.D., University of Iowa.
- Tate, Sarah** (2016), Affiliate Professor of History. B.A., Western Michigan University; M.A., Central Michigan University.
- Taylor, Merritt K.** (2007), Associate Professor of Biomedical Sciences. B.S., B.A., University of Rochester; Ph.D., University of Michigan.
- Tefera, Akalu** (2000), Associate Professor of Mathematics. B.Sc., M.Sc., Addis Ababa University; Ph.D., Temple University.
- Thomas, Derek** (2010), Assistant Professor of Biomedical Sciences. B.Sc., Ph.D., University of Wales, Swansea.
- Thompson, Anthony W.** (1997), Professor of Communications. B.S., University of Dallas; M.F.A., Washington University Saint Louis.
- Thompson, Cynthia** (2013), Assistant Professor of Biomedical Sciences. B.S., University of California Davis; M.A., Ph.D., Kent State University.
- Thompson, Elizabeth Guinevere** (2014), Assistant Professor of Art and Design. B.A., Indiana University; M.F.A., University of Hartford.
- Thorgaard, Scott N.** (2014), Assistant Professor of Chemistry. B.S., University of Wisconsin – Eau Claire; Ph.D., University of Minnesota.
- Thorpe, Patrick A.** (1988), Professor of Biology and Cell and Molecular Biology. B.S., Texas Lutheran College; M.S., Ph.D., University of Texas.
- Tian, Lin** (2009), Affiliate Professor of Communications. B.A., Nankai University; M.A., Indiana University.

- Toot, Jane** (1991), Professor of Physical Therapy, Frederik Meijer Honors College. B.S., University of Michigan; M.A., George Washington University; Ph.D., Wayne State University.
- Topper, Andrew** (1999), Associate Professor of Education. B.S., Grand Valley State University; Ph.D., Michigan State University.
- Toth, Christopher** (2009), Associate Professor of Writing. B.A., Hiram College; M.A., Ph.D., Iowa State University.
- Treanor, Sr., Lucia**, F.S.E. (2002), Senior Affiliate Professor of Writing. M.A., Columbia University; M.P., Ph.D., The City University of New York.
- Trefftz, Christian** (2002), Associate Professor of Computing and Information Systems. B.S., Universidad; M.S., Western Michigan University; Ph.D., Michigan State University.
- Trier, Terry M.** (1997), Associate Professor of Biology. B.S., Purdue University; Ph.D., Michigan State University.
- Tripp, Steven** (1990), Professor of History. B.A., University of California, Berkeley; M.A., University of California, Davis; Ph.D., Carnegie Mellon.
- Truskowski, Scott** (2009), Assistant Professor of Occupational Therapy. B.S., M.S., Grand Valley State University.
- Tsou, Pei-Lan** (2006), Associate Professor of Cell and Molecular Biology. B.S., National Taiwan University; Ph.D., North Carolina State University.
- Tunstall, Dwayne** (2008), Associate Professor of Philosophy. A.A.S., Rappahannock Community College; B.A., Christopher Newport University; M.A., Ph.D., Southern Illinois University at Carbondale.
- Tusch, Guenter** (2001), Professor of Computing and Information Systems. M.S., University of Hanover, Germany; Ph.D., Medical School Hanover.
- Tutt, Kevin** (2003), Associate Dean and Professor of Music. B.S., M.M., Ph.D., Pennsylvania State University.
- Tuma, Lorie** (2014), Assistant Professor of Hospitality and Tourism Management. B.S., M.S., Central Michigan University; Ed.D., Walden University.
- Uglietta, John** (2004), Associate Professor and Chair of Philosophy. A.B., University of Chicago; J.D. University of Michigan Law School; M.A., Ph.D., Johns Hopkins University.
- Vail, Janet** (1990), Research Scientist. B.S., University of Michigan; M.A., University of California, Santa Barbara; Ph.D., Western Michigan University.
- Valdez, Glenn** (2006), Associate Professor of Psychology. B.A., Tufts University; M.A., Ph.D., University of California.
- Vallery, Richard** (2008), Assistant Professor of Physics. B.A., Gustavus Adolphus College; M.S., Ph.D., University of Michigan.
- VandenBerg, Neal** (2016), Assistant Professor of Accounting. B.B.A., M.B.A., Grand Valley State University; Ph.D. (ABD), Temple University.
- Vandenberg, Phyllis** (2000), Professor of Philosophy. B.A., Marquette University; M.A., Western Michigan University; Ph.D., University of Utah.
- Vanden Bosch, Melodee** (2012), Assistant Professor of Nursing. B.S.N., M.S.N., Grand Valley State University; Ph.D., Michigan State University.
- VandenPlas, Jessica** (2011), Associate Professor of Chemistry. B.S., University of Wisconsin Madison; M.S., The George Washington University; Ph.D., The Catholic University of America.
- Vander Broek, Laura** (1979), Associate Professor of English. B.A., Hope College; M.A., Teachers College, Columbia University.
- Vandermolen, Rick** (2016), Assistant Professor of Education. B.A., University of Western Ontario; M.A., Michigan State University; Ed.D., Eastern Michigan University.
- VanderPoel, Jennifer** (2006), Instructor of Radiologic and Imaging Sciences. B.S., Grand Valley State University.
- Vanden Wyngaard, Julianne M.** (1965), University Carillonneur. B.F.A., University of Wisconsin – Milwaukee; Practical Diploma, The Netherlands Carillon School.
- Van Doren, Elaine** (2005), Associate Professor of Nursing. B.S.N., M.S.N., Wayne State University; Ph.D., Western Michigan University.
- Van Orsdel, Lee** (2005), Senior Librarian. B.A., Samford University; M.A., Florida State University; M.S.L.S., University of Alabama.
- VanSickle, James** (2002), Senior Affiliate Professor of Writing. B.S., United States Military Academy; M.S., Rensselaer Polytechnic Institute.
- Van Wormer, Heather** (2006), Associate Professor of Anthropology. B.A., University of Nevada; Ph.D., Michigan State University.
- Vaughn, Daniel** (1996), Professor of Physical Therapy. B.S., East Carolina University; M.O.M.T., Ola Grimsby Institute; Ph.D., Michigan State University.
- Vavřikova, Marlen** (2005), Associate Professor of Music. Diploma, Janacek Conservatory of Music, Ostrava; M.M., Eastman School of Music; D.M.A., University of Illinois at Urbana – Champaign.
- Veenstra, Victoria** (2000), Associate Professor of Communications. B.F.A., M.F.A., University of Michigan.
- Vèlez Ortiz, Melba** (2009), Associate Professor of Communications. B.A., M.A., Purdue University – Calumet; Ph.D., University of Illinois at Urbana – Champaign.
- Vessey, David** (2008), Associate Professor of Philosophy. B.A., St. Olaf College; M.A., Ph.D., University of Notre Dame.
- Videtich, Patricia** (1992), Professor of Geology. B.S., Grand Valley State University; M.Sc., Ph.D., Brown University.
- Vigna, Janet** (2002), Professor of Biology. B.S., University of Michigan; Ph.D., University of Iowa.
- Villarreal, Melissa** (2015), Assistant Professor of Social Work. B.A., Hope College; M.S.W., Ph.D., Western Michigan University.
- Villatoro, Daphne** (2010), Affiliate Faculty in Spanish. B.A., Grand Valley State University; M.A., Western Michigan University.
- Viviano, Norwood** (2005), Associate Professor of Art and Design. B.F.A., New York State College of Ceramics at Alfred University; M.F.A., Cranbrook Academy of Art.
- Vlietstra, Sheryl** (2012), Affiliate Professor of Education. B.S., Central Michigan University; M.Ed., Grand Valley State University.
- Vogelzang, Jody** (2013), Assistant Professor of Public Health. B.S., Michigan State University; M.S., Grand Valley State University; M.A.T., Miami University; Ph.D., Waldon University.
- Vrooman, Michael** (2003), Associate Professor of Spanish. B.A., University of Toledo; M.A., Bowling Green State University; Ph.D., University of Massachusetts – Amherst.
- Vu, Kristen** (2015), Assistant Professor/Dosimetry Educational Coordinator and RT Faculty. B.S., Grand Valley State University; M.S., Grand Valley State University; Dosimetry Certificate, MD Anderson Cancer Center (Univ. of Texas).
- Wagendorp, Jeroen** (2004), Associate Professor of Geography and Sustainable Planning. B.S., Aquinas College; M.A., Western Michigan University; Ph.D., University of Oklahoma; AICP, GISP.
- Walhof, Darren R.** (2003), Professor of Political Science. B.A., Calvin College; Ph.D., University of Minnesota.
- Walker, Thomas** (2010), Associate Professor of Political Science. M.A., University of Michigan; M.A., University of Kent at Canterbury; Ph.D., Rutgers University.
- Wallace, Adrienne** (2016), Assistant Professor of Communications. B.S., M.S., Grand Valley State University.
- Wallace, Heather** (2011), Assistant Professor of Public Health. B.A., Indiana University – Purdue University, IUPUI; M.P.H., Ph.D., University of Kentucky, Lexington.
- Wallar, Brad** (2003), Professor of Chemistry. B.S., University of Michigan – Flint; Ph.D., University of Minnesota.

## Faculty Directory

- Walsh, John** (2010), Associate Professor of Criminal Justice. B.A., M.A., Southern Illinois University at Carbondale; Ph.D., Indiana University, Bloomington.
- Walz, Anna** (2009), Associate Professor of Marketing. B.S., M.B.A., University of Southern Indiana; Ph.D., Louisiana State University.
- Wampler, Peter** (2004), Associate Professor of Geology and Faculty in Residence, Frederik Meijer Honors College. B.S., Western Washington State University; M.S., Oregon State University; Ph.D., Oregon State University.
- Wangdi, Yosay** (2003), Associate Professor of History. B.A., Loreto College; M.A., Jadavpur University; M.S., Ph.D., University of Nevada, Reno.
- Ward, Jeffrey** (2013), Associate Professor of Engineering. B.S., Brigham Young University; M.S., Ph.D., Utah State University
- Ward, Séverine** (2011), Affiliate Faculty in French. Maîtrise en L.E.A., La Sorbonne Paris IV; M.A., Ph.D., Michigan State University.
- Washburn, Joy** (2005), Associate Professor of Nursing. B.S., Aquinas College; M.S.N., Andrews University; Ed.D., Eastern Michigan University.
- Watts, Keith E.** (1996), Associate Professor of Spanish. B.A., Eastern Mennonite College; M.A., University of Virginia; Ph.D., University of New Mexico.
- Weber, John C.** (1995), Professor of Geology. B.S., M.S., Southern Illinois University; Ph.D., Northwestern University.
- Webster, Michael P.** (1988), Associate Professor of English. B.A., DePauw University; M.A., Boston University; M.A., Ph.D., Indiana University.
- Weekley, Ayana K.** (2010), Associate Professor of Women, Gender, and Sexuality Studies. B.A., Truman State University; Ph.D., University of Minnesota.
- Weibel, Deana** (2003), Associate Professor of Anthropology. B.A., University of California, Irvine; M.A., Ph.D., University of California, San Diego.
- Weis, Richard** (1991), Associate Professor of Art and Design. B.F.A., Kansas City Art Institute; M.F.A., Indiana University.
- Wells, Clark** (1997), Associate Professor of Mathematics. B.S., University of Kentucky; M.S., Purdue University; Ph.D., University of Kentucky.
- Wells, Pamela** (1995), Associate Professor of Mathematics. B.S., University of Wisconsin – Oshkosh; M.S., Purdue University; Ph.D., University of Kentucky.
- Wendland, Joel** (2013), Assistant Professor of Liberal Studies. B.A., The Evergreen State College; M.A., University of Texas at El Paso; Ph.D., Washington State University.
- Westbrook, Laurel** (2009), Associate Professor of Sociology. B.A., M.A., Ph.D., University of California, Berkeley.
- Wheatley, Elizabeth** (2008), Associate Professor of Sociology. A.B., Colby College; M.S., University of Illinois, Urbana – Champaign; M.A., Ph.D., University of California, Santa Cruz.
- Whipps, Judy D.** (1999), Professor of Liberal Studies and Philosophy. B.A., Grand Valley State University; M.A., University of Chicago; Ph.D., The Union Institute.
- White, Brian** (1990), Professor of English. B.A., M.A., Ph.D., University of Wisconsin – Madison.
- White, Jonathan** (1983), Professor of Criminal Justice, Frederik Meijer Honors College. B.A., M.A., Western Michigan University; M.Div., Western Theological Seminary; Ph.D., Michigan State University.
- White, Julie** (2002), Senior Affiliate Professor of Writing. B.A., M.A., University of Toledo.
- Whitman, Heather** (2015), Affiliate Faculty of Biology. B.S., Grand Valley State University; M.S., Ohio State University.
- Wildes, Mikhila N.** (2015), Assistant Professor of Psychology. B.S., M.A., Ph.D., Michigan State University.
- Wiljanen, Dan** (2016), Clinical Faculty of Management. B.A., M.A., University of West Florida; Ph.D., Capella University.
- Wiley, Kristin** (2016), Assistant Professor of Occupational Science and Therapy. B.S., Western Michigan University; M.S., University of Indianapolis.
- Wiley, Thomas** (1999), Associate Professor of Finance. B.S.B.A., University of Kansas; M.B.A., University of Houston; D.B.A., Mississippi State University.
- Williams, Elizabeth** (Betsy) (2014), Assistant Librarian. B.S., Texas A&M; M.L.I.S., University of Illinois, Urbana – Champaign.
- Williams, Mark** (2008), Associate Professor and Assistant Chair of Music. B.M., Michigan State University; M.M., D.M.A., The University of Texas at Austin.
- Williams, Olivia** (2005), Associate Professor of Education. B.A., M.A., Oakland University; Ph.D., Michigan State University.
- Williams, Sherie** (2001), Associate Professor of Education. B.S., Eastern Michigan University; M.A., Michigan State University; Ph.D., Western Michigan University.
- Williams, Todd J.** (2008), Associate Professor of Psychology. B.A., Ph.D., University of Alberta.
- Wilson, Alex** (2017), Assistant Professor of Music. B.M., Grand Valley State University; M.M., Arizona State University.
- Wilson, Carol** (2008), Affiliate Faculty in French. B.A., M.A., University of Northern Iowa.
- Wilson, Roger** (2001), Associate Professor of Education. B.A., University of Western Ontario; B.Ed., Ontario Teacher Education College; M.Ed., Brock University; Ph.D., University of Calgary.
- Winchester, Randy** (2002), Associate Professor of Chemistry. B.A., New College; Ph.D., University of Florida.
- Wing, Jeffrey** (2015), Assistant Professor of Public Health. B.S., M.P.H., Ph.D., University of Michigan.
- Winter, Janet** (2012), Assistant Professor of Nursing. B.S.N., University of Michigan; M.P.A., Grand Valley State University; D.N.P., Rush University.
- Winther, Jennifer** (2011), Assistant Professor of Biology. B.A., University of Chicago; Ph.D., University of Colorado, Boulder.
- Wittenbraker, Paul** (1997), Professor of Art and Design. B.A., Wabash College; M.F.A., Cranbrook Academy of Art.
- Witucki, Laurie** (2000), Professor of Chemistry. B.S., Cedar Crest College; M.A., Ph.D., Princeton University.
- Wolfe, Michael** (2000), Professor of Psychology. B.A., University of California; M.A., Ph.D., University of Colorado.
- Wolffe, Gregory S.** (1998), Professor of Computing and Information Systems. B.S., Michigan State University; M.S., Ph.D., University of Wisconsin.
- Woller-Skar, M. Megan** (2009), Associate Professor of Biology. B.S., Miami University; M.S., Central Michigan University; Ph.D., Bowling Green State University.
- Wolverton, Maureen** (2001), Senior Affiliate Faculty, Liberal Studies. B.A., Michigan State University; M.A., Pacifica Graduate Institute.
- Wooddell, Michelle** (2014), Assistant Professor of Nonprofit Management. B.A., University of Michigan; M.P.A., New York University; Ph.D. (ABD), Wayne State University.
- Wright, Diane** (1992), Professor of Spanish. B.A., Aquinas College; M.A., Ph.D., Michigan State University.
- Wroblewski, Michael** (2012), Assistant Professor of Anthropology. B.A., Middlebury College; M.A., Ph.D., University of Arizona.
- Wu, Mingyu** (2009), Assistant Professor of Occupational Safety and Health Management. B.S., China University of Geosciences; M.S., Indiana University; Ph.D., West Virginia University.
- Wu, Shinian** (1998), Professor of English. B.A., Xi'an Institute of Foreign Languages; M.A., Ph.D., Northern Arizona University.
- Wyble, J. Randy** (2008), Assistant Professor of Therapeutic Recreation. B.S., M.S., Michigan State University.
- Xu, Gang** (2006), Associate Professor of Geography and Sustainable Planning. B.S., Nanjing University; M.S., Chinese Academy of Sciences; Ph.D., Johannes Gutenberg University of Mainz.

- Xu, Xiaojuan (Xandra)** (1994), Professor of Psychology. B.S., Beijing University; M.S., Ph.D., University of Michigan.
- Yalda, Christine** (2004), Associate Professor of Criminal Justice. B.A., University of Michigan; J.D., Boston University Law School; M.S., Ph.D., Arizona State University.
- Yancey, Jason E.** (2009), Associate Professor of Spanish. B.A., M.A., Brigham Young University; Ph.D., University of Arizona.
- Yang, Fang** (2016), Assistant Professor of Communications. B.A., Sichuan University, China; M.A., University of Alabama; Ph.D., Michigan State University.
- Yen, Huei Lan** (2012), Assistant Professor of Spanish. B.A., Jinan University; M.A., Ph.D., University of Oklahoma.
- Yidana, Richard** (2006), Associate Professor of Sociology and African/African American Studies. B.A., Clark University; M.A., Ph.D., Binghamton University.
- Youker, Brandon W.** (2012), Assistant Professor of Social Work. B.A.S.W., Michigan State University; M.S.S.W., Columbia University; Ph.D., Western Michigan University.
- Ysasi, Raul** (2013), Affiliate Professor of Education. B.A., M.A., Grand Valley State University; M.A., Michigan State University; Ed.D., Wayne State University.
- Yu, Yan** (1998), Professor of Sociology. B.A., M.A., Beijing University; Ph.D., Florida State University.
- Yu, Paul Woo Dong** (2003), Associate Professor of Mathematics. B.S., University of Illinois at Urbana; M.S., Ph.D., Illinois State University.
- Yuhás, Michael** (1985), Professor of Accounting and Taxation. B.A., University of Notre Dame; J.D., Indiana University; LL.M., Georgetown University; LL.M., University of Miami; C.P.A.
- Zack, Suzanne** (2014), Affiliate Professor of Communications. B.S. William James College; M.F.A., Temple University.
- Zaszlavik, Katalin** (2003), Associate Professor of Art and Design. Diploma, Hungarian College of Applied Arts; M.A., Ph.D., University of Illinois.
- Zeitler, David** (2004), Associate Professor of Statistics. B.S., M.S., Michigan State University; M.S., Ph.D., Western Michigan University.
- Zemmol, Gail** (2009), Affiliate Professor of Hospitality and Tourism Management. M.A., Michigan State University.
- Zettle-Sterling, Renee** (2000), Associate Professor of Art and Design. B.F.A., Indiana University of Pennsylvania; M.A., M.F.A., Edinboro University of Pennsylvania.
- Zhang, Xianguang (Peter)** (2008), Associate Professor of Communications. B.A., Xi'an Jiaotong University; M.A., Nankai University; Ph.D., Indiana University.
- Zhao, Yi** (2006), Associate Professor of Political Science. B.A., Peking University; M.A., Graduate School of the Chinese Academy of Social Sciences; M.S.L., Yale Law School; Ph.D., Yale University.
- Ziembo-Vogl, Joanne** (1995), Associate Professor of Criminal Justice. B.A., Saginaw Valley State University; M.S., Ph.D., Michigan State University.
- Zinman, Donald** (2006), Associate Professor of Political Science. B.A., Brandeis; M.A., Ph.D., University of Texas at Austin.
- Zivi, Karen** (2011), Associate Professor of Political Science, Honors College. B.A., University of Virginia; M.A., Ph.D., Rutgers University.
- Zuidema, Scott** (2017), Affiliate Faculty of Engineering. B.S.E., Grand Valley State University.
- Zondervan, Angela** (2014), Clinical Affiliate of Finance. B.A., Calvin College; M.B.A., Cornerstone University; D.B.A., Capella University.
- Zwart, David** (2012), Assistant Professor of History. B.A., Dordt College; M. A., California State University, Fresno; Ph.D., Western Michigan University.

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