

2010

GVSU Undergraduate and Graduate Catalog, 2010-2011

Grand Valley State University

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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. 8/10

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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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 preparing 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.

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. Eighty-four percent of the faculty have earned doctoral degrees or other appropriate terminal degrees. They are supported by a high quality non-teaching 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 78 undergraduate and 28 graduate programs that include 74 graduate emphases and certificate programs.

Accreditation

Grand Valley is accredited by The Higher Learning Commission; Member - North Central Association, 30 N. LaSalle Street, Suite 2400, Chicago, IL 60602-2504; telephone: (312) 263-0456; Web: www.cahigherlearningcommission.org/. Other accreditations include: Member - National Association of Schools of Music (NASM); Associate member of the National Association of Schools of Art and Design (NASAD); Seidman College of Business by The Association to Advance Collegiate Schools of Business (AACSB International); Accounting and Taxation programs by The Association to Advance Collegiate Schools of Business (AACSB International); Clinical Laboratory Sciences/Medical Technologist Program: National Accrediting Agency for Clinical Laboratory Sciences (NAACLS); Chemistry Department by the Committee on Professional Training of the American Chemical Society; College of Education by the National Council for Accreditation of Teacher Education (NCATE); Bachelor of science in engineering program by the Accreditation Board for Engineering and Technology (ABET); Bachelor of science and bachelor of arts programs in computer science and in information systems by the Computing Accreditation Commission of ABET. Nursing program by the Commission on Collegiate Nursing Education (CCNE); Occupational Therapy program by the Accreditation Council for Occupational Therapy Education (ACOTE); Physical Therapy program by the Commission on Accreditation in Physical Therapy Education (CAPTE); Athletic Training: Joint Review Committee on Educational Programs in Athletic Training (JRC-AT); The Athletic Training Program in the Department of Movement Science by the Commission on Accreditation of Allied Health Education Programs (CAAHEP); Physician Assistant Studies program by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA); School of Public and Nonprofit Administration by the National Association of Schools of Public Affairs and Administration (NASPAA); School of Social Work by the Council on Social Work Education (CSWE); Michigan SBDC (MISBDC): Association of Small Business Development Centers (ASBDC).

University Facts

Visit www.gvsu.edu/quickfacts for facts about Grand Valley State University.

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 will become one of the nation's premiere Carnegie classification "Master's Large" institutions of higher education grounded in the tradition of liberal education. It will be recognized and acknowledged as a community of diverse, committed scholars engaged in collaborative, lifelong learning to achieve acknowledged academic excellence and positive community impacts. By focusing on the promotion of high quality undergraduate and graduate degree programs, the institution will be the university of choice for students and faculty alike and it will enjoy broad support for its innovative partnerships and initiatives that promote the physical health and the intellectual, social, environmental, economic, and cultural advancement of West Michigan, and ultimately, the advancement of the state, nation, and world.

Values

At Grand Valley State University, we value:

Effective Teaching

Our highest priority is to offer outstanding teaching in all of our undergraduate and graduate programs. The teaching culture of Grand Valley State University is characterized by the continual development of excellence in the classroom, the recognition of multiple ways of learning, and the accessibility of faculty to students. In order to nurture the habits of intellectual growth, we seek to instill in our students curiosity as well as the love of learning. Students acquire new knowledge and explore its application through research, artistic expression, and scholarly activity. We value the vigorous engagement of students in the classroom and other learning environments.

Liberal Education

Grand Valley State University is committed to providing each student a broad educational experience that integrates liberal learning with preparation for career or profession. Liberal education begins with encountering the great ideas of diverse traditions in the humanities, the creative and performing arts, the natural and social sciences, and mathematics, and is an essential part of all of our professional programs. We value the liberal ideals of critical thinking and preparing students for lifelong learning. The practice of liberal learning develops the skills of inquiry and reflection, which guide students to think for themselves, gain self-knowledge, and make ethical judgments. Such learning can inform individual and collective actions and prepare students for the responsibility of local, national, and global citizenship.

Scholarship

Scholarship is an essential component of the university's mission as an institution of higher learning. Excellence in teaching at the university level depends upon active scholarship by faculty members. Through basic and applied research, artistic expression and performance, and other forms of scholarship, faculty members contribute to the development and application of knowledge and create a dynamic environment for learning. Active scholarship may include collaboration of faculty and staff with students, business and labor, government, and community organizations. In this way, the benefits of a liberal education and specific disciplines can extend beyond classroom walls to lifelong learning and partnerships between the university and its diverse communities and the greater community.

Service

Grand Valley State University values the collaboration of faculty, staff, and students with external partners in addressing mutual interests and regional needs. The university offers the communities it serves resources and inspiration in their own lifelong pursuit of knowledge. Faculty and staff are encouraged to contribute their expertise and service to the university, their disciplines' professional organizations, and working in partnership with the community. Students are encouraged to be active

citizens, to become active service providers, and to take part in various service learning and volunteer opportunities in the community and abroad.

Inclusiveness

Possessing and mastering a range of thoughtful perspectives is necessary for open inquiry, a liberal education, and a healthy community. Recognizing this, Grand Valley seeks to include, engage, and support a diverse group of students, faculty, and staff. The institution values a multiplicity of opinions and backgrounds, and is dedicated to incorporating multiple voices and experiences into every aspect of its operations. We are committed to building institutional capacity and strengthening our liberal education through providing an inclusive environment for all of our Grand Valley constituents.

Community

Grand Valley State University values its connections to, participation with, and responsibility for local communities, the West Michigan region, the state, the nation, and the world. The university embraces the participation of diverse individuals, groups, and organizations from every corner of the globe and both encourages and supports the participation of its students, faculty, and staff in educational opportunities abroad. To foster and expand these community connections, the institution and its members promote, value, and honor diverse perspectives. We seek to act with integrity, communicate openly and honestly, and accept responsibility for our words and actions.

Sustainability

Grand Valley State University values the guiding principles of sustainability in helping to meet the current needs of our faculty, staff, 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, and our region. We will model applied sustainability best practices in our campus operations and administration, education for sustainable development, student involvement, and community engagement by promoting social responsibility, encouraging environmental stewardship, and creating efficiencies and value for the work we perform. We will 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.

The Campuses

The Allendale Campus

The 1,280 acre Allendale campus, is located 12 miles west of Grand Rapids and is home to state-of-the-art facilities that include: 122 classrooms, 144 research laboratories, 20 lab prep rooms, 21 computer labs, and the Zumberge Library. The university currently has 6,068 beds, the majority being on the Allendale campus. For detailed information regarding these locations, please see the *Campuses* section of the online catalog, www.gvsu.edu/catalog/.

The Robert C. Pew Grand Rapids Campus

The 33-acre Robert C. Pew Grand Rapids Campus is comprised of two separate sites with a total of 11 buildings and three leased spaces in downtown Grand Rapids. The principal buildings are the Richard M. DeVos Center, the L.V. Eberhard 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 *The Campuses* section of the online catalog.

The Meijer Campus in Holland

The Meijer Campus in Holland, 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 basic skills and general education requirements, as well as courses in business administration, education, and public administration.

The Muskegon Campus

The university operates two research centers in Muskegon. The Robert B. Annis Water Resources Institute, which is housed on Lake Michigan Center located on Muskegon Lake, conducts research with a primary focus on the water quality of Michigan and the region. The Michigan Alternative Energy Research Center (MAREC), located in the Muskegon Lakeshore SmartZone on Muskegon Lake, has a focus on energy production and providing alternative energy education.

Regional Centers

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 further information, please contact our Muskegon office at 221 S. Quarterline Road; telephone (231) 777-0505. The Traverse City office is located at 2200 Dendrin Drive; telephone (231) 995-1785.

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 this catalog for degree requirements, which are listed by department in the Academic Programs section of the catalog.

Visiting the Campuses

Prospective students are always welcome to visit the campus and talk with staff 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

Academic Calendar

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
300 Student Services Building
Grand Valley State University
Allendale, Michigan 49401-9403
Telephone: (616) 331-2025 or
Toll free: (800) 748-0246 (for Admissions, Financial Aid, Housing, and Records)
Email: admissions@gvsu.edu

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Academic Calendar

Fall Semester 2010

Convocation August 27
Classes begin August 30
Labor Day Recess September 5-7
Thanksgiving Day Recess November 24-28
Classes end December 11
Commencement December 11
Examinations December 13-18
Semester ends December 18
Grades due December 21

Winter Semester 2011

Classes begin January 10
Spring Break March 6-13
Classes end April 23
Examinations April 25-30
Semester ends April 30
Commencement April 30
Grades due May 3

Spring/Summer Session 2011

Classes Begin first 6 and 12 weeks May 9
Memorial Day Recess May 30
Classes end first 6 weeks June 20
Examinations first 6 weeks June 21-22
Classes begin second 6 weeks June 27
Independence Day Recess July 4

Classes end second 6 and 12 weeks August 8
Examinations second 6 and 12 weeks August 9-10
Session ends August 10

Fall Semester 2011

Convocation August 26
Classes begin August 29
Labor Day Recess September 4-6
Thanksgiving Day Recess November 23-27
Classes end December 10
Commencement December 10
Examinations December 12-17
Semester ends December 17
Grades Due December 20

Winter Semester 2012

Classes begin January 9
Spring Break March 4-11
Classes end April 21
Examinations April 23-April 28
Semester ends April 28
Commencement April 28
Grades Due May 1

Spring/Summer Sessions 2012

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 weeks August 3
Examinations second 6 and 12 weeks August 6-7
Session ends August 7

Fall Semester 2012

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

Winter Semester 2013

Classes begin January 7
Spring Break March 3-10
Classes end April 20
Examinations April 22-April 27
Semester ends April 27
Commencement April 27
Grades due April 30

Spring/Summer Semester 2013

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 weeks August 2
Examinations second 6 and 12 weeks August 5-6
Session ends August 6

Fall Semester 2013

Convocation	August 23
Classes begin	August 26
Labor Day Recess	September 1-3
Thanksgiving Day Recess	November 27-December 1
Classes end.	December 7
Commencements	December 7
Examinations	December 9 - 14
Semester ends.	December 14
Grades due	December 17

Seidman College of Business**Administration**

Dean: Williams; Associate Dean: Reifel

Website

www.gvsu.edu/business

Mission

The Seidman College of Business provides a rigorous learning environment, with a student focus, a regional commitment, and a global perspective.

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, *Legislative History of the Federal Income Tax Law*, *Financing the War*, and *Accounting Handbook*.

Mr. 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 all persons 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 persons in the Grand Rapids area as well as funds for the Seidman House at Grand Valley.

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

Just as quality was the hallmark of Mr. Seidman's efforts, so quality in education has been made 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's of Business Administration (B.B.A.), a Master's of Business Administration (M.B.A.), a Master's of Science in Accounting (M.S.A.), and a Master's of Science in Taxation (M.S.T.). The Seidman College also offers dual M.B.A./J.D., M.S.A./J.D., and M.S.T./J.D. degrees in cooperation with Michigan State University College of Law. 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.

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 will develop an understanding of the functional areas of business, of the dynamics of competitive and cooperative group process, of formal and informal organizational behavior, and of the culture of business.

Students also will become better acquainted with the external environment of business, gaining a perspective on contemporary global business through historical and international comparisons. They will come to understand more fully 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, international business, management, and marketing. Emphases in general management, human resources, manufacturing, operations, and organizational information systems are available in the management program. Emphases in general business economics and real estate business economics are available in the business economics 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. In each case, the college makes every effort to accommodate the varying needs of its students. Persons 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 Master in Business Administration degree program, it is possible (but not required) for students to pursue an emphasis in finance, health or technology innovation management.

Academic Units

School of Accounting
Economics Department
Finance Department
Management Department
Marketing Department

Seidman Business Services

Center for Entrepreneurship
Center for Business Ethics
Family Owned Business Institute
Seidman Information Services

MI-Small Business Technology Development Center - Region 7
MI-Small Business Technology Development Center State Headquarters
U.S.Department of Commerce Export Assistance Center
Seidman Financial Planning Certificate Program
Van Andel Global Trade Center

Refer to the Community Resources section of this catalog for descriptions for the services above.

Secondary Admission for Undergraduates

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 2.75. Students whose GPA falls below 2.75 will be reclassified as pre-business students and will need to reapply to the Seidman College as juniors.

For students not admitted as freshmen, Seidman's admission criteria require a student to have at least 55 semester hours (junior status) with a 2.75 or higher overall GPA. Students who have earned fewer than 55 semester hours and have not been admitted as freshmen are accepted to the Seidman College of Business pre-business program. All business students must complete the university basic skills and 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. After earning 55 semester hours with a minimum 2.75 GPA, students are admitted to the upper-division programs.

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. Non-business students must have earned 55 credit hours with a minimum 2.0 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 Seidman College students. Accordingly, a guest student must be a student in good standing at his or her home institution in order to enroll in any 300- or 400-level courses at the Seidman College of Business. The guest student is advised to bring a transcript at the time of registration.

Graduate Admission

The graduate business programs are open to qualified individuals with bachelor's degrees from accredited colleges and universities. No particular undergraduate major is necessary, 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); previous undergraduate and graduate academic performance; work experience; and, if the applicant's first language is not English, scores on the Test of English as a Foreign Language (TOEFL).

In making admissions decisions, the Graduate Admissions Committee computes a scholastic index for applicants 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 an 1100 scholastic index. Using the scholastic index and other information, the committee implements the policies and practices described below.

An applicant 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 predictive indications of success with respect to quantitative and qualitative GMAT scores and grades earned in courses determined to be relevant to the graduate curriculum. 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. Recognizing that both test scores and previous academic performance are important predictors of success in the graduate programs, acceptable or exceptional performance in background courses does not compensate for an unacceptable GMAT score.

Applicants with GMAT scores above 500 but scholastic indexes below 1100 may be advised by the committee to complete certain background coursework after which the committee would re-evaluate the application.

Applicants whose first language is not English must also score at least 80 on the TOEFL (IBT).

Applicants for the M.S.T. program are not required to submit a GMAT score if they have a J.D., M.B.A., or master's of accounting with at least a 3.0 GPA. Applicants for the M.B.A. program may request a waiver of the GMAT if they have a doctoral degree. Such requests should be addressed to the committee and submitted to the graduate program director.

Candidates will be given an admission decision for any academic semester for which they would like to begin their studies provided their application, transcripts of prior college work, and GMAT results are in the Admissions office at least one month before the semester begins.

Individuals not yet admitted to the M.B.A. or M.S.A. program may enroll in 500-level background courses, but 600-level course enrollment is generally restricted to students admitted to the respective program who have also completed the appropriate prerequisite courses. The exception to this policy is undergraduate students with senior standing who have completed all prerequisites for the graduate program and have at least a 3.0 cumulative GPA and a GMAT score of at least 500 on file with the Graduate Business Office. If their schedule allows, and with permission of the graduate programs director, such students may enroll for up to five 600-level business courses that will be applied toward their graduate degree.

Graduate Independent Study

Individualized study is 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 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 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 program director's office.

Graduate Study Abroad

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

Washington Campus Program

Sixteen 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, Arizona State, the University of California at Berkeley, the University of California at Los Angeles, Emory University, Georgetown University, Howard University, Indiana University, The Ohio State University, the University of New Mexico, the University of Michigan, Northeastern University, the University of North Carolina at Chapel Hill, Purdue University, Texas A&M, and the University of Texas at Austin.

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.

Each year selected graduate students spend a week in Washington D.C., attending classes, special lectures, and hearings, and conducting research. The students stay in appropriate facilities in Washington. Participants earn three hours of credit and a Certificate of Completion from The Washington Campus Program. For additional information, graduate students can contact the Graduate Business office.

Student Services

Distinguished Executive Lecture Series

One evening each semester, the Seidman College of Business Dean invites an expert on a current and relevant topic to address graduate business students. The topic is selected specifically to enrich the curriculum. Following the presentation, students and faculty ask questions and engage the presenter in conversation.

Seidman Professional Development Series

The Seidman Professional Development Series is a series of events held on Thursday evening twice each semester during the academic year. These events, open to all business students, are designed to provide the opportunity for students to develop successful business skills beyond what is taught in the classroom. Seminar topics have included how to work a room, salary and money matters, giving presentations that beat the competition, business golf, and the etiquette dinner.

Mock Interviews

To assist students in preparing for career placement the Seidman College of Business collaborates with Career Services and the Seidman Dean's Advisory Board to offer mock interview opportunities for Seidman juniors and seniors who meet Seidman'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

Student Awards

Each year the *Wall Street Journal* makes an award to an undergraduate business student. The award is a silver medallion and a one-year subscription to the *Wall Street Journal*. The recipients are selected by Seidman College faculty on the basis of academic excellence, business leadership, contribution to the university, and promise of success.

Accounting Awards

The Beene, Garter & Co., Institute of Management Accountants, Ernst & 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.

Seidman Service Award

The Seidman Service Award was created to honor an undergraduate and graduate student each year for their outstanding service contribution to Seidman, the university, and the community.

Scholarships

Accounting Alumni Scholarship
 American Production and Inventory Control Society (APICS) Scholarship
 Scott and Ruth P. Koeze Graduate Business Scholarship
 The Barry Castro Business Ethics Scholarship
 BOMA Scholarship
 Business Study Abroad Scholarship
 Newton D. Becker Scholarship Award
 H. James and Carole Lynn Campbell Williams Scholarship in Business
 Richard H. Giles Memorial Scholarships
 Earl Harper Management Scholarship
 The Hilda C. Holder Scholarship for Women in Business
 J.C. Huizenga Scholarship
 Jurries Family Scholarship
 Global Forex Trading Scholarship
 The Grubb & Ellis/Paramount Commerce Scholarship
 Hungerford, Aldrin, Nichols & Carter, P.C. Accounting Scholarship
 The Don Klein Graduate Scholarship in Accounting
 The Jack J. Korff Seidman College of Business Finance Scholarship
 L.V. Eberhard Business Scholarship
 L.V. Eberhard Graduate Research Assistantship
 Marilyn and B.P. Sherwood III Scholarship
 Mithilesch and Jitendra Mishra Foreign Student and Faculty Scholarship
 Seidman Dean's Advisory Board Scholarship
 The Steelcase Inc. Seidman College of Business Diversity Scholarship
 Supply Chain Management Related Scholarships
 TEI Accounting/Tax Scholarship
 VanderZwaag Business Scholarship
 The Richard E. Veazey Graduate Academic Scholarship in Accounting
 The Kathleen B. Vogelsang Seidman College of Business Scholarship for Women
 Robert H. and Barbara Wood Entrepreneurship Scholarship

Refer to the Seidman College of Business website: www.gvsu.edu/business for scholarship details.

Graduate Assistantships

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

Advisory Boards and Associations

Seidman College Advisory Board

The Seidman College 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

The Alumni Association 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 Alumni Advisory Board

The Accounting Alumni 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 the local accounting associations, and corporate accountants are members of this board.

M.S.T. Advisory Board

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

Seidman Undergraduate Advisory Board

The Seidman Undergraduate Advisory Board (SUAB) is comprised of students from across the Seidman majors, class statuses, and academic levels. The SUAB meets regularly with the Dean to discuss, investigate, and communicate concerns, problems, and recommendations that Seidman students may have in relation to the business college. The SUAB members also act as student ambassadors on behalf of the undergraduate business 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 communications between students and the faculty, staff, 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.

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 is the former Chairman of the Federal Deposit Insurance Corp. (FDIC). Mr. Seidman received his undergraduate degree from Dartmouth, his law degree from Harvard Law School, and his MBA from the University of Michigan. He is also a C.P.A. and a noted author. He has served as dean of the College of Business at Arizona State University, as

Vice Chairman of Phelps Dodge Corporation, and is an Assistant to the President of the United States for Economic Affairs.

The Esther Seidman Chair

The E. 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.

College of Community and Public Service

Administration

Dean: Grant; Associate Dean: Crawley

Website

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

The College of Community and Public Service offers the following programs:

School of Criminal Justice:

Criminal Justice, B.A., B.S., M.S.

Legal Studies, B.A., B.S.

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

Department of Hospitality/Tourism Management:

Hospitality and Tourism Management, B.A., B.S., minor

School of Public, Nonprofit and Health Administration:

Public and Nonprofit Administration, B.A., B.S., minor

Master of Public Administration (M.P.A.)

Master of Health Administration (M.H.A.)

Nonprofit Leadership graduate certificate

American Humanics certificate (extracurricular)

School of Social Work:

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

Dorothy A. Johnson Center for Philanthropy and Nonprofit Leadership

Nonprofit Leadership Institute which includes the

Nonprofit Leadership and Management Program

Community Research Institute

AIM Alliance

Grantmaking School

(See specific Academic Programs for detailed information.)

Academic Units

School of Criminal Justice
 School of Public, Nonprofit and Health Administration
 School of Social Work
 Department of Hospitality/Tourism Management
 Dorothy A. Johnson Center for Philanthropy and Nonprofit Leadership

Accreditation

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).

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.

Graduate Admission

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

Student Services

The CCPS Undergraduate Advising Center provides assistance and information to current and prospective undergraduate students in the School of Criminal Justice (criminal justice and legal studies majors and minors), School of Public, Nonprofit and Health Administration, School of Social Work, and Department of Hospitality and Tourism Management.

The center provides comprehensive, centralized services to assist students with: degree planning including general education and major or minor requirements; development and review of degree progress plans; personalized course selection assistance; dissemination of Grand Valley policies and procedures, outreach and support to students in academic jeopardy; assistance with the creation of long-term goals; and referrals to faculty mentors in the academic programs or other university resources.

Graduate Assistantships

Graduate assistantships exist in the Undergraduate Advising Center, the School of Criminal Justice, 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 and SPNA 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 Leadership Institute research assistants.

College of Education

Administration

Dean: Collins

Website

www.gvsu.edu/coe

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 in elementary general education and secondary general 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 from education teach courses and seminars in educational philosophy and psychology, methods and materials, school organization and management, and technology and assessment. Faculty from the Liberal Arts teach content areas.

Graduate level programs offer the Master of Education degree (M.Ed.), Michigan Provisional, Professional, and Administrative 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: General Education, 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.)

College of Health Professions

Units

Academic Departments:
Leadership and Learning
Special Education, Foundations, and Technology

Administrative Departments:
Administrative Services
Dean's Office
Community Outreach
Student Information and Services Center

All offices are located at the L.V. Eberhard Center 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 accredited by the National Council for Accreditation of Teacher Education. (NCATE).

Secondary Admission for Undergraduates

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

Graduate Admission

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

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.

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.

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. Applications and criteria are available in College of Education offices.

Greta and Arthur DeLong Scholarship for Teacher Education
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

Refer to www.gvsu.edu/financialaid or the Costs and Financial Aid section of this catalog for scholarship details.

Graduate Assistantships

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

College of Health Professions

Administration

Dean: Olsson; Associate Dean: Goossen.

Website

www.gvsu.edu/chp

Mission

The College of Health Professions strives to be a model of excellence in health care education in the twenty-first 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 eight programs: a clinical doctoral degree in Physical Therapy; master's degrees in Occupational Therapy and Physician Assistant Studies; and baccalaureate degrees in Medical Laboratory Science, Health Professions, Radiologic and Imaging Sciences, Occupational Safety and Health Management, and Therapeutic Recreation.

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 diagnostic medical sonography program is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCEDMS). 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 program is accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). The physical therapy curriculum is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

Secondary Admission for Undergraduates

Three undergraduate programs in the College of Health Professions require a non-competitive secondary admissions/application process: Medical Laboratory Science, Occupational Safety and Health Management, and Therapeutic Recreation. See the Academic Programs section of the catalog for details.

Admission into the Radiologic and Imaging Sciences programs (Radiation Therapy or Sonography) involves a competitive secondary admissions process. Those who are already practicing in an RIS profession and have national registration with two years of college are eligible to pursue a baccalaureate degree and specialize in two RIS emphasis areas. Call the College of Health Professions for further program details.

Graduate Admissions

The Clinical Doctorate of Physical Therapy and the Master's Degree programs in Occupational Therapy and Physician Assistant Studies require a post baccalaureate application process; admission into these programs is competitive. See appropriate Academic Program description for information on graduate admission.

Student Services

The CHP Student Services Director and Academic Advisors are available to assist prospective students and their families with an introduction to the university and the College of Health Professions. In addition, they are available to help undergraduate and graduate students with academic advising and general program planning.

Student Organizations

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

Pre-Physician Assistant Club
 Pre-Physical Therapy Club
 Pre-Occupational Therapy Club
 Student Occupational Therapy Club
 Therapeutic Recreation Club
 Radiologic and Imaging Sciences Student Organization (RISSO)

Scholarship Resources

Numerous scholarship opportunities are available to students in their respective programs. Information regarding scholarships is available through the College of Health Professions website: www.gvsu.edu/chp, or through Grand Valley State University's Financial Aid Office at: www.gvsu.edu/financialaid/.

Brooks College of Interdisciplinary Studies

Administration

Dean: Wenner; Associate Dean: Glass

Website

www.gvsu.edu/cois

Mission

The Brooks College of Interdisciplinary Studies fosters and supports interdisciplinary programs and initiative in teaching and research and university-wide support services. Its mission is: connecting diverse interdisciplinary communities and cultivating innovative liberal learning.

Program Information

The Brooks College of Interdisciplinary Studies offers interdisciplinary undergraduate degree programs in Chinese studies, liberal studies and women and gender studies; minors in African/African-American studies, East Asian studies, environmental studies, Latin American studies, Middle East studies, and women and gender studies. In addition, the college hosts a number of academic and non-academic units that provide university-wide service and opportunities for faculty and students. The college serves to nurture and support interdisciplinary programming and promote cross-disciplinary collaboration.

What is interdisciplinary study? Traditional university models involve discipline-specific learning, focusing on depth of knowledge. Interdisciplinary study requires the learner to incorporate knowledge from a variety of content areas within a perspective that helps to solve complex problems and issues. Critical thinking skills are developed by learners

who see the breadth of issues as well as the depth, combining science, the arts, and humanities. Interdisciplinary questions are complex, multi-faceted, and involve the highest order of learning skills. Often this means that instruction comes from experts in a variety of fields, and outstanding teachers who can help students combine real-world experience with broad content knowledge.

Continuing Education

The Office of Continuing Education provides programs and services that link the needs of lifelong learners with the resources of the university. Continuing Education 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 Continuing Education section of the catalog.

The 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, life-long learners and leaders in their communities and a changing world. Additional Honors College information can be found in the Honors College section of the catalog. Honors courses are team taught, blocked sequentially, and offer an interdisciplinary approach to general education.

The Robert and Mary Pew Faculty Teaching and Learning Center

The Robert and Mary Pew Faculty Teaching and Learning Center supports faculty efforts to achieve teaching excellence. The Center presents programs throughout the calendar year, including workshops, mentoring programs, conferences, and consultations. Its directors offer leadership on teaching and learning issues across the university with a particular emphasis on teaching within a liberal education context. The Pew FTLC also provides tangible support and recognition of teaching excellence through a grants program and the campus-wide Pew Teaching Awards. The Pew FTLC is located in 324 Lake Ontario Hall.

Barbara H. 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

Integrative Learning 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. The purpose of the Office of Integrative Learning is to help students transcend boundaries between academic, personal, and work life to become engaged, ethical, and academically proficient learners. Some of the hallmark programs of the Office of Integrative Learning are:

- **Community Reading Project** Enhances the intellectual environment and culture of Grand Valley and its surrounding communities by encouraging the reading, appreciation, and discussion of books.
- **The LIB 100** Co-curriculum offers collaborative educational experiences and events which encourage students to critique and

Brooks College of Interdisciplinary Studies

shape their own educational paths within the context of an academic course.

- **Student Summer Scholars** A summer program which offers a unique opportunity for undergraduate students to do hands-on, professional research and creative practice in their chosen field.
- **Student Scholars Day** An annual celebration of the scholarship and creative work performed by GVSU students. The day showcases faculty-mentored student work, shared through many venues, including oral presentations, discussion and panel sessions, fine arts exhibits and performances, and poster presentations.

Fred Meijer Center for Writing and Michigan Authors

The Fred Meijer Center for Writing and Michigan Authors provides writing support to all students at the university. In addition to offering one-to-one consultations to students via appointments and drop-in hours at the Allendale, Pew, CHS, and Meijer (Holland) campuses, the center also sends consultants into all first-year writing classrooms (WRT 098 and WRT 150) to facilitate peer review sessions in those courses. The center also offers online consultations. To meet the needs of English as Second Language students, or international students or students referred to the Center by Disability Support Services, the center offers standing, weekly, one-hour appointments.

The center is also a resource for faculty and offers writing instructional support services and some programming to support faculty writing projects. Faculty writing retreats are offered as intensive writing instruction for faculty working on major projects.

Center for Scholarly and Creative Excellence

The Center for Scholarly and Creative Excellence works to provide support, mentorship, and guidance for faculty in their research and creative work. The center will promote the development of faculty in their pursuit of excellence and connect the Grand Valley community of scholars for mutual growth.

Sustainable Community Development Initiative

The Sustainable Community Development Initiative (SCDI) 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 three pronged approach of social justice, economic prosperity, and environmental stewardship. SCDI connects faculty, students, and community stakeholders to address campus needs as well as community needs. The initiative provides support and input for course development, campus programming, internships, and project activities that promote awareness about sustainable development and the application for sustainable best practices. Visit www.gvsu.edu/sustainability for more information.

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.

Women and Gender Studies

The Women and Gender Studies Program at Grand Valley State University offers an interdisciplinary major and minor based on the scholarship of the study of women, men, lesbians, gays, transgendered, and bisexuals. WGS has close relationships with the Liberal Studies Department and the African/African American, Middle Eastern, Latin American, and East Asian programs. The WGS Program works closely with GVSU's Women's Center to cosponsor a variety of speakers, events, and internships. For students selecting the major or minor in women and gender studies, there are more than 30 courses that fulfill the required twenty-one hours. More than 40 faculty across the campus support WGS through teaching, research, and service.

Areas Studies Programs

Area Studies focus on the interdisciplinary study of the culture and issues of a particular world region.

- African/African American studies (minor)
- Middle East Studies (minor)
- Latin American studies (minor)
- East Asian studies (minor)
- Chinese studies (major)

Student Services and Campus-wide Programs

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

Junior Level Writing Assessment

All GVSU students must demonstrate proficiency in writing in order to graduate. WRT 305 is the designated course to meet this writing requirement. Students can test out of the course by taking and passing a writing assessment test, which allows the students to demonstrate their ability to write for content as well as style and mechanics. The assessment test needs to be taken during the junior year so that, in the event that the test is not passed, the student can still take the WRT 305 class.

Student Scholars Day

Student Scholars Day (SSD) is held once each year to celebrate the scholarship and creative work performed by GVSU students. The day showcases faculty-mentored student work, shared through many venues, including (but not limited to) oral presentations, discussion and panel sessions, fine arts exhibits and performances, and poster presentations.

Summer Student Scholars

The Student Summer Scholars Program (S3) provides funds for a student and faculty mentor to devote twelve weeks to a research and/or creative project during the spring/summer semester. Generally, S3 Grants provide a student stipend, faculty stipend, and a small budget for supplies. Through these grants and the mentorship of a faculty member, the S3 program offers a unique opportunity for undergraduate students to do hands-on, professional research and creative practice in their chosen field. Combining academics, field work, and a reflection component provides students with a meaningful learning experience that helps to prepare them for graduate school and future careers.

Community Reading Project

The community reading project is a campus wide 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. In 2009 discussions focused on Three Cups of Tea, and culminated in the author, Greg Mortensen's appearance at GVSU to discuss the book.

Awards, Scholarships, and Scholarship Events

GVSU LGBT Scholarship Fund

Barbara H. Padnos International Scholarship

Jean Enright Scholarship (Women and Gender Studies)

CEA Scholarship (Cultural Experiences Abroad)

Mark A. Elizabeth C. Murray Study Abroad Scholarship

Nichols Sustainability Scholarship

Peace and Justice Award

Arend D. & Nancy Lubbers Honors College Scholarship

Grand Forum Scholarship for Continuing Education

Student Summer Scholars Program

Student Scholars Day

Graduate Assistantships

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

Continuing Education

General Education

Padnos International Center

Sustainable Community Development Initiative

Writing Center

Advisory Boards

Latin American Studies

Sustainable Community Development Initiative

Women & Gender Studies

Community Resources

Grand Forum

Professional Development

The Professional Development Partnership Program (for education and social work professionals)

Sustainable Community Development Initiative

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

College of Liberal Arts and Sciences**Administration**

Dean: Antczak; Associate Dean: Joseph; Associate Dean: Schutten;

Associate Dean: Stark

Website

www.gvsu.edu/clas

Mission

The College of Liberal Arts and Sciences 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 almost 50 bachelors 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

Communications, B.A., B.S.

Advertising and Public Relations, B.A., B.S.

Advertising and Public Relations (minor)

Aging and Adult Life

Aging and Adult Life (minor)

Annis Water Research Institute**Anthropology**

Anthropology, B.A., B.S.

Anthropology (minor)

Archaeology

Archaeology (minor)

Art and Design

Art and Design, B.A., B.S.

Art and Design, B.F.A.

Ceramics

Graphic Design

Illustration

Jewelry/Metalsmith

Painting

Printmaking

Sculpture

Visual Studies

Art Education K-12

Art History, B.A.

Studio Art

Studio Art (minor)

Athletic Training

Athletic Training, B.S.

Behavioral Science

Behavioral Science, B.A., B.S.

Biology

Biology, B.A., B.S.

Animal Biology

Aquatic Sciences

Environmental Health

Genetics and Cell/Molecular

Plant Biology

Predental

Premedical

Preosteopathic

Physical Therapy

Preveterinary Medicine

Secondary Education

Wildlife Biology

Biology, M.S.

Biology (minor)

Biomedical Sciences

Biomedical Sciences, B.S.

Microbiology

Nutritional Science

Biomedical Science, M.S.

Biopsychology

Biopsychology, B.A., B.S.

Biostatistics

Biostatistics, M.S.

Broadcasting

Broadcasting, B.A., B.S.

Cell and Molecular Biology

Cell and Molecular Biology, B.S.

Cell and Molecular Biology, M.S.

College of Liberal Arts and Sciences

Chemistry

Chemistry, B.A., B.S.
Biochemistry and Biotechnology
Environmental Chemistry
Professional
Secondary Education
Technical

Chemistry (minor)
Certificate in Green Chemistry

Chinese Language (minor)

City and Regional Planning

City and Regional Planning (minor)

Classics

Classics, B.A.
Classical Languages Emphasis
Classical Tradition Emphasis
Greek Emphasis
Latin Emphasis
Latin Secondary Education Emphasis

Classical Tradition (minor)

Greek (minor)

Latin (minor)

Latin Secondary Education (minor)

Comprehensive Science and Arts for Teaching, B.A., B.S.

Communication

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

Dance

Dance, B.A.
Dance (minor)

Earth Science

Earth Science, B.S.
Secondary Education
Earth Science (minor)

Exercise Science, B.S.

Clinical Exercise Science
Health Fitness Instruction

Film and Video Production

Film and Video Production, B.A., B.S.
Animation/New Media
Cinema Studies
Documentary/Nonfiction
Fiction Filmmaking
Sound Design

French

French, B.A.
Elementary Education
Secondary Education
French (minor)

Geochemistry

Geochemistry, B.S.

Geography and Planning

Geography, B.A., B.S.
Geographic Techniques (minor)
City and Regional Planning (minor)
Geography – Secondary Education (minor)
Geographic Information Systems Technology, Certificate

Geology

Geology, B.S.
Geology (minor)

Geology – Chemistry, B.S.

German

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

Health Communications

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

History

History, B.A., B.S.
Elementary Education
Secondary Education
History (minor)
Social Studies Group Major B.A., B.S.

History of Science

History of Science (minor)

Integrated Science

Integrated Science, B.S.
Elementary Education

International Relations

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

Journalism

Journalism, B.A., B.S.

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.

Music

Music, B.A.
Music, B.M.
Music (minor)
Music Education, B.M.E.
Instrumental
Vocal/Choral

Natural Resources Management

Natural Resources Management, B.S.
Ecosystem Science and Management
Environmental Science
Natural Resources Management (minor)

Philosophy

Philosophy, B.A.
Philosophy (minor)

Photography

Photography, B.A., B.S.

Physical Education

Physical Education, B.S.
Professional Instruction
Sports Leadership, Coaching
Sports Leadership, Sports Management
Physical Education (minor)
School Health Education (minor)

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

Pre dental Studies

Prehealth Curriculum
 Prelaw
 Premedical Studies
 Prepharmacy

Professional Science Masters (PSM)

Biostatistics, M.S.
 Cell and Molecular Biology, M.S.
 Medical and Bioinformatics, M.S.

Psychology

Psychology, B.A., B.S.
 Psychology - Special Education
 Psychology (minor)
 Psychology - Secondary Education (minor)
 Biopsychology, B.A., B.S.
 Behavioral Science, B.A., B.S.

Regional Math and Science Center**Russian**

Russian (minor)

Russian Studies

Russian Studies, B.A.
 Russian Studies (minor)

Sociology

Sociology, B.A., B.S.
Applied
Professional
 Sociology (minor)
 Sociology Secondary Education (minor)

Spanish

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

Statistics

Statistics, B.A., B.S.
 Applied Statistics (minor)
 Statistics (minor)
 Mathematical Statistics (minor)

Theatre

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

Writing

Writing, B.A.
Creative Writing
Professional Writing
 Writing (minor)

Academic Units

Anthropology
 Annis Water Research Institute
 Art and design
 Biology
 Biomedical Sciences
 Cell and Molecular Biology
 Chemistry
 Classics
 School of Communications
 English
 Geography and Planning
 Geology
 History
 Mathematics
 Modern Languages and Literatures
 Movement Science
 Music
 Philosophy
 Physics

Political Science
 Psychology
 Sociology
 Statistics
 Writing

Accreditation

See individual unit or program sections for information.

Secondary Admission for Undergraduates

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

- Art and Design
- Music
- Dance
- Film and Video Production (in the School of Communication)

Graduate Admission

See appropriate Academic Program description for information on graduate admission.

Student Services

CLAS Academic Advising Center
 Math Tutoring Lab
 Regional Math and Science Center
 Statistical Consulting Center

Honors Organizations

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

Scholarships

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

Art Scholarship
 Edith Blodgett Piano Scholarship
 Branstrom Fine Arts Scholarship
 Breen Scholarship Fund
 Alexander Calder Honor Scholarship
 Dance Scholarship
 Gilbert and Patricia Davis Scholarship for Full- or Part-time English Majors
 Aaron DesRocher Memorial Chemistry Scholarship
 Leslie Eitzen Voice Scholarship
 Flanders/University Club Scholarship
 Geology Scholarship
 Geology/Earth Science Tremba Scholarship
 Charlotte Gierst and Salome Egeler Music Scholarship
 Arthur C. Hills Music Scholarship
 Huizenga Biology Education
 Kent Medical Foundation Health Sciences Grant
 Walton Koch Scholarship
 Albert S. and Ella D. Koeze Art Scholarship
 Dirk Koning Film/Video Scholarship
 Mathematics Scholarship
 Glenn A. and Betty Niemeyer History Scholarship
 Ilene I. Schooley Biomedical Science Scholarship
 School of Communications Scholarship
 Mary and Wilhelm Seeger Scholarship
 Shakespeare Scholarship
 Nedra J. Smith Otis Art Scholarship
 Statistics Scholarship
 Howard and Rose Stein Biology
 Donald and Barbara VanderJagt Mathematics and Athletics Scholarship
 Margaret F. Ward Art and Design Scholarship

Kirkhof College of Nursing

Margaret F. Ward Music Scholarship
Dr. Ronald Ward Scholarship
Bill and Diana Wipperfurth Annis Water Resources Institute Student
Research Scholarship
Jennifer Youssef Journalism

Community Resources

Annis Water Resource Institute
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: Scott; Associate Dean, Undergraduate Programs: Van Doren; Interim Associate Dean for Practice: Brintnall; Associate Dean for Nursing Research and Faculty Development: Coviak.

Website

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. Kirkhof College of Nursing strives to improve the well-being of people through leadership in nursing education, professional practice and scholarship.

Kirkhof Legacy

Grand Valley State University named Kirkhof College of Nursing in honor of Ottawa County businessman and entrepreneur Russel Kirkhof, who donated the first million-dollar gift to Grand Valley in 1978. Kirkhof was so important to Grand Valley that his name also graces the student hub on the Allendale Campus, the Kirkhof Center. Kirkhof's commitment to education in the region inspires the College of Nursing's devotion to providing well-prepared health care professionals to the West Michigan community.

Program Information

Bachelor of Science in Nursing, B.S.N.; a B.S.N. for students with degrees in other disciplines; B.S.N. completion for Registered Nurses; Master of Science in Nursing, M.S.N.; and the Doctor of Nursing Practice, D.N.P.

Accreditation

The Kirkhof College of Nursing (KCON) at Grand Valley is accredited by the Commission on Collegiate Nursing Education (CCNE) and recognized for outstanding teaching, scholarship, service, and research. The Kirkhof College of Nursing is located in the Cook-DeVos Center for Health Sciences in downtown Grand Rapids, Michigan. The baccalaureate program is fully accredited by the Commission on Collegiate Nursing Education (One Dupont Circle NW, Suite 530, Washington, DC, 20036-1120; Telephone: 202-887-6791) and is approved by the Michigan State Board of Nursing (P.O. Box 30018, Lansing, MI 48909; Telephone: 517-335-0918). Graduates are prepared to take the licensure examination for registered nurses. The master's program is fully accredited by the CCNE. Consistent with CCNE guidelines Doctor of Nursing Practice program accreditation will be sought in 2011. Graduate students are eligible for certification exams.

Undergraduate Admissions

Students admitted to the university as pre-nursing or nursing majors must complete a secondary application for the upper division clinical courses. Admission of pre-nursing students to the undergraduate nursing major is selective and highly competitive. Information regarding undergraduate admissions is outlined under the Academic Program section for Nursing. For questions or clarification, please call the Kirkhof College of Nursing at (616) 331-7160.

Graduate Admissions

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

Student Services

The Office of Student Services at Kirkhof College of Nursing is staffed by professional advisors. The Center provides a wide range of services to support undergraduate and graduate nursing students with: degree planning including general education and major or minor requirements, development and review of degree progress plans to promote their academic success. Prospective students interested in any nursing degree program can attend group information sessions scheduled regularly. For individual and group appointments, students may call (616) 331-7160 or visit us at www.gvsu.edu/kcon/oss/.

Student Organizations

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. The benefits of joining include opportunities for leadership, networking, and volunteering in your community. Additional information about the Student Nurses' Association is available at www.gvsusna.com/.

Honors Organizations

Membership in Sigma Theta Tau International Honor Society of Nursing is offered to baccalaureate and graduate nursing students who demonstrate academic excellence. The mission of the society is to support learning, knowledge, and professional development of nurses committed to making a difference in health worldwide. 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 pre- and post-licensure students. Information regarding specific scholarships is available through the Kirkhof College of Nursing website and the Grand Valley State University Office of Financial Aid website at www.gvsu.edu/financialaid/.

Graduate Assistantships

The Kirkhof College of Nursing employs graduate students in full and part-time assistantships to support faculty scholarship and special projects. Assistantships provide tuition and stipend support.

Seymour and Esther Padnos College of Engineering and Computing

Administration

Dean: Plotkowski; Assistant Dean: Standridge.

Website

www.gvsu.edu/pceec

Mission Statement

The mission of the Seymour and Esther Padnos College of Engineering and Computing is to prepare undergraduate and graduate students in engineering and computing 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
- 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 and computing. It is the aim of the University to inspire future engineers and computing 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, and information systems. Masters degree programs are offered in medical and bioinformatics, computer information systems, electrical and computer engineering, product design and manufacturing engineering, manufacturing operations, and mechanical engineering.

The college also provides courses in support of non-engineering and computing students through minor programs in computer science, computer engineering, engineering science, information systems, information technology, and health care information systems, 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 and computing. All students completing undergraduate degrees complete the integrated cooperative education program. All students completing undergraduate degrees in computer science and information systems complete the integrated internship program.

Academic Units

School of Computing and Information Systems, www.cis.gvsu.edu
School of Engineering, www.gvsu.edu/engineering

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/.

- 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/.
- The **Engineering Major with Electrical Engineering Emphasis** is accredited under the General Criteria and Electrical Engineering Criteria by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org/.
- The **Engineering Major with Computer Engineering or Interdisciplinary Engineering Emphasis** is accredited under the General Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone (410) 347-7700, www.abet.org/.
- The **Engineering Major with Mechanical Engineering Emphasis** is accredited under the General Criteria and Mechanical Engineering Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org/.
- The **Engineering Major with Product Design & Manufacturing Engineering Emphasis** is accredited under the General Criteria and Manufacturing Engineering Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone (410) 347-7700, www.abet.org/.

Secondary Admission for Undergraduates

The computer science, engineering, and information systems programs all require secondary admission as described in their specific Academic Program information.

Graduate Admission

See appropriate Academic Program description for information on graduate admission.

Student Services

The Student Services Coordinators work with the School of Engineering and School of Computing and Information Systems to provide effective advising services for prospective and current students. In addition, outside constituents are reached through outreach activities hosted on and off campus. These activities focus on explaining the various fields of engineering and computing. Other services include supporting student societies and coordination of the college newsletter.

Professional Society Student Chapters

ACM - Association for Computing Machinery
ASME - American Society of Mechanical Engineers
IEEE - Institute of Electrical & 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 & Information Disciplines

Scholarships

Joseph E. Appelt, P.E. Engineering Scholarship
Robert Bosch Fuel Systems Engineering Scholarship
Scott M. Dykstra/Oliver Products Company Engineering Scholarship
FIRST Robotics Engineering Scholarship

Frederik Meijer Honors College

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
School of Computing & Information Systems Freshman Scholarship
School of Computing & Information Systems Study Abroad Scholarship
School of Computing and Information Systems Academic Scholarship

Graduate Assistantships

Graduate assistants work with appropriate school faculty and staff. Qualified full time candidates are selected on the basis of aptitude, interest, and background. 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
- FIRST Robotics
- K-12 Outreach

Advisory Board

School of Engineering Advisory Board and School of Computing & Information Systems Advisory Board

The Advisory Boards of each school, composed of the dean and many leaders from local, national, and international companies, serve to create and sustain an active partnership between the schools and industry. The boards advise the schools on goals, curriculum, and other matters that strengthen the student experience, the schools and college, and the industry and public communities.

Frederik Meijer Honors College

Administration

Director: J. Chamberlain.

Website

www.gvsu.edu/honor

Mission

The mission of the Frederik Meijer Honors College is to provide a challenging interdisciplinary liberal education in a personal, nurturing living/learning environment. Honors education encourages students to develop high-level skills, knowledge and expertise, and prepares them to be intellectually curious, life-long learners and extraordinarily capable leaders in their communities and the world.

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 intelligence, 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 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, 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 the Grand Valley Student Scholarship 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, out West, and Washington D.C. Trips for credit are offered to various international destinations such as Germany and Poland, and there is an annual summer service-learning program 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 wear a special 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 a semester 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 resign from Honors but will be responsible for completing the regular general education program of the university.

Learning and Living Community

Glenn A. Niemeyer Learning and Living Center

Students who have been admitted to the Meijer Honors College are encouraged to live in the Glenn A. Niemeyer Learning and Living Center, a state-of-the-art residential and academic center for honors students. This arrangement allows students who have a strong commitment to

academic excellence to live with other students of similar interest. The center is administered through a cooperative agreement between the director of housing and the Meijer Honors College director. Students living in Niemeyer are involved in governance, social activities, and in program planning through the Honors Community council (see below under Student Organizations). Residents are often called upon by various university staff and administrators for suggestions, ideas, and reactions on matters of importance to the campus community.

Space in Niemeyer is limited. Returning Honors College students are strongly advised to submit their housing applications online as soon as possible. Incoming freshmen interested in living in Niemeyer must submit (1) their Honors College application and (2) a separate university housing application. On that application they select Honors housing as their first option. These can be submitted online.

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, and then 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 and wish to enter the Meijer Honors College may apply for admission if they have a 3.5 college grade point average. The application forms can be picked up at the Honors office or from the website www.gvsu.edu/honors/.

Student Organizations

Honors Community Council

The Honors Community Council is the student group responsible for contributing to Meijer Honors College governance and provides all honors students, not just those living in the Niemeyer Learning and Living Center, opportunities to be heard. The Community Council provides input to the college, 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

Upper-class 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.**

The Frederik Meijer First Generation Honors College Student Scholarship 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 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 Honors College to renew this scholarship.

For more information on applying and competing for scholarships, contact an admissions counselor at admissions@gvsu.edu or (616) 331-2025 or 1-800-748-0246. For all of the possibilities, see www.gvsu.edu/financialaid or call (616) 331-3234 or (800) 748-0246.

Office of Graduate Studies

Administration

Dean: Potteiger; Associate Dean: Stevenson

Website

www.gvsu.edu/gs

Mission

The mission of the Office of Graduate Studies is to promote and support excellence in graduate education and the research and scholarly activities associated with it; to be an advocate for graduate students and graduate programs within the university.

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 Office of Graduate Studies is located in the Richard M. DeVos Center on the Robert C. Pew Grand Rapids Campus. The Pew 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 that 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.

Graduate Studies

Mission: The Dean of Graduate Studies works on behalf of all graduate students to ensure that Grand Valley State University's graduate programs are of the highest quality, that faculty 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 Graduate Studies and staff work closely with the Provost, the Graduate Council, the Office of Admissions, Academic Deans, Department Chairs, the Graduate Program Directors Advisory Group, the Division of Continuing Education, the Registrar, the Office of Multicultural Affairs, 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 persons interested in graduate studies at Grand Valley State University are welcome to visit the Graduate Dean in the Richard M. DeVos Center for assistance, advice, or to provide feedback on any aspect of their graduate education: telephone (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 Admissions website.

Graduate Council

The Office of Graduate Studies 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 graduate curriculum. The Graduate Council's voting membership is made up of elected faculty representatives from each college and the university library, and two graduate students who are elected by the Graduate and Professional Students Association. The Graduate and Professional Students Association (GPSA) is a recognized student organization, eligible to receive funds from the Office of Student Life. More on GPSA can be found in the Student Life organizations section of this catalog.

Awards

Graduate Dean's Citations for Academic Excellence

The Dean of Graduate Studies presents awards to outstanding graduate students to be recognized for their academic achievement. Nominations for the awards are submitted to the Office of Graduate Studies 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 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. Besides awards for academic achievement, the Graduate Dean's Citations for Academic Excellence also include recognition for service to the community, service to the university, and for outstanding master's thesis, outstanding final project, and outstanding publication. The recipient of the award for outstanding master's thesis may be eligible to submit their thesis to the Midwest Association of Graduate Schools for consideration and for a regional distinguished thesis award.

Graduate Assistantships

The Office of Graduate Studies is responsible for the overall administration of the university's graduate assistantship (GA) 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 Graduate Assistantship program, faculty and university staff benefit as well, in that they receive assistance with 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 director within their program as students often find assistantships within their programs. However, other academic and non-academic units may have positions available as well. While the Office of Graduate Studies 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 department. More information on graduate assistantships may be found in the Costs and Financial Aid and Graduate Information sections of the catalog.

Graduate Student Services

Requests for Exception to Graduate Policy

The Dean of Graduate Studies is responsible for the review and final approval or denial of Petitions for Exception to graduate student 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 Graduate Studies to approve them. The following

information should be included in the Petition for Exception: how many hours in excess of the 12 credit limit the student has completed, the factors that prevented the student from being admitted to the program in a timely way, if the courses are within the eight-year limit or five-year transfer limit, if the student is currently enrolled in classes, the student's academic performance, if the courses are required to complete the degree, if the student is admitted to the program as of the submission of the petition. All materials must be submitted to the Office of Graduate Studies either via email or in a letter. Graduate students should note that the "clock" for their degree begins with the first course taken toward the degree.

Petition for Exception: Twelve-credit hour limit on courses completed prior to admission to a program: GVSU 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 their academic advisor to initiate the Petition for Exception.

Eight-Year Time Limit to Degree Completion: All courses to be counted for a master's degree at GVSU 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.

Five-Year Time Limit on Transfer Courses: Transfer credits from another institution that are more than five years old will severely limit the time available to complete the GVSU courses required for a master's degree. All transfer courses from other universities must be evaluated by the Registrar's office to determine if they are graduate level courses and that the student earned a grade of B or better.

Credit Overload: Full-time graduate students register for 9 to 12 credit hours per semester. Permission from the Dean of appropriate studies is required for more than 15 hours per semester.

Petition to Return: 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. This form serves to update the student's demographic record. 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.

Graduate Student Organizations

The Dean of Graduate Studies actively supports the Graduate and Professional Student Association (GPSA), the university-wide student organization for graduate students at Grand Valley. This includes co-hosting many events, promoting the events, and providing support for the annual National Graduate and Professional Students Recognition Week. GPSA 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.

Office of Grants Development and Administration

Administration

Director: Chamberlain

Website

www.gvsu.edu/grants

The office of Grants Development and Administration (GDA) encourages active scholarship among faculty, staff, and students, both graduate and undergraduate. This office provides oversight and services in the management of externally sponsored programs and grants. The role of this office is to assist Grand Valley faculty and staff in the pre-award process of developing proposals and finding potential funding sources as well as submitting grant proposals to funding sources, and also to work with the project directors of such grants in managing and monitoring their grant awards. Faculty and staff who receive grant funding often utilize students to assist them with their research. Doing so gives students an opportunity to conduct hands-on research and enhances their academic experience, while at the same time the faculty member can contribute new knowledge to their field of expertise.

To foster the quality of the grants submitted to potential funding sources, this office offers workshops on proposal writing and project management. Workshops are offered several times per year. The GDA office allows graduate students to attend the workshops upon request from their research or academic advisor. Contact grants@gvsu.edu or (616) 331-6826.

Continuing Education Office

Administration

Executive Director: Jonaitis

Website

www.gvsu.edu/learn

Mission

The Continuing Education Office provides programs and services that link the needs of lifelong learners with the resources of the university.

Program Information

The Continuing Education Office coordinates academic programs and services for students at regional sites and locations throughout Michigan.

The Office of Continuing Education 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) 331-7360 or on the Web at: www.gvsu.edu/nontraditional or www.gvsu.edu/learn/.

Nontraditional students are described as meeting any one or more of the following criteria:

- Play multiple roles in addition to being a student such as a full-time employee, a spouse/partner or parent
- Returning to a learning environment after three or more years' absence
- Aged 24 years or older
- A veteran of the military

The Continuing Education Office also coordinates professional development and community engagement opportunities. These include:

- Grand Forum
- Professional Development
- The Professional Development Partnership Program (for education and social work professionals).

Details about these programs can be found in the Community Resources section of the catalog.

Classes are offered in Allendale, Grand Rapids, and/or the following locations:

Holland

Grand Valley State University offers the 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, as well as graduate courses in business and education. 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/.

Muskegon

The Muskegon Regional Center, located at the James L. Stevenson Center for Higher Education on the campus of Muskegon Community College. Staff at the center are available to advise students considering 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/.

Traverse City

Grand Valley State University also 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 elementary and secondary teacher certification and liberal studies. Students can earn a master's degree in education and social work. Other Northern Michigan locations include Boyne City, Cadillac, and Sault Ste. Marie. Individuals and organizations seeking additional information about Grand Valley in Northern Michigan call (231) 995-1785 or visit 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). Amount: \$1,200 renewable.

Graduate Assistantships

Continuing Education occasionally provides graduate assistantships at our regional sites. Please contact Continuing Education at (616)-331-7360 for more information.

University Libraries

Administration

Dean: Van Orsdel.

Director of Administrative Services: De Wind.

Director of Research and Instruction: Garrison.

Director of Special Collections and University Archives: Beasecker.

Director of Technology and Information Resources: Van Orsdel, Acting.

Director of User Services: Armstrong.

Website

www.gvsu.edu/library

Mission

The Grand Valley State University Libraries enrich the educational mission of the university by advancing intellectual growth and discovery. Through the acquisition, application, dissemination, and preservation of knowledge we strive to serve the community, the state, the nation, and the world.

Library Services

The University Libraries offer dynamic and diverse opportunities for research, collaboration, and individual study. From three unique locations (James H. Zumberge Library 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 between all of Grand Valley's sites throughout Michigan.

The University Libraries house a robust collection in multiple formats that support the research and scholarship activities of students and faculty. They have over 750,000 items and over 300 electronic databases. The GVSU library is also a United States Government Depository.

The libraries provide a number of free services that support student research and increase student efficiency, including desktop delivery of journal articles across campuses, an interlibrary loan service that borrows materials from other institutions for our students' use, and electronic course reserves for required class readings. Research help is available through email or chat www.gvsu.edu/chat, by phone, or in person at any of our three locations.

Computers in the Libraries

PCs, laptops, and printers are available for use in all GVSU Libraries.

Government Resources

Grand Valley State University is a depository for United States government documents. The library has been a selective depository in the Federal Depository Library Program since 1963 and currently receives approximately 44% of the documents distributed by the program.

Curriculum Materials Library (CML)

There are two Curriculum Materials Libraries: one in the DeVos Center on the Robert C. Pew Grand Rapids Campus and another in Zumberge Library on the Allendale Campus. The two centers house current, high-quality instructional materials for preschool through grade twelve and provide spaces where education majors can preview resources, develop lesson plans, create media for the classroom, and try out teaching aides.

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 database contains 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 resource makes unique or rare materials from GVSU collections available electronically to students, faculty, administrators, researchers, and the general public. This project is a work-in-progress. Collections will be added as they become available.

Scholar Works@GVSU

Scholar Works@GVSU is an online repository of research and scholarly output selected and deposited by individual university departments and centers on campus. Visit the website at scholarworks.gvsu.edu/.

Admissions

Undergraduate Admission

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.

Admission

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 4th year of mathematics, and additional science courses. Results of the ACT or SAT (Scholastic Aptitude Test) 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 test of General Educational Development (GED).

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
300 Student Services Building
Grand Valley State University
Allendale, Mi 49401-9403
Web: www.gvsu.edu/admissions
Email: admissions@gvsu.edu

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

- 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 complete 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 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

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 complete 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 twelve 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 2.5 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 non-accredited 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-year and four-year institutions.

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 Foundation Categories of the General Education Program, the Writing 150 Basic Skills requirement, and one Supplemental Writing Skills (SWS) course. Transfer students with a MACRAO are required to complete the following Basic Skills requirements: demonstrate proficiency in Mathematics (MTH 110); fulfill the junior-level Writing requirement (a satisfactory score on the junior-level assessment essay or a grade of C or better in Writing 305); one SWS course in their major or division. In addition, transfer students with a MACRAO must also fulfill the following general education requirements: the two-course Cultural

Admissions

Emphasis requirement; and one three-course theme. For specific course information, please refer to 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 Non-degree-Seeking Applicant section of the Grand Valley State University Undergraduate and Graduate Catalog for specific admissions requirements to Grand Valley State University.

Undergraduate Non-degree Seeking Applicants

The non-degree-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 non-degree-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 Scholars/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:

- Completed non-degree-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 six hours per semester.
- Permission from the Admissions office must be obtained for future semesters at Grand Valley while still in high school. Faculty advisement is strongly encouraged.
- Students qualifying for dual-enrollment assistance from their high school must present a dual enrollment authorization form prior to enrollment.

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 non-degree 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.

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 welcomes international students wishing to study at our campus. In 2009-2010, students from 68 nations were enrolled at Grand Valley.

To be considered for admission the student must submit the following items:

- Completed international admission application.
- \$30 nonrefundable application fee.
- Evidence of English language proficiency verified by an official score report from the Test of English as a Foreign Language (TOEFL), the Comprehensive English Language Test (CELT), the International English Language Testing System (IELTS), or completion of ELS Level 112.
- The verification of financial support. This is a bank statement from your parents or sponsor showing that you have full financial support for the duration of your degree.
- 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.
- One page personal statement, typed and signed, indicating your academic goals and how you feel you will impact the GVSU campus as an international student.

The following minimum scores are expected: TOEFL 550 paper-based, or 80 internet-based; CELT 85 or IELTS 6.5 for undergraduate students and 7.0 for graduate students.

Applicants must demonstrate that they have full financial support as part of the application process. Partial tuition scholarships may be offered to qualified admitted international students. All admitted students will be considered for a scholarship. May 1 is the application and scholarship deadline for August (Fall) admission. A letter of admission and immigration Form I-20 will be issued at the time of acceptance to the university.

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 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 deadlines.

Art and Design	Liberal Studies
Athletic Training	Medical Imaging/Radiological Sciences
Business	Music
Clinical Laboratory Sciences	Nursing
Computer Science and Information Systems	Occupational Safety and Health
Dance	Occupational Therapy (M.S.)
Education	Physical Therapy (M.S.)
Engineering	Physician Assistant Studies (P.A.S.)
Film and Video Production	Police Academy (MCOLES)
Graphic Design	Social Work
Information Systems	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 Admission

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

- 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.

Graduate admission requirements are minimum requirements for consideration and do not guarantee acceptance into any program. Graduate programs may have additional or alternate admission requirements. For details, please consult with specific programs. All graduate students at Grand Valley State University will be classified as either degree seeking or non-degree seeking.

Application Procedure for Degree-seeking Students

Applicants should become familiar with entrance requirements well before their intended admission date. To be assured of admission consideration, applicants should submit applications and all supporting documents one to two months before the semester they wish to enter. Some graduate programs have more restrictive application deadlines. Please refer to the appropriate section of this catalog or visit our website at www.gvsu.edu for specific program deadlines.

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

- Completed graduate application for admission.
- A \$30 nonrefundable application fee (unless you have previously applied to Grand Valley State University).

- 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. Note: We do not require official transcripts from Grand Valley State University.
- Scores from either the TOEFL (Test of English as a Foreign Language) or CELT (Comprehensive English Language Test) from students whose native language is not English.
- Additional application documents as required by each graduate program. These requirements and application procedures are listed under each graduate degree 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 admission.

Application materials should be sent to:
Grand Valley State University
Admissions Office
1 Campus Drive
Allendale, MI 49401-9403

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 Non-degree-seeking Status

Students with a baccalaureate degree who are not seeking a graduate degree or have not completed all of the admissions requirements of their chosen program may be granted non-degree-seeking status. A maximum of six to twelve semester credits may be earned at Grand Valley State University as a non-degree-seeking student, depending on the student's program of interest. Some programs have more restrictive guidelines. Students should check specific program descriptions for details.

These credits may be considered for transfer into a graduate degree program if the student is granted permission to change his or her status from non-degree to degree seeking.

Changing Status from Non-degree 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 program and then to the dean of the college in which the program resides.

Second Master's Degree

Under certain circumstances a student may earn two master's degrees. Students who are considering such a plan should note the following information:

1. Meet all specified requirements for both degree programs.
2. Complete a minimum of 21 semester hours in residence at Grand Valley beyond the requirements for the first Grand Valley degree.
3. In keeping with the residency requirement, a student with a graduate degree from another institution with appropriate regional accreditation must earn a minimum of 24 semester hours in residence at Grand Valley. Note that the minimum total hours required for the second degree must be satisfied either through approved transfer hours or additional coursework at Grand Valley.
4. The time limit to satisfy degree requirements and the time limit on transfer of credits are applicable to the second master's degree.

Costs and Financial Aid

5. Students who meet separate emphasis area requirements within a program but not the additional residence requirements for two degrees may have both emphasis areas certified and recorded on their academic record.

International Students

Grand Valley welcomes international students wishing to study at our campus. In 2009-2010, students from 68 nations were enrolled at Grand Valley.

To be considered for admission the student must submit the following items:

- Completed international admission application.
- \$30 nonrefundable application fee.
- Evidence of English language proficiency verified by an official score report from the Test of English as a Foreign Language (TOEFL), the Comprehensive English Language Test (CELT), the International English Language Testing System (IELTS), or completion of ELS Level 112.
- The verification of financial support. This is a bank statement from your parents or sponsor showing that you have full financial support for the duration of your degree. 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. Scanned or copied documents will not be accepted.
- One page personal statement, typed and signed, about what the applicant can do to bring cultural and international perspectives to Grand Valley to enhance the learning environment for the entire GVSU community.

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

Applicants must have the following minimum scores for admission: TOEFL 550 paper-based, 213 computer-based, or 80 Internet-based; CELT 85; or IELTS 6.5 for undergraduate students and 7.0 for graduate students.

Partial tuition scholarships may be offered to qualified admitted international students. A completed application for admissions, including all required documentation, must be submitted by May 1 for scholarship consideration. May 1 is the deadline for submission of the application and all required documentation to be considered for August (fall) admission. A letter of admission and immigration Form I-20 will be issued at the time of acceptance to the university.

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 of Credit

Graduate credit from institutions with appropriate regional accreditation may be considered for transfer to a degree program at Grand Valley State University. Only coursework completed in the five years prior to application will be considered for transfer. Transfer credits must apply directly to the student's program as determined by the director of the graduate program. It is the student's responsibility to petition the program director for consideration of any transfer credit. Only courses with a grade of B (3.0) or above will be considered for transfer. Correspondence courses will not transfer into graduate programs at Grand Valley State University. Students must complete a minimum of 24 credits toward their graduate program at Grand Valley State University; therefore, those students with a considerable number of graduate credits from another

institution may not be allowed to apply all those credits toward their degree.

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. This form serves to update the student's demographic record. 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 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.

Dual Credit

Undergraduate students at Grand Valley State University may register concurrently for graduate credit prior to completing a baccalaureate degree. To do so, students must have earned a minimum of 85 semester hours and have a 3.0 grade point average or be admitted to a graduate degree program. Students wishing to apply for concurrent enrollment must obtain a Dual Credit Request form from the Records Office 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.

The completed form must be submitted to the Records 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

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 2010-2011 academic year. Additional tuition is assessed on some high cost curriculum. For more information go to the Grand Valley website, click on "Quick Facts" under "About Grand Valley" and view the special course charges under Tuition Rates.

Tuition for lower division (0-54 credits) undergraduate students who are Michigan residents taking anywhere from 12 to 16 credit hours is the same, a total of \$4,544 per semester. Tuition is \$395 per credit hour for fewer than 12 credits and for each credit over 16. Tuition for upper division (55 or more credits) undergraduate students who are Michigan residents taking anywhere from 12 to 16 credit hours is the same, a total of \$4,770 per semester. Tuition is \$414 per credit hour for fewer than 12 credits and for each credit over 16. Tuition for masters resident students is \$471 per credit hour for 500-600 level courses, \$414 for courses below 500 level. Tuition for doctoral students is \$532 per credit hour.

For lower division (0-54 credits) nonresident undergraduate students, tuition is \$6,701 total per semester for anywhere from 12 to 16 credits and \$571 per credit for fewer than 12 credits and for each credit over

16. For upper division (55 or more credits) nonresident undergraduate students, tuition is \$6,934 total per semester for anywhere from 12 to 16 credits and \$591 per credit for fewer than 12 credits and for each credit over 16. Nonresident masters tuition is \$646 per credit hour for 500-600 level courses, \$591 for courses below 500 level. Nonresident tuition for doctoral students is \$737 per credit hour.

The above 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.

Parking

Students wishing to park on either the Allendale or Robert C. Pew Campus must purchase a parking permit. Permits can be ordered at www.gvsu.edu/publicsafety/. The permit costs* \$160/semester for full-time students and \$83.00/semester for part-time students. A student is considered part-time if they are taking six or less credits each semester. The permit costs will be charged to their student account and billed on their regular tuition bill. Everyone who signs up at www.gvsu.edu/publicsafety will be issued a permit.

*Subject to change for the 2010-2011 year.

Residency

Because students normally come to Grand Valley State University for the primary or sole purpose of attending the university rather than to establish a home in Michigan, 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.

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.

Additional fees in particular courses may be required to cover the cost of field trips or the use of off-campus facilities. Fees may also be charged for administering standardized tests.

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 canceled and all financial aid received must be repaid.
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 the full session are eligible for a 75 percent refund of the applicable credit hours assessed.

3. Students withdrawing after the second week of classes in the shortened session (spring or summer) and after the fourth week of classes in the full session are not eligible for a 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. All financial aid awarded to the student will be canceled and all financial aid received must be repaid. 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 Financial Aid Office 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: The Vice Provost and the Associate Vice President of Academic Affairs will review student applications for appeal of tuition refunds. This serves as the review process for students seeking exception to the university tuition and registration late fee policy. A final appeal can be made to either the Associate Vice President of Academic Affairs or the Vice Provost of Academic Services.

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 withdraw during the 100 percent refund period will be required to repay funds previously advanced to them. These students will

Costs and Financial Aid

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 drop out but do not officially go through withdrawal procedures are considered an unofficial withdrawal. In cases of unofficial withdrawals the last recorded day of known class attendance will be used as the date of withdrawal. All cash disbursements will be required to be repaid if the student is unable to document the last day of attendance.

Financial Aid for Undergraduate Students

At Grand Valley State University in 2009-2010 more than 80 percent of full-time students received some kind of financial aid. The average award was approximately \$9,050.

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. All forms of financial aid are viewed as supplemental to the total family effort. A student who receives a scholarship or grant should be willing to borrow and work for additional money needed. 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 rather would 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 you receive is based on your enrollment status each semester. Refer to the "Enrollment Requirements for Aid" section. Exceptions are made for part-time students.

The graduation rate, as defined in the federal IPEDS Graduation Rate Survey, for students entering Grand Valley State University as new, full-time degree-seeking freshmen during the fall of 2003 was 61 percent. The cohort includes students who may have stopped, dropped out, reduced loads to become part-time students, or transferred to other institutions. The students in this cohort who remained at Grand Valley as full-time students for the first four complete academic years had a graduation rate of 89 percent.

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 to file the FAFSA online. Contact the Financial Aid Office if you need assistance in obtaining or completing this form.

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. Limited funds are available to students who file after March 1 (see application dates in the next section). You 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, non-degree-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 utilize the Grand Valley State University tuition payment plan offered by the Student Accounts office. For additional information on alternative loan programs, contact the Financial Aid office. Financial aid for international students is extremely limited.

Additional aid may be awarded for the spring/summer session depending on the availability of funds. You must enroll at least half time to receive financial aid for the spring/summer session. If you are seeking a spring/summer award, you must also file the Spring/Summer application, available at our website, www.gvsu.edu/financialaid/, after March 1, 2011.

If you wish to be considered for financial aid, please refer to the deadline dates listed below 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. Applying on the Internet at www.fafsa.gov is the fastest and most accurate means of filing. Paper forms are also available from your local high school, community college or by contacting the Financial Aid Office. You should list Grand Valley among your choice of schools. Our federal school code is 002268. The Free Application for Federal Student Aid (FAFSA) is the only application for aid Grand Valley requires.
3. In some cases you and your parent will be required to submit Federal 1040 forms to verify the information submitted on your application.
4. Award notifications will be mailed to your permanent address beginning mid-March.

The Financial Aid Office (FAO) 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.

Application Dates to Remember

If you plan to enroll for the fall semester, the following dates are important:

December 31: Freshman and community college transfer applicants must submit a completed admission application by this date to be considered for the major scholarship programs offered by Grand Valley.

March 1: Entering freshman and transfer students: submit the Free Application for Federal Student Aid (FAFSA) and list Grand Valley as a college choice. Our federal school code is 002268.

March 1: Renewal aid applicants and returning upperclass and graduate students: submit the Free Application for Federal Student Aid (FAFSA).

April 1: Entering freshman and transfer students receive notification of their financial aid award.

April 1: Spring/summer session students receive notification of their financial aid award.

June 1: Renewal aid applicants and returning upperclass and graduate students receive notification of their financial aid award.

If you plan to enroll beginning with the winter semester, the following dates are important:

October 1: Entering freshman, graduate, transfer, renewal aid applicants, and upperclass students: submit the Free Application for Federal Student Aid (FAFSA). List Grand Valley as a college choice. Our federal school code is 002268.

December 1: Students receive notification of their financial aid award. If you plan to enroll beginning with the spring/summer session, the following dates are important:

March 1: All students interested in receiving aid for the spring/summer must also file the Spring/Summer Supplemental Financial Aid form. This form is available online at www.gvsu.edu/financialaid/.

April 1: Students receive notification of their financial aid award.

Cost of Attendance and Student Budgets

Before applying for financial aid, students and parents should assess all of the costs of attending Grand Valley. The following tables estimates 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 students (living with parents or relatives).

Residential Students

Tuition and fees* (Michigan resident)	\$9,088
Books and supplies	\$1,000
Personal and miscellaneous	\$1,100
Room and board*	\$7,624
Transportation	\$1,100
Total	\$19,912

Commuting Students

Tuition and fees*	\$9,088
Books and supplies	\$1,000
Living Expenses	\$2,500
Transportation/Personal	\$2,200
Total	\$14,788

Out-of-State Students

Tuition and fees* (Non-Michigan resident)	\$13,402
Books and supplies	\$1,000
Personal and miscellaneous	\$1,100
Room and board*	\$7,624
Transportation	\$1,100
Total	\$24,226

*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 2010-2011 academic year.

Are you a Dependent or Independent Student?

You may consider yourself independent because you don't receive support from your parents and/or don't live in your parents' home. You may even qualify as independent for income tax purposes, but the U.S. Department of Education has stricter standards for financial aid purposes.

In order to file your financial aid application as an independent student, you must be one of the following: (1) age 24 by January 1 of the aid year, (2) a Veteran of the U.S. Armed Forces, (3) currently serving on active duty in the U.S. Armed Forces for purposes other than training, (4) a graduate, graduate/professional, or doctoral student, (5) married prior to filing and signing the Free Application for Federal Student Aid (FAFSA), (6) an orphan, ward of the court, or in foster care age 13 or older, (7) have legal dependents other than a spouse, (8) an emancipated minor as determined by a court, (9) a legal guardianship as determined by a court, or (10) at any time on or after July 1, 2009 an unaccompanied youth who was homeless as determined by a high school guidance counselor, the director of an emergency shelter, or the director of a runaway or homeless youth basic center.

See the FAFSA instructions for additional information on these criteria. If you do not meet one of the above conditions, you must file as a dependent student and include your parents' information.

The only exception to the dependency rules is in very rare instances where it can be proven that there is a total breakdown in the relationship between student and parent(s). Grand Valley calls this a Dependency Status Appeal. If you are unsure if your situation would qualify for consideration contact a financial aid counselor in our office.

Filing incorrectly as independent when you're actually a dependent student can seriously delay the processing of your financial aid. If you have questions about your status, contact a financial aid advisor before filing your FAFSA.

Financial Aid for Graduate Students

Three types of financial aid are available to degree-seeking graduate students enrolled for at least 4.5 credit hours at Grand Valley:

1. Federal College Work-Study Program: The majority of campus jobs are funded under this program (see following program description).
2. Student Loans: Federal Direct Student Loans of up to \$10,250 per semester are available (see following program description). In addition graduate students are able to borrow through the Federal Graduate PLUS loan. This loan program does require a credit check. For additional information see our website at www.gvsu.edu/financialaid/. Private, alternative education loan program information is also available at our site under the "How Do I" section of our website.
3. Assistantships: You can find additional information regarding assistantships at www.gvsu.edu/gvgs which is the Graduate Studies website.

If you are a graduate student, you should follow normal financial aid application procedures. Additionally, graduate students should refer to the "Special Programs" section for other programs for which they may qualify.

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 cover the additional costs. Limited scholarships and grants are available for some programs. An appointment 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 Barbara H. 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 you flexibility in meeting your educational costs. This assumes that a combination of the various types of aid - that is, loans, jobs, scholarships, and grants - is 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.

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1. **Programs not based on need.** Each program requires different application procedures. Eligibility is determined jointly by the Financial Aid Office and the agency or department funding the program.
2. **Programs based on need.** You are required to complete the Free Application for Federal Student Aid (FAFSA). Eligibility is determined by the Financial Aid Office.
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 Focus on the Finish grant will help you achieve that goal.

Every new, full-time student can take advantage of the Focus on the 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.

Grants and Scholarships

Scholarship eligibility criteria indicated below are for students entering in the 2010-2011 academic year and may change. Grand Valley offers an outstanding merit-based scholarship program. We determine initial eligibility for these scholarships at the time of admission, although final award decisions and the amount of most scholarships are made by the scholarship committee after the student has completed all required application materials. To be considered for a scholarship, students must minimally have a complete application for admission submitted to the Admissions Office by December 31 for the following fall semester. Complete applications consist of an application for admission, official transcripts, results of the ACT or SAT test, and a \$30 application fee. All relevant information including ACT and SAT scores must be received by the December 31st deadline to receive scholarship consideration. The three levels of merit-based scholarships are described below.

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 GPA, a minimum 32 composite ACT for Michigan residents or SAT of 1420 for nonresidents, based on the critical reading and math combined scores, and attend a scholarship competition. Awards range from \$3,000 to \$7,000. Awards are made up to \$8,200 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 consecutive additional years (8 total semesters) provided you continue to maintain a 3.5 or better GPA and meet the Financial Aid Satisfactory Academic Progress Standards.

b. **Faculty Scholarships.** To be considered for a Faculty Scholarship you must have a 3.6 high school GPA, a minimum 29 composite ACT for Michigan residents or SAT of 1300 for nonresidents, based on the

critical reading and math combined scores, and attend a scholarship competition. Awards are made up to \$4,200 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 consecutive additional years (8 total semesters) provided you maintain a 3.5 or better GPA and meet the Financial Aid Satisfactory Academic Progress Standards.

2. **Awards for Excellence.** The following group of scholarships requires students to submit their complete application for admission by December 31 for the following fall semester. Complete applications consist of an application for admission, official transcripts, results of the ACT or SAT test, and a \$30 application fee.

a. **Awards for Excellence Scholarship.** This scholarship provides awards of \$1,200. 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 have GPAs of 3.5 or better and a minimum ACT composite score of 26. For students entering in Fall 2011 the award will be \$1,500.

This scholarship is renewable for three consecutive additional years (8 semesters total) provided you maintain a 3.25 or better GPA and meet the Financial Aid Satisfactory Academic Progress Standards.

b. **Out-of-State Awards for Excellence.** This scholarship provides awards up to an amount equal to the differential between non-Michigan and Michigan resident tuition plus \$1,200. For students entering in Fall 2011 the award will be the differential plus \$1,500. Grand Valley must be the first college you attend after high school graduation. This amount is currently approximately \$5,520. All admitted freshman students will be considered for this scholarship. Students who receive this award have GPAs of 3.5 or better and minimum ACT composite scores of 26 or SAT scores of 1190, based on the critical reading and math combined scores.

This scholarship is renewable for three additional consecutive years (eight semesters total) provided you maintain a 3.25 or better GPA and meet the Financial Aid Satisfactory Academic Progress Standards.

c. **Awards for Excellence Transfer Scholarship.** This scholarship provides awards of \$1,200. You must be a graduate of an accredited community college in Michigan and have completed 45 college credit hours. All admitted transfer students with a completed admission application by December 31 will be considered for this scholarship. Students who receive this scholarship have at least a cumulative collegiate 3.5 grade point average. For students entering in Fall 2011 the award will be \$1,500.

This scholarship is renewable for one additional consecutive year (four semesters total) provided you maintain a 3.25 or better GPA and meet the Financial Aid Satisfactory Academic Progress Standards.

3. **Laker Scholarship.** This scholarship provides awards of \$1,000. Students who receive this award have GPAs of 3.5 or better and ACT scores of 23, 24, or 25 for Michigan residents or SAT scores between 1070 and 1150, based on the critical reading and math combined scores. This scholarship will begin with the students entering in Fall 2011. The scholarship is renewable for three additional consecutive years (8 semesters total) provided you maintain a 2.85 GPA and complete 25 GVSU credits after your first year, 55 GVSU credits after your second year and 85 GVSU credits after your third year.

4. Early Awareness Scholarship. Recipients of this \$3000 scholarship will have participated 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., Upward Bound Program (including Upward Bound Math and Science Program and Talent Search) and GEAR UP while in high school., Additionally, students must have a 3.30 cumulative high school grade point average (GPA) and a 21 ACT composite score. Non-residents of Michigan may also qualify with a 990 on the SAT on the critical math and combined science score. Students must have a completed Admissions application submitted by December 31st for the following Fall semester. This scholarship cannot be combined with the Urban Schools Scholarship or a Native American Grant. This scholarship is renewable for 3 successive semesters (8 consecutive semesters) provided the student maintains full time attendance and a 2.50 cumulative grade point average and meet the Financial Aid Satisfactory Academic Progress Standards.

Transfer students that have participated in one of the programs listed above can also receive this scholarship if they have a 3.00 cumulative community college grade point average and 45 college credits earned. They must have a completed admission application by December 31 and transfer directly from the community college. Transfers can renew for one additional consecutive year (up to a total of two years) provided they maintain a 2.50 or better grade point average and meet the Financial Aid Satisfactory Academic Progress Standards.

5. Urban Schools Scholarship. This \$3,000 scholarship is specifically for students graduating from the following high schools: Michigan high schools: Grand Rapids Public Schools, Detroit Public Schools, Arthur Hill, Detroit High School of Fine and Performing Arts, Detroit University Prep Academy, John Pershing, JW Sexton, Northwestern, Pontiac Central, Pontiac Northern, Southfield Lathrup, Southfield Senior High, and Western International. Non-Michigan high schools include: 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. Thornwood and Whitney Young. In addition to graduating from one of the above high schools, students must also meet minimum grade point average and standardized test scores. Michigan residents must have a 3.30 cumulative grade point average and a 21 ACT composite score. Non-Michigan residents must also have a 3.30 cumulative grade point average and score a 990 on the SAT based on the critical math and science combined scores or have a 21 ACT composite score. Students must have a complete Admissions application submitted by December 31st for the following fall semester. This scholarship cannot be combined with the Early Awareness Scholarship or a Native American Tuition Grant. Students must be enrolled full time, achieve a minimum 2.50 cumulative grade point average, and meet the Financial Aid Satisfactory Academic Progress Standards. This scholarship is renewable for three successive years (eight semesters). This scholarship can only be used in the traditional academic year. A completed admissions application serves as your application for this scholarship.

Transfer students that graduated from one of the high schools listed above can also receive this scholarship if they have a 3.00 cumulative community college grade point average and 45 college credits earned. They must have a completed admission application by December 31 and transfer directly from the community college. Transfers can renew for one additional consecutive year (up to a total of two years) provided they maintain a 2.50 or better grade point average and meet the Financial Aid Satisfactory Academic Progress Standards.

6. Community College Distinguished Graduate Scholarships. Grand Valley provides two \$2,000 Community College Distinguished Graduate Scholarships to Grand Rapids Community College and

Muskegon Community College and one \$2,000 scholarship to each of the following community colleges: Northwestern Michigan College, West Shore Community College, Lansing Community College, Lake Michigan Community College, Kalamazoo Valley Community College, Kellogg Community College, North Central Michigan Community College, and Montcalm Community College. The respective community colleges select the recipients. Students must have a 3.50 GPA cumulative grade point average, be completing the associate's degree, matriculate directly to Grand Valley, and apply for admission by December 31. To be renewed for one additional consecutive year, students must have a 3.50 cumulative grade point average and meet the Financial Aid Satisfactory Academic Progress Standards. The scholarship will take the place of any other merit scholarships awarded by Grand Valley.

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 15. Applications are mailed to admitted students who qualify and are available at participating community colleges. Applicants must submit a letter of application indicating their educational and career goals, send a letter of recommendation from their PTK chapter advisor, and arrange an interview with the PTK scholarship committee if requested. The scholarship is renewable for one additional consecutive year provided the student maintains a 3.50 cumulative grade point average and meet the Financial Aid Satisfactory Academic Progress Standards

The above scholarships are only for use in the fall and winter semesters. The Financial Aid Office will review each scholarship recipient at the end of the winter semester for renewal for the next academic year. If a student fails to meet the renewal requirements the scholarship will be cancelled for the following academic year. A student can petition for reinstatement once they again meet the minimum and only at the beginning of an academic year. The appeal for reinstatement must be done online at the Financial Aid Office website.

8. Robert C. Trotter Tri-County Scholarships. Each high school in the counties of Kent, Muskegon, and Ottawa are allotted two \$250 scholarships to Grand Valley to award to students of their own choosing. Students must have a 3.20 cumulative grade point average, a minimum ACT composite score of 22, and not be the recipient of other academic scholarships offered by Grand Valley. Entering freshmen wishing to be considered should contact the counseling office in their high school.

9. 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 3.50 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. Students are supported by academic departments and are requested to submit applications and personal essays. Selection of upperclass honor award recipients are made by the Grand Valley Scholarship Committee. These scholarships may be renewed for one consecutive year for students who enroll full time, maintain a 3.25 GPA, and meet the Financial Aid Satisfactory Academic Progress Standards. Students must apply by the March 1 deadline.

10. 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,

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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.

11. 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.

12. 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.

13. Federal TEACH Grant. The Teacher Education Assistance for College and Higher Education (TEACH) Grant Program that provides grants of up to \$4,000 per year to students who intend to teach in specific specified content areas in a public or private elementary or secondary school that serves students from low-income families. Contact the Financial Aid Office for more information.

14. Native American Tuition Benefit. Students who are certified by the Michigan Inter-Tribal 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 Inter-Tribal Council at (800) 562-4957 for an application and additional information. Students receiving the Native American Tuition Benefit are not eligible for the Bert Price Diversity Scholarship. Student must be degree seeking and meet satisfactory academic progress to receive this benefit.

15. 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 Database at www.gvsu.edu/scholarships for a complete listing. The database allows for a search based on a number of common qualifying criteria such as major, grade point average and class level. Below is a list of these scholarship programs currently awarded to students attending Grand Valley:

Accounting Alumni Scholarship
Ada Council for Arts Rebecca Vogelsang Memorial Scholarship
Alumni Heritage Scholarship
American Production and Inventory Control Society Scholarship
Angus Foundation "Most Improved Student" Award
David G. and Mary L. Annis Education
David G. and Mary L. Annis Graduate Teacher Certification
Joseph E. Appelt P.E. Engineering Scholarship
Carl and Delores Arendsen Golf Scholarship
Art and Design Scholarship
Association of Information Technology Professionals Scholarship
Atomic Object LLC Scholarship
John Batchelder Political Science Scholarship
Battle Creek Community Foundation
Newton D. Becker Scholarship Award
Fred Bell Business Scholarship
David A. Bergsma Scholarship
Hyman H. & Gretz M. Berkowitz Scholarship Fund
Berkowitz Scholarship for Handicapped Students
Better Business Bureau of Western Michigan Integrity Scholarship
Owen Bieber Scholarship
Rev. Darld and Joyce Black Doctor of Physical Therapy Scholarship in memory of Robert Klein

Edith Blodgett Piano Scholarship
Joan Board Athletic Endowment Scholarship
Robert Bosch Fuel Systems Engineering Scholarship
Ira Brad Scholarship
Branstrom Fine Arts Scholarship
Breen Scholarship Fund
Brooks Family Minority Scholarship
Donna K. Brooks Presidential Scholarship
Building Owners and Managers Association Scholarship
Johnny C. Burton Scholarship
Business Study Abroad Scholarship
Butterworth Nursing Scholarship
Alexander Calder Honor Scholarship
Capital Region Community Foundation Scholarship
Campus View Apartments Upperclass Scholarship
Career Services Internship Award
Carlton Radiologic and Imaging Sciences Undergraduate Scholarship
Barry Castro Business Ethics
Bernard J. and Camille Cebelak Foundation Scholarship
Robert L. Chamberlain Memorial Scholarship
Hong Chen Memorial Scholarship
Children's Enrichment Center Scholarship Fund
Douglas K. and Ellen Chung Asian Social Work Graduate Scholarship
Knights and Ladies of Peter Claver and Ladies Auxiliary Scholarship
Clerical Office Technical (COT) Association Scholarship
College of Education Future Teacher Scholarship
Collegiate Entrepreneurs' Organization Scholarship
Commercial Real Estate Women Scholarship
Community Foundation of the Holland/Zeeland Area Scholarship
Community Foundation for Muskegon County Scholarships
School of Communications Scholarship
GVSU Community Leadership Scholarship
Computer Science and Information Systems Scholarship
Cook Leadership Fellows of Hauenstein Center for Presidential Studies
The Coopersville Scholarship
Ann M. Cusack Upperclass Scholarship
Dance Scholarship
David Daniels Memorial Scholarship
Gilbert and Patricia Davis Scholarship for Full- or Part-time English Majors
Greta and Arthur DeLong Perpetual Scholarship
Aaron M. DesRocher Memorial Chemistry Scholarship
Richard M. DeVos Presidential and Faculty Scholarship
Helen DeVos Presidential Scholarship
Dick and Betsy DeVos Leadership Fellow Endowment
The Pamela and Daniel G. DeVos Musical Theatre Scholarship
Dewitt Barrels Inc. Env. Science
Henry and Juanita Dungey School of Public and Nonprofit Administration Excellence Award
Scott M. Dykstra Oliver Products Company Engineering Scholarship
L.V. Eberhard Business Scholarship
Becky Eckstrom Environmental Studies Scholarship in Philanthropy
Valerie Eggert Distinguished Scholarship in Philanthropy
Leslie Eitzen Voice Scholarship Fund
School of Engineering/SAE Engineering Scholarship
Jean Enright Women and Gender Studies Scholarship
FTLC Endowment Scholarship for Minority Students in Education
Federated Garden Club of Michigan Scholarship
Finance Advisory Board Scholarship
First Robotics Engineering Scholarship
First Generation Urban Schools Scholarship
Scott Flahive Police Academy Scholarship
Richard E. Flanders/University Club Scholarship
Janice Flentje Memorial Nursing Scholarship
Robert W. Fletcher Memorial Scholarship

Folds of Honor Scholarship
 Fremont Area Community Foundation Scholarship
 General Dynamics Land Systems Engineering Scholarship
 Geology Scholarship
 Charlotte Gierst and Salome Egeler Music Scholarship
 Richard Giles Scholarship
 Geology Field Study Scholarship
 The Norman Gibson Geology Field Study Scholarship
 Charlotte A. Gierst & Salome C. Egeler Trust Fund
 Global Forex Trading Scholarship
 Joseph and Elizabeth Godwin Scholarship
 John and Barbara Gracki Football Degree Completion Scholarship
 Graduate Teacher Certification Scholarship
 Grand Forum Scholarship for Continuing Education
 Grand Rapids Community Foundation Local College Scholarship
 Grand Haven Area Community Foundation Scholarship
 Grand Valley Lanthorn Merit Scholarship
 Grand Valley UAW Region 1-D
 Thomas J. and Marcia Hass Laker Marching Band Scholarship
 Gail and Scott Haebich Nursing
 Grubbs & Ellis/Paramount Commerce Scholarship
 Earl Harper Management Scholarship
 Joyce Hecht Philanthropy Scholarship
 John C. Heerspink Scholarship
 William Hegarty Scholarship
 Paul Henry Foundation Congressional Internship Scholarship
 Arthur C. Hills Music Scholarship
 Hispanic Scholarship Fund
 Dr. James D. Hoffman Scholarship
 Hilda C. Holder Scholarship for Women in Business
 Holliday-Willey Psychology Scholarship for the Study of Pervasive
 Developmental Disorders
 Hospitality and Tourism Management Club Scholarship
 Professor Paul A. Huizenga Biology Education Scholarship
 J.C. Huizenga Business Scholarship
 Professor Paul Huizenga Biology Education Scholarship
 Hyatt Place Grand Rapids – South Hospitality and Tourism Scholarship
 William and Lois Hundley Baseball Scholarship
 Hungerford, Aldrin, Nichols & Carter, P.C. Accounting Scholarship
 Investment Club Student Scholarship
 Charles H. and Florence Irwin Scholarship Endowment
 Michael and Susan Jandernoa Scholarship Endowment
 Todd Jager Memorial Athletic Training Scholarship
 Jurries Family Scholarship
 Kalamazoo Community Foundation Scholarship
 Fred M. Keller Engineering
 Fred M. and Bernadine Keller Diversity Scholarship
 Daniel Kemp Alumni Leadership Scholarship
 Kemp Faculty Scholarship Kurt. Kimball Scholarship
 Russell H. Kirkhof Engineering Scholarship
 Don Klein Graduate Scholarship in Accounting
 Walton B. Koch Scholarship
 Albert S. and Ella D. Koeze Art Scholarship
 A. Scott and Ruth Koeze Graduate Business Scholarship
 Dirk Koning Film and Video
 Jack J. Korff Seidman College of Business Finance Scholarship
 Lynn Kraemer Memorial Scholarship
 Lacks Enterprises Scholarship
 Lesbian Gay Bi-sexual and Transgender Scholarship
 Arend D. and Nancy Lubbers University Honors College Scholarship.
 Dr. Faite R-P Mack/Thomas Jackson Urban Teacher Education
 Scholarship
 Dr. Nancy K. Mack Scholarship Fund Eric Maino Community Technology
 Award
 Macomb County Student of the Week Scholarship

Eric Maino Community Technology Award
 Jean Martin Doctor of Nursing Practice Scholarship
 MathCounts Scholarship
 Mathematics Scholarship
 McFadden Picciuca International Child Welfare Scholarship
 Theresa McKee Occupational Therapy
 Reverend Dennis and E. Jean (Lackey) McMurray Academic
 Achievement Scholarship
 Frederick Meijer First Generation Honors College Scholarship
 Corky Meinecke Scholarship
 Metro Detroit Alumni Scholarship
 Metropolitan Hospital Scholarship
 Michigan Nursing Scholarship
 Michigan Society of Professional Engineers Scholarship
 Paul C. Miller Scholarship
 Milhlesh and Jitendra Mishra Foreign Student and Faculty Scholarship
 Jacob Mol Athletic Scholarship
 Rodney Mulder Social Work
 Mullendore Legal Studies and Criminal Justice
 Mark and Elizabeth Murray International Travel Scholarship
 Nichols Sustainability
 Glenn A. and Betty Niemeyer History Scholarship
 Amos Nordman Foundation Scholarship
 Nedra Smith Otis Art and Design Scholarships
 Candace Otte Scholarship for Nursing
 Barbara H. Padnos Scholarship for Study Abroad
 Esther Padnos Nursing Scholarship
 Louis Padnos Iron & Metal Co. Employees Scholarship
 Seymour and Esther Padnos Engineering
 Joan Panopoulos Scholarship
 Lt. James W. Parmlee Memorial Scholarship
 Pathways to Recover Scholarship
 Eugene and Lillian Pawl Scholarship
 Peace and Justice Award
 Ross W. Perry Bachelor of Science/Core Sciences Major Scholarship
 Ross W. Perry Doctor of Physical Therapy Scholarship Pew Faculty
 Teaching & Learning Center Minority Scholarship
 Pew Faculty Teaching & Learning Center Minority Scholarship
 Pew Faculty Teaching & Learning Center Women's Scholarship
 Tony Pfenning Baseball Commitment Award
 Plant Services Personnel Scholarship
 Polish Heritage Scholarship
 Positive Black Women Scholarship/Endowment
 Paul and Margaret Potter Scholarship
 Judith S. Pratt Nontraditional Nursing Scholarship
 Berthold Price Memorial Endowment Scholarship
 Price Heneveld Engineering Scholarship
 Margaret Proctor School of Communication Scholarship
 Dr. George I and Helen Z. Quimby Scholarship
 Esther Rehm Stotz Nursing Scholarship
 Joe E. Reid Memorial Scholarship
 Reister Family Memorial Scholarship
 Renaissance Church of God in Christ African American Academic
 Achievement Scholarship
 Peter P. and Patricia R. Renucci Clinical Lab Sciences Scholarship
 Peter P. Renucci Family Clinical Lab Sciences Scholarship
 Warren Reynolds Scholarship
 SAE Engineering Scholarship
 Laura Sakoski Memorial
 Hugo Salazar Memorial Scholarship Fund
 Salski Biology Scholarship
 J. Patrick Sandro Education Scholarship
 School of Engineering/MSPE Engineering Scholarship
 Ilene I. Schooley Biomedical Science Scholarship
 Lois Searles Hospitality and Tourism Award

Costs and Financial Aid

Amassador Secchia International Studies
Mary and Wilhelm Seeger Scholarship Fund
Seidman College of Business Commerical Real Estate Scholarship
Seidman College of Business Study Abroad Scholarship
Thomas Seykora Alumni Leadership Scholarship
Shakespeare Scholarship
Marilyn and Budge Sherwood Scholarship
John J. and Marjorie E. Shepard Communications Scholarship
Ryan Short Memorial Scholarship
John Shontz Native Plants Biology Scholarship
Drs. Esther and Enrico Sobong Nursing Scholarship
Ram Singh Social Work Scholarship
Joseph Spruit Engineering Scholarship
School of Social Work Scholarship Endowment
Social Work Minority Scholarship
Society for Automotive Engineers Scholarship
Society of Manufacturing Engineers Scholarship
Spectrum Health Diversity Scholarship
Paul Springer Crew Scholarship
Joseph Spruit Engineering Scholarship
SPX Corporation Engineering Scholarship
Statistics Scholarship
Steelcase Foundation Scholarship
Steelcase Inc. Seidman College of Business Diversity Scholarship
Howard and Rose Stein Endowed Biology
Tim Strickler Pre-Medical Scholarship
Student Legacy Scholarship
Student Support Fund
Subar Family-Model Coverall Service Scholarship
Sullivan Scholarship Trust Fund
Duke Tanaka Jr. Anatomy Scholarship
Steele A. and Mary D. Taylor Pathway to Education Scholarship
TEI Accounting/Tax Scholarship
Telephone Pioneers Scholarship
Alice C. TenBrink Scholarship
Topcraft Metal Products, Inc. Scholarship
Traverse City Convention & Visitors Bureau Education Foundation
Scholarship
Arlene Treanor Native Plants Internship
Edward L. Tremba Geology Scholarship
Robert Trotter Scholarship
TV 35/52 Auction Grant
UFCW Local 951 Foundation Scholarship
David and Carol Van Andel Leadership Fellow Endowment for the
Hauenstein Center for Presidential Studies
Donald and Barbara VanderJagt Mathematics and Athletics Scholarship
Donald and Wilma VanderZwaag Business Scholarship
Veazey Graduate Academic Scholarship in Accounting Scholarship
Kathleen B. Vogelsang Seidman College of Business Scholarship for
Women
Volkhardt Family Nursing Scholarship.
Volkhardt Family Physical Therapy Scholarship.
Caprice R. Wagner Memorial Scholarship Fund
Florence Cowan Ward Scholarship for Nursing
Barbara Waddell Native Plants Research Scholarship
Margaret F. Ward Art and Design Scholarship
Margaret F. Ward Music Scholarship
Dr. Ronald Ward Scholarship
John D. Wardrop Leadership Fellow Endowment for the Hauenstein
Center for Presidential Studies
Westerman Nursing Scholarship
West Shore Aware Scholarship
WGVU-TV Scholarship
Shawn D. Wiersma Criminal Justice Memorial Scholarship
H. James and Carole Lynn Campbell Williams Business Scholarship

Bill and Diana Wipperfurth Annis Water Resources Institute Student
Research Scholarship
Wisner First Generation Engineering Scholarship
Wisner Non Traditional Student Engineering Scholarship
Wisner Doctor Physical Therapy Scholarship
Women's Center Scholarship for Non Traditional Students
Robert and Barbara Wood Entrepreneur
Doug and Linda Woods Excellence in Athletic Training Scholarship
Whitney Young Village Outreach Engineering Scholarship
Writing Department Scholarship
Jennifer Youssef Journalism Scholarship
Lt. William Zimmerman Memorial Scholarship
Felix V. and Gladys A. Zukaitis Scholarship Trust Fund
Felix V. and Gladys A. Zukaitis Athletic Scholarship Trust

Programs Based On Need

The programs listed below 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 based on financial need and availability of funds. To apply, you must complete the FAFSA.

a. **Grand Valley Grant:** Eligibility: Need based grant for students who have filed by the priority application deadline and an Expected Family Contribution (EFC) of \$2000 or less from the Free Application for Federal Student Aid (FAFSA). Amount: up to \$3000. Renewal criteria: FAFSA must be filed by March 1st each year with the EFC \$2000 or less. The student must be meeting Satisfactory Academic Progress. This grant can be received for a total of 4 years. Application: Be admitted to Grand Valley and complete or continuing undergraduate student FAFSA by March 1.

b. **GV Freshmen Grant:** Eligibility: Need based grant for new first time freshmen students who have exceptional unmet need after all other financial aid is awarded. Amount: Up to \$2,000. Renewal criteria: Award is only available to new first time freshmen students. Application: Complete the FAFSA. Priority consideration is given to students that complete the FAFSA by March 1st.

c. **GV Grant:** Eligibility: Need based grant for transfer and returning students who have exceptional unmet need after all other financial aid is awarded. Amount: Up to \$2,000. Renewal criteria: The student must complete the FAFSA, have continued financial need based on their EFC and be meeting Satisfactory Academic Progress to be considered for renewal. Application: Complete the FAFSA. Priority consideration is given to students that complete the FAFSA by March 1st.

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 Free Application for Federal Student Aid (FAFSA) and indicate on this form that you wish Grand Valley State University to receive your application. You will then receive a notification form called the Student Aid Report (SAR). The Financial Aid Office 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 satisfactory academic progress to remain eligible.

3. **Federal Supplemental Educational Opportunity Grants (SEOG).** These federal grants are awarded to undergraduate students with exceptional financial need who, without the grant, would be unable to continue their education. No specific GPA is required for renewal; however, students must be making satisfactory academic progress to remain eligible. Priority is given to students who qualify for the Federal Pell Grant Program.

4. Michigan Competitive Scholarship. The Michigan Higher Education Assistance Authority (MHEAA) offers scholarships on an annual, renewable basis. You must (1) fill out the Free Application for Federal Student Aid (FAFSA) by March 1, (2) demonstrate financial need as determined by the FAFSA, (3) qualify as a result of your performance on the American College Test (ACT), (4) be a continuous resident of Michigan for 12 months preceding the examination date, (5) be a high school graduate with no previous college training, and (6) comply with all other provisions of Public Act 208 and regulations adopted by the MHEAA. As a scholarship winner, you are eligible to have your scholarship renewed if you are making satisfactory academic progress, have a cumulative GPA of 2.0 or higher, and continue to demonstrate financial need. You must reapply for the scholarship each year by filing the FAFSA before March 1. You must also satisfy other regulations adopted by the state authority. Awards from this program are subject to state funding.

5. Michigan Educational Opportunity Grants. The State of Michigan provides grant assistance for needy undergraduates who are enrolled at least half-time. Students must submit the FAFSA. Since these funds are limited, they are targeted to students with greatest financial need. Awards from this program are subject to funding.

6. Michigan Adult Part-Time Grant. This program is designed to provide grants to financially needy students who enroll as part-time students (3-11 credits). Students must be self-supporting, out of high school for at least two years, and Michigan residents. You must file a FAFSA (Free Application for Federal Student Aid) and notify the Grand Valley Office of Financial Aid that you wish to apply for this grant. Students can receive this grant for only four semesters. The maximum grant is \$300 per semester. Awards from this program are subject to funding.

Educational Loans Based on Need

1. Federal Perkins Loans. This federal loan program is for students who can establish financial need, are U.S. citizens, meet the 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 carry at least a half-time load 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 Financial Aid Office.

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 (6 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 4.5% for 2010-2011. The interest rate changes every July 1. The federal government deducts a 0.5 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, \$5,500 for the junior and senior years, and \$8,500 for each year of graduate study, 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). Eligible students will be notified by the Grand Valley Office of Financial Aid.

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

Federal Direct Unsubsidized Student Loan Program. 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 6.8%. 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 0.5 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.

Federal Direct Parent 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 charges without regard to financial need. The interest rate is fixed at 7.9%. The federal government deducts a 2.5 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.

Alternative Loan Programs. Alternative loans are non-federal 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 Financial Aid Office or visit our website www.gvsu.edu/financialaid for more information.

Career Services and Graduate Enrollment Statistics

The Career Services office provides extensive services to students and alumni as they prepare for internship/co-op and post-graduation employment. The staff assists students and alumni with preparing written application materials along with developing interviewing skills and job search techniques. Individual appointments can be scheduled with an advisor, in addition to attending workshops and seminars. Students and alumni may take advantage of LakerJobs, a web-based system to access current job/internship opportunities, sign up for on-campus interviews, and receive email correspondence regarding upcoming events and employment information. LakerJobs also includes a resume database available to employers for resume referrals. The office coordinates several career fairs each year including: Grand Valley State University Careerfest, West Michigan Career Connections and Health Career Day, Summer Job Fair, Teacher Search, and Out-of-State Teacher Fair. The Career Contact Bank is a web-based database, which contains professional contacts in various career fields that students can access to learn more about a career of interest. In addition, the office provides internship listings and assistance in locating internships for students.

The Career Services office has primary locations: 206 Student Services Building (616) 331-3311, and 116B DeVos Center (616) 331-6708. Both office locations have office hours 8 a.m. to 5 p.m., Monday through Friday. Services are also available at the L.V. Eberhard Center and Cook-DeVos Center for Health Science in Grand Rapids, at the Meijer Campus

Costs and Financial Aid

in Holland, Muskegon Campus at Muskegon Community College, and Traverse City/Petoskey locations by appointment. Visit our website at www.gvsu.edu/careers/.

Student Employment

The Student Employment Office has a website to assist students in finding jobs both on and off campus. Visit www.gvsu.edu/studentjobs to view job postings, a gallery of pictures showing students working at all types of jobs on campus, the on-campus wage schedule, the pay period calendar, hints for interviewing, student handbook, forms for employment, explanation of work study, and much more. The Student Employment office is located at 105 Student Services Building. Telephone (616) 331-3238.

- 1. Regular Student Employment.** Any student wishing to work on campus can apply for job opportunities through the student employment office. It is important to follow the procedures outlined on the website to be informed of these employment opportunities.
- 2. Federal College Work-Study Program.** Many campus jobs are funded under this program. Preference is given to students who have the greatest financial need and who are enrolled full time. Students usually work an average of 10 to 15 hours a week. Employment is not guaranteed.
- 3. Michigan Work-Study Program.** Grand Valley also receives funds from the State of Michigan to provide work opportunities for needy undergraduate and graduate students. The guidelines for this program are subject to state funding.

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 Financial Aid Office 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 Financial Aid Office.
- 2. Grand Valley Deferment Plan.** Tuition loans allow students to pay their tuition in four installments for a small processing fee each semester. Applications and general policies regarding tuition loans are emailed with the initial tuition billing each semester and are also available online through the My Banner 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 My Banner 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 (G.I. Bill) provides educational benefits for servicemen 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 utilize for more information. 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 further information from the Michigan Veterans Trust Fund, Lansing, Michigan 48904.

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

Veterans Administration Benefits may be available to children of deceased or totally disabled veterans if the cause is service-connected. You can obtain an application from the Veterans Administration, 477 Michigan Avenue, Detroit, Michigan 48226, or any Veterans Administration Office.

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:

- Michigan Promise Scholarship
- 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:

- Federal Academic Competitiveness Grant
- Federal Smart Grant
- State Competitive Scholarship

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

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
- Federal Supplemental Opportunity Grant
- Grand Valley Grants
- Grand Valley Scholarships
- Some private scholarships

Satisfactory Academic Progress

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 below.

Undergraduate students

- Achieve a minimum 1.5 cumulative GVSU GPA after 24 credits (0-24)
- Achieve a minimum 1.8 cumulative GVSU GPA after 54 credits (25-54)
- Achieve a minimum 2.0 cumulative GVSU GPA after 55 credits (55+)
- Complete and pass a minimum of 2/3 of all undergraduate collegiate credit hours attempted.
- Complete all degree requirements within 150% of the minimum number of credits hours required to graduate (based on 120 credits for undergraduate students.)

Graduate students

- A 3.0 cumulative GVSU GPA.
- Complete and pass a minimum of 2/3 of all collegiate graduate credit hours attempted.
- Complete all degree requirements within 150% of the minimum number of credit hours required to graduate (based on 60 credits for graduate students)

Second Undergraduate Students

- A 2.0 cumulative GVSU GPA.
- Complete and pass a minimum of 2/3 of all collegiate undergraduate attempted hours.
- Complete all additional requirements within 150% 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).

General Provisions and Information

- The complete Grand Valley State University academic record is considered regardless of whether or not financial aid was received each semester.
- Transfer credits (both attempted and earned) will be included in calculating the 2/3 completion rate and the 150% of required credits limit for both undergraduate and graduate 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 probation. During the semester the student is on probation, the student must:
 - 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.

Students meeting financial aid probationary requirements will be continued on FA probation until they again meet Standard Academic Progress requirements. Failure to meet the financial aid 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% of cumulative attempted credit hours at their own expense.
- Students repeating courses are eligible for financial aid; however, 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.
- Credits hours earned by testing or other non-standard 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 above academic progress standards may appeal the loss of financial aid eligibility only if special circumstances exist, such as the death of a close relative or an injury or illness of the student. Appeals must be submitted to the Office of Financial Aid with appropriate documentation of the special circumstances. 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 satisfactory academic progress requirements discussed above.

Conditions Governing Acceptance of Your Award

In accepting your financial aid award offer, you are stating that you have met and will meet all of the following conditions of acceptance:

1. The information submitted by you (and your parents or spouse, if applicable) is true, correct, and complete to the best of your knowledge.
2. You will use the financial aid awarded to you only for payment of tuition, books, room and board, transportation, and other related educational expenses.
3. If you completely withdraw from Grand Valley before the 60 percent point of the enrollment or payment period, you may be required to repay a portion of the federal financial aid disbursed to you.
4. You will report to Grand Valley's Financial Aid Office if you receive assistance from any source that was not originally on your award notification. Grand Valley reserves the right to adjust financial aid when other aid is received.
5. You will maintain sufficient academic progress toward your degree according to the policy of Grand Valley State University (see Satisfactory Academic Progress section).
6. You have not defaulted on any previous Federal Title IV loan, do not owe a refund or repayment to any institution on any Federal Title IV program (Pell Grant, Supplemental Educational Opportunity Grant, Perkins Loan, Work-Study, Federal Direct Loans, and have not borrowed in excess of any loan limits from any Federal Title IV program at any institution.
7. You will maintain the minimum credit requirements for your financial aid award. Your award notification indicates by semester the minimum

Academic Policies and Regulations

number of credit hours you must enroll in to receive your financial aid. If you drop below the required number of credit hours upon which your award was based or if you withdraw completely from your courses, you may be expected to repay all or part of your award (see the Tuition and Fees Refund section).

8. You are a student enrolled in a program of study that leads to an academic degree.

9. The Military Selective Service Act (Pub. L. 97-252) requires that any student who is required to register with the Selective Service and fails to do so is ineligible for Title IV Student Financial Aid (Pell Grant, Supplemental Educational Opportunity Grant, Perkins Loan, Work-Study, Federal Direct Loans, and state scholarships funded under Title IV). Among Title IV financial aid applicants, men who are at least 18 years old and born after December 31, 1960, and who are not currently on active duty with the Armed Forces must be registered. If you are applying for Title IV student financial aid, you may have to sign a statement certifying that either you are indeed registered with the Selective Service or that you do not have to be registered with them.

10. You may be asked to submit additional documentation (e.g., 1040 tax returns) to the Grand Valley Financial Aid Office as part of your application for financial aid. The federal government requires that a number of financial aid forms be verified for correctness of information. If your application is selected, we will not be able to award and disburse your financial aid to you until all documentation is received and verification of information is complete.

Academic Policies and Regulations

General Academic Policies

Semester Hour

The unit of credit is the semester hour; the number of semester hours 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		
D+	1.3		
D	1.0		
F	0.0		

Quality points are the numerical equivalent of letter grades. A grade point average is computed by dividing the number of quality points earned by the number of semester credits attempted (only those graded A-F). The GPA (grade point average) is used to determine academic standing, eligibility to participate in certain curricular and co-curricular 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. Please refer to each academic section for specific 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 figure in a student's GPA, but the credits will not count toward the degree.

Incomplete Grade

This is a temporary grade given for work that is lacking in quantity to meet course objectives. It may be assigned when illness, necessary absence, or other reasons generally beyond the control of the student prevent completion of the course requirements by the end of the semester. This grade may not be given as a substitute for a failing grade or withdrawal. Unless changed by the instructor, the *I* will be changed to an *F* (NC when appropriate) according to this schedule: fall semester incompletes, end of winter semester; winter and spring/summer incompletes, end of fall semester.

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. A department that wishes to assign the grade of X must receive approval for such courses from the University Curriculum Committee before students enroll. 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.

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 above. Consent is unnecessary if the course is an elective, a general education course, or a degree cognate. Changes from a grade to credit/no credit and vice versa will not be allowed after the first week of the semester.

Repeating a Course

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 post-graduate 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.

Student 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.

Withdrawing from a 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.

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 Advising Resources, the Director of Housing, and the Director of Financial Aid. The completed form must be returned to the Student Assistance Center. Any refunds will be based on the date the completed form is filed with the Registrar's Office.

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 Student Assistance Center prior to registration. The form can be obtained from the Office of Admissions or the Student Assistance Center.

Uniform Course Numbering System

1. Uniform Course Numbering Guidelines

Category Description

000-099	Credit in these courses do 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 post-masters and doctoral 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 699 and 799 are to be used for graduate independent study courses.

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 Student Assistance Center. 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 anytime on the Web at no charge. 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.

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 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.

Academic Policies and Regulations

5. 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 in science. Allegations of misconduct in science should be referred to the appropriate dean or appointing officer and the Provost and Vice President for Academic Affairs (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 in science has occurred should report the incident to the dean of their academic college.

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 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 shall establish a committee to review the grievance and make a recommendation within 60 days to the dean. Such a committee shall include a representative of the dean's office, a faculty representative from the college of the course under appeal, and a student representative. 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.

- b. 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) above.
- c. 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 Senior Director of Advising Resources & Special Programs. 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 60 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.

- d. 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 mailed 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, 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 published in the schedule of courses.

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 grade requirement by completion of a GVSU course or an equivalent transfer class.
- Having a test score that meets the requirement.

If you have **not** completed and are **not registered** for the prerequisite, you will receive a prerequisite error message when you try to register.

Electronic Overrides

If a course requires a registration permit, is closed or prevents registration based on major, class, prerequisite etc., contact the department offering the course to request an electronic override. Once the electronic override is entered into the Banner system, you can register. 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.

Aliens 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, provided, however, that aliens who are present in the United States on a temporary or student visa shall not be eligible for classification or reclassification as residents.

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 ten 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 awards baccalaureate, master's degrees 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 the Application for Degree card and submitting it to the Student Assistance Center prior to the semester of graduation.

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, above) 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 Student Assistance Center and is published in the Student Code.

The HIPAA Law (Health Insurance Portability and Accountability Act)

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.

Academic Waiver

A student who seeks exemption to a policy in this section may present his or her case in writing to the Registrar. The Registrar will then refer the appeal to the appropriate university official or committee. A final decision will be communicated in writing to the student either by the university official or by the Registrar, whichever is most expedient.

Student Responsibility

Each student must fulfill all general and specific requirements and abide by all pertinent academic regulations in order 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 below, students can check their credits earned, cumulative grade point average (GPA) and current grade point average (GPA) to readily determine their academic standing. The table below lists semester hours earned (including hours in transfer) and the minimum grade point average for good standing, probation, jeopardy of dismissal and dismissal.

- Good Standing.** Each student must have a cumulative grade point average (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 30 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.
- 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
Freshman	0-24	1.500 or less	1.501-1.999	2.000 or better
Sophomore	25-54	1.800 or less	1.801-1.999	2.000 or better
Junior	55-84	1.999 or less	not applicable	2.000 or better
Senior	85 or more	1.999 or less	not applicable	2.000 or better

*Including transfer credit hours.

Deans’ 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 Deans’ List. (A grade of “CR” does not count towards 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 2009, winter 2010, and summer 2010:

Summa cum laude: 4.000
 Magna cum laude: 3.843-3.999 (96th to 100th percentiles)
 Cum laude: 3.754-3.842 (91st to 95th percentiles)

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 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 may take extended course loads, those of more than 20 credits, if such requests have been approved by the Senior 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 are no misunderstandings regarding program requirements.

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:

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. In keeping with the senior residency requirement, examination credit will not be granted within the last 30 hours toward the degree.
4. The maximum amount of credit by examination that may be applied toward the baccalaureate is 32 hours, eight of which may be in the major area.

Advanced Placement Program (AP). 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 Student Assistance Center. Native speakers of a language other than English will not be granted CLEP or AP exam credit for that language.

Defense Activity for Non-Traditional 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 Student Assistance Centers.

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 Student Assistance Centers.

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 the semester before it takes place with a faculty advisor.

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.

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. Basic skills requirement.
6. General education requirements.
7. Degree cognate for Bachelor of Arts or Bachelor of Science degree.
8. Capstone course.
9. The last 30 semester hours toward a baccalaureate degree must be earned in Grand Valley courses.
10. A minimum of 58 semester hours must be earned at a senior institution.
11. 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 numbered below 100 and taken after summer 1983 do not apply toward the 120 needed for graduation.

Undergraduate Academic Policies and Regulations

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 exceeding the minimum. Refer to the department entries for program specifics.

5. Basic Skills Requirements

Grand Valley State University is concerned that all graduates have the skills for understanding numerical data and mathematical reasoning, for writing lucidly and expressively, and for reading critically and actively. To achieve these goals, the university requires specific competency levels in mathematics, writing, and reading as indicated by the completion of specific courses or by scores on placement tests.

- a. Basic Mathematics Requirement: Mathematics 110.
- b. Basic Reading Requirement: Entering students whose test score places them in English 099 must enroll in that course during their first semester at Grand Valley.
- c. Freshman Writing Requirement: Writing 150 with a grade of C (not C-) or better.
- d. Junior-level Writing Requirement: A satisfactory score on the junior-level assessment essay or a grade of C (not C-) or better in Writing 305.

Students should complete the mathematics, reading, and freshman writing requirements within the first two years, or the first 60 semester hours, of their undergraduate coursework.

The junior-level writing requirement should be fulfilled within the first three years or 90 semester hours of undergraduate work. Two options are available to fulfill this requirement: achieve a satisfactory score on the junior-level assessment essay, or pass WRT 305 with a grade of C (not C-) or higher. Students are eligible to write the assessment essay after earning a grade of C (not C-) in WRT 150, are registered for or have completed one SWS course, and have registered for their 55th overall semester hour. Students are eligible to enroll in WRT 305 after receiving a grade of C (not C-) in both WRT 150 and one SWS course and upon reaching junior standing. Placement testing is offered three times each semester, with three test times on each date: 9 a.m.-11 a.m.; 11:30 a.m.-1:30 p.m.; and 2 p.m.-4 p.m. All are held on Saturdays, are administered in a computer lab, and must be typed. Please visit www.gvsu.edu/testserv for test dates and to register to take the exam or contact the Student Academic Success Center at (616) 331-3588 for more information.

6. 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.

Grand Valley State University 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 therefore 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 the more specialized studies comprising each student’s major and minor areas of study.

GVSU 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 dialogues that consider the issues of humane living and responsible action in local, national, and global communities.

Refer to the General Education website or the General Education Guide for more information.

Goals of the General Education Program

The General Education Program teaches the skills and knowledge needed to intelligently participate in public discourse. Mastery of critical content and the development of skills occur concurrently in all General Education courses.

Knowledge Goals

- The major areas of human investigation and accomplishment — the arts, the humanities, the mathematical sciences, the natural sciences, and the social sciences.
- An understanding of one’s own culture and the cultures of others.
- The tradition of humane inquiry that informs moral and ethical choices.

Skills Goals

- To engage in articulate expression through effective writing and speaking.

- To think critically and creatively.
- To locate, evaluate, and use information effectively.
- To integrate different areas of knowledge and view ideas from multiple perspectives.

The Structure of the General Education Program

The General Education Program is divided into three sections: the Foundations, Cultures, and Themes.

Foundations

Courses in the Foundations Categories introduce students 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 students to the varied methods used to create knowledge, and they acquaint students with major questions and principles of the field. All Foundation courses help students develop the essential skills of creative and critical thinking, articulate expression, and information literacy.

Cultures Requirements

An important component of education is realizing that how we know is as important as what we know. The study of culture prompts students to recognize themselves as cultural beings, and to understand the diverse ways in which people organize life and perceive the world. All Foundations courses that receive Cultures Designations focus on the values, perceptions, history, and social life of various cultures and subcultures in the United States and in other countries or regions. All cultures help students develop the skills of creative and critical thinking, articulate expression, and information literacy.

Themes

Preparing for responsible participation in public discourse requires that people become conscious of both complementary and competing viewpoints and recognize that any issue or problem can be viewed from multiple perspectives. Cross-disciplinary study helps students integrate knowledge from various disciplines through the study of a major idea. Themes build on the knowledge gained in Foundations. Each Theme group consists of interrelated courses that explore an idea from three different perspectives and examines the connections that exist, actually or potentially, among our various ways of understanding major ideas. All Themes courses help students develop the skills of creative and critical thinking, articulate expression, and information literacy. In addition, these courses focus on integrative skills.

Questions regarding the General Education program should be addressed to www.gvsu.edu/gened/.

General Education Requirements

Foundations

- The Arts (one course)
- Philosophy and Literature (one course)
- Historical Perspectives (one course)
- The Mathematical Sciences (one course)
- The Natural Sciences (select one from the Physical Sciences and one from the Life Sciences. One of the science courses must contain a lab)
- Social and Behavioral Sciences (two courses from two disciplines)

Cultures

- One course with the World Perspectives designation
- One course with the U.S. Diversity designation

Theme

- Each student will select a Theme and choose three courses from that Theme. The courses must come from three different disciplines. Only one course may be at the 100/200 level.

I. Foundations

The Arts – select one

ART 101 Introduction to Art
 CLA 250 Classical Art and Archaeology
 CLA 275 Ancient Drama
 CFV 225 Film Culture
 CTH 101 Introduction to Theatre
 CTH 161 Theatre Production
 DAN 200 Introduction to Dance
 MUS 100 Introduction to Music Literature
 MUS 129 Fundamentals of Music
 PHI 220 Aesthetics

Philosophy and Literature – select one

CLA 101 Greek and Roman Mythology
 CLA 201 Classical Literature
 COM 202 Critical Interpretation
 ENG 203 World Literature
 ENG 105 Literatures in English
 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
 RST 331 Russian Literature in Translation (1800–1880)
 RST 333 Russian Literature in Translation (1932 to Present)

Historical Perspectives – select one

ANT 215 Origins of Civilization
 CLA 121 Greek Civilization
 CLA 131 Introduction to Roman Civilization
 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.
 HSC 201 The Scientific Revolution
 HSC 202 The Technological Revolution

Mathematical Sciences – select one

CS 160 Programming with Visual BASIC
 MTH 122 College Algebra
 MTH 123 Trigonometry
 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

Natural Sciences – Select one from Physical Sciences and one from Life Sciences. One of those courses 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

Undergraduate Academic Policies and Regulations

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 Changing Systems
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 –Select two courses from two different disciplines

AAA 200 Understanding Africa
AAA 201 Introduction to African American Studies
ANT 204 Introduction to Cultural Anthropology
ANT 220 Introduction to Archaeology
CJ 101 Justice and Society
ECO 100 Current Economic Issues
ECO 210 Introductory Macroeconomics
ECO 211 Introductory Microeconomics
GPY 220 Cultural Geography
GPY 235 World Regional Geography
PA 270 Public and Nonprofit Administration
PLS 102 American Government and Politics
PLS 103 Issues in World Politics
PSY 101 Introductory Psychology
SOC 201 Introduction to Sociology
SOC 280 Social Problems
SW 150 Human Needs in a Complex Society
WGS 200 Introduction to Gender Studies

II. Cultures

World Perspectives – select one

AAA 200 Understanding Africa
AAA 300 US-Africa Relations
AAA 302 African Diaspora
AAA/PLS 319 African Politics
ANT 111 Peoples of the World
ANT 204 Introduction to Cultural Anthropology
ANT 215 Origins of Civilization
ANT 315 Comparative Religions
ANT 316 Death, Burial, and Culture
ANT 340 Culture and Environment
ANT 345 Perspectives on Globalization
ANT 346 Kinship and Culture
ANT 360 Ethnology of Mesoamerica
ANT 370 Cross-Cultural Perspectives on Gender

ARA 202 Intermediate Arabic II
BUS 301 International Business
CHI 202 Intermediate Chinese II
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
GER 202 Intermediate German II
GPY 235 World Regional Geography
GPY 350 Geography of Russia and Its Neighbors
GPY 351 Geography of Africa
GPY 355 Geography of Southwest Asia (The Middle East).
GRK 202 Intermediate Greek II
HST 210 Empire, Culture, and Conflict
HST 211 History of Islamic Civilization
HTM 175 International Food and Culture
ITA 202 Intermediate Italian II
JPN 202 Intermediate Japanese II
LAS 210 Exploring Latin America
LAT 202 Intermediate Latin II
LIB 335 Scriptures as Literature
MES 201 Introduction to the Middle East
MGT 303 Introduction to International Business
MGT 466 International Management and Multinational Corporations
MUS 218 World Music
PHI 210 Eastern Philosophy
PHI 240 Middle Eastern Philosophy
PLS 103 Issues in World Politics
PLS 281 Comparative Political Systems: Canada
PLS 283 Chinese Politics and US-China Relations
PLS 284 Latin American Politics
PLS 382 Politics of Post-Communist Europe
PLS 385 Russian and Post-Soviet Politics
POL 202 Intermediate Polish II
PSY 355 Psychology and Culture
RST 225 Introduction to Russian Culture
RUS 202 Intermediate Russian II
SPA 202 Intermediate Spanish II
SPA 310 Spanish Civilization and Culture
SPA 311 Latin American Civilization and Culture I
SS 324 Urbanization
SS/WGS 351 Family and Gender in the Developing World

U.S. Diversity – select one

AAA 201 Introduction to African American Studies
AAA/WGS 352 Black Women's Culture and Communities
AAA 355 History of the Underground Railroad
ANT 311 Native Peoples of North America
ED 225 Diversity in Education
ED 315 Diverse Perspectives on Education
ENG 335 Literature of American Minorities
LIB 320 Social Autobiography in the U.S. Civil Rights Movement
LIB 350 The Immigrant Experience in the U.S.
LIB 401 Visionary Thinkers in the American Mosaic
MGT 355 The Diversified Workforce
MUS 219 Jazz History
MUS 300 Exploring American Music
SOC 280 Social Problems
SOC 323 Families in Society
SOC 381 Class, Race, Gender, and Sexuality
SOC 382 Race and Ethnicity

SPA 313 U.S. Latino/a Civilization and Culture
US 201 Diversity in the U.S.

III. Themes

Select a Theme and complete three courses from that Theme. The courses must be from different disciplines. Only one course may be taken at the 100/200 level.

Theme 01 – Marginality and Difference

AAA 302 African Diaspora
BIO 329 Evolution of Social Behavior
ENG 335 Literature of American Minorities
HST 376 History of Witches and Witch-Hunting
LIB 350 The Immigrant Experience in the U.S.
MGT 355 The Diversified Workforce
SOC 250 Perspectives on Madness
SOC 385 Social Inequalities

Theme 02 – Changing Ideas: Changing Worlds

BIO 349 The Darwinian Revolution
ENG 383 “Make It New!” Literary Modernism
GEO 310 Plate Tectonics
HSC 201 The Scientific Revolution
HST 364 Renaissance and Reformation Europe
PHY 303 The World After Einstein

Theme 03 – Society and the Media

CJR 236 News in Society
COM 220 Media Literacy
COM 372 Global Communications
LIB 373 American Society and Mass Culture
MKT 358 Advertising and Marketing Communications
PLS 340 Mass Media and American Politics
PSY 349 Psychology Applied to Media
SOC 366 Sociology of Media

Theme 04 – The Human Journey

LIB 314 Life Journey
NUR 344 Healthy Aging: A Lifelong Journey
PHI 300 Theories of Human Nature
PSY 364 Life Span Developmental Psychology
PSY 366 Perspectives on Aging
PSY 377 Psychology of the Quest
SOC 323 Families in Society

Theme 05–War and Peace

AAA 341 Civil Conflicts in Africa
CJ 405 Terrorism
ENG 384 Literary Responses to War and Peace
HST 317 History of American Foreign Policy
HST 377 History of Warfare
LIB 345 War in the Nuclear Age
PLS 211 International Relations
PLS 311 International Conflict and Conflict Resolution

Theme 07 – Continuity and Change in the Americas

ANT 355 Migration in Americas
ANT 360 Ethnology of Mesoamerica
BIO 310 Biological Diversity of the Americas
ENG 385 Writing and Revolution in the Americas
GEO 350 Geology’s Great Debate in the New World
HST/LAS 374 Revolution in the Americas
LAS 210 Exploring Latin America

Theme 08 – Gender, Society and Culture

AAA 351 Perspectives on African American Males
AAA/WGS 352 Black Women’s Cultures and Communities
ANT 370 Cross-Cultural Perspectives on Gender
BIO 325 Human Sexuality
CJ/WGS 320 Crimes Against Women
CLA 320 Women in the Classical World
ECO 350 Gender and Economics
HST 371 The History of Gender, Family, and Sexuality
LIB 325 Understanding the Gay Life Cycle
LS/WGS 370 Women and the Law
PHI 370 Feminist Philosophy
SOC/WGS 375 Perspectives on Masculinity
SOC 379 Love, Sex, and Gender
SS/WGS 351 Family and Gender in the Developing World
WGS 310 Sexual Orientation and the Law

Theme 09 – Religion

ANT 315 Comparative Religions
CLA 315 Ancient Religion
HST 211 History of Islamic Civilization
HST 311 History of Religion in the United States
HST 342 History of East Asian Religions
LIB 300 Jewish Scriptures and Traditions
LIB 335 Scriptures as Literature
PHI 312 Medieval Great Philosophers
PHI 343 Philosophy of Religion
PLS 330 Religion and Politics in America
PSY 385 Psychology of Religion
SOC 357 Sociology of Religion

Theme 10 – Ethics

BIO 328 Biomedical Ethics
BIO 338 Environmental Ethics
COM 438 Communication Ethics
MGT 340 Business, Social
MKT 375 Marketing Ethics
PHI 325 Ethics in Professional Life
PLS 338 Citizenship

Theme 11 – Earth and Environment

ANT 340 Culture and Environment
BIO 105 Environmental Science
ECO 345 Environmental and Resource Economics
ENG 382 Nature Writing
GEO 300 Geology and the Environment
GPY 356 Geography of Europe
GPY 361 Historical Geography of the Amazon
GPY 363 World Forests and their Use
GPY 410 Landscape Analysis
GPY 412 Global Environmental Change
LIB 330 The Idea of Nature
NRM 451 Natural Resource Policy
WGS 335 Women, Health and Environment

Theme 12 – Freedom and Social Control

BIO 311 Biological Basis of Society
CJ 325 Criminal Justice and Human Rights
CLA 287 Roman Law
ENG 392 Language and Power
HST 372 From Slavery to Freedom
LIB 340 Utopias: Ideal Worlds
PHI 320 Social and Political Philosophy
SOC 392 Social Deviance and Social Control

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Theme 13 – Civil and Human Rights Movements

AAA 305 Perspectives on the Black Arts Movement
AAA 355 History of Underground Railroad
ENG 381 Regional Discourses of The Civil Rights Movement
HST 316 History of The Civil Rights Movement 1940-1980
LIB 320 Social Autobiography of the U.S. Civil Rights Movement
PLS 307 American Constitutional Law II
SOC 333 Sociology of The Civil Rights Movement

Theme 14 – Death and Dying

ANT 316 Death, Burial, and Culture
BMS 374 Physiological Aspects of Death and Dying
ENG 386 Literary Responses to Death and Dying
NUR 354 An Overview of End-of-Life Care
PHI 341 Philosophy of Death and Dying
SPA 307 Death and Dying in Hispanic Literature
SS 381 Death and Dying

Theme 15 – Global Change: Integration and Fragmentation

AAA 300 US-Africa Relations
ANT 345 Perspectives on Globalization
BUS 301 International Business and Culture
CTH 373 Global Arts Performance
ECO 349 Emerging Markets Issues
ECO 369 International Economic Issues
GPY 335 Geographic Patterns-Global Development
GPY 350 Geography of Russia and Its Neighbors
HST 386 Europe since World War II
HTM 202 International Tourism
MGT 303 Introduction to International Business
MGT 466 International Management and Multinational Corporations
MKT 359 Multinational Marketing
PLS 315 International Political Economy

Theme 16 – Health, Illness, and Healing

ANT 320 Culture and Disease
BIO 309 Plants and Human Health
BMS 223 Public Health Concepts
HPR 340 Health Care Management
HST 370 History of Medicine and Health
PSY 368 Psychology of Physical Disabilities
SOC 356 Sociology of Health Care
SW 322 Health Care and Social Services

Theme 17 – Cities

AAA 315 Field to Factory: African American Migration
ECO 435 Urban Economics
ECO 436 Real Estate Economics
GPY 309 Introduction to City and Regional Planning
GPY 385 Economic Geography of the United States
HST 327 History of American Urban Society
PA 307 Local Politics and Administration
SOC 351 Urban Sociology
SS 324 Urbanization

Theme 18 – Creativity: Ideas and Innovation

CAP 315 Advertising Copywriting
CTH 300 Storytelling
ECO 342 Strategic Games
EGR 304 Innovation
LIB 310 Creativity
MGT 345 Team Building
SOC 346 Sociology of Art

SPA 300 Reading and Telling Stories
WRT 219 Introduction to Creative Writing

Theme 19–Perception

COM 320 Vision and Culture
HST 320 American Indians
LIB 311 Meaning
PHI 440 Epistemology
PHY 307 Light and Sound
PSY 361 Perception

Theme 20 – American Mosaic

AAA 340 African American Culture and Social Thought
ANT 311 Native Peoples of North America
HST 315 Latinos: Forging of Ethnic Identities
LAS 475 Latinos in West Michigan
LIB 401 Visionary American Thinkers
MUS 300 Exploring American Music
SOC 381 Class, Race, Gender, and Sexuality
SOC 420 Sociology of Community
SW 300 Pluralism in American Society
US 201 Diversity in the United States

Theme 22 – Sport and Life

CAP 305 Sports Promotion
ECO 330 Sports Economics
HST 325 History of America
MKT 361 Sports Marketing
PED 315 Sport in Society
PHY 306 Physics of Sports
STA 345 Statistics in Sports
WRT 381 Writing and Sports

Theme 23 – Democracy

ECO 365 Comparative Economic Systems
HST 318 History of Democracy in America
MTH 330 The Mathematics of Voting and Elections
PHI 335 Philosophy and Democracy
PLS 306 American Constitutional Law
PLS 339 Comparative Democratization

Theme 24 – Study Abroad

See the Padnos International Center for details: www.gvsu.edu/pic/.

Supplemental Writing Skills (SWS)

Because the ability to write clearly is a means for critical thinking, exploration of values, and self-discovery-goals of the general education program-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 multi-section 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.

The two SWS courses may not be taken from the same department or school. One must be from outside the student's major unit. The first SWS course, normally part of the general education requirement, must be taken before completing the junior-level writing requirement. The second course, normally taken in the student's major and normally at the 300 or 400 level, is taken after completing the junior-level writing requirement. 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 SWS Committee: 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, the Writing 150 Basic Skills requirement, and one Supplemental Writing Skills (SWS) course. Transfer students with a MACRAO are required to complete the following Basic Skills requirements: demonstrate proficiency in mathematics (MTH 110); fulfill the junior-level writing requirement (a satisfactory score on the junior-level assessment essay or a grade of C or better in WRT 305); and one SWS course in their major or college. They must also complete the capstone course in that major and the B.A./B.S. cognate where applicable. In addition, transfer students with a MACRAO must also fulfill the following General Education requirements: the two-course Cultures requirement; and one three-course theme.

1. B.A. or B.S. Cognate

In addition to the basic skills and the general education requirements, the B.A. degree requires a third-semester proficiency in a foreign language (either a classical or a modern language) of the student's choice. Instruction in twelve foreign languages is offered by the Department of Classics and the Department of Modern Languages and Literatures. Placement tests are available to students with pre-college competence in a foreign language who desire advanced placement or waiver of the foreign language requirement.

In addition to the basic skills and the general education requirements, the B.S. degree requires a three-semester sequence of courses that emphasize either natural science or social science methodology as prescribed by the major department. See the department entries for specific details.

2. Capstone Course

Each major curriculum includes a senior-level capstone course aimed at providing the student with a broad and comprehensive perspective on the fundamental assumptions, issues, and problems of the field. See the department entries for specific details.

3. 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.

4. 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.

5. 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).

Multiple Major; Multiple Minor; Major-Minor

In order to have multiple majors recorded on the official record, a student must meet fully the requirements of each major. Regardless of the amount of overlap, each major must contain at least 30 credits that are not duplicated in the other. For a multiple minor, each must contain 20 credits that are not duplicated in the other. A degree cognate is required for only one major.

The same principle applies in counting credits toward a major and a minor; regardless of the overlap, the major must contain at least 30 credits not duplicated in the 20 credits of the minor.

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 certified and 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 Limitation 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

Academic Review

A cumulative grade point average of 3.0 or higher must be earned in the entire degree program in order to graduate. A graduate student whose cumulative grade point average falls below 3.0 after completion of

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nine hours of graduate level coursework will be placed on academic probation. Such students must achieve at least a 3.0 cumulative grade point average after the next nine hours of coursework to remain in the program. A cumulative grade point average of 2.0 or below after nine hours of graduate level coursework means automatic dismissal from the university. Students who have been academically dismissed may apply for readmission after one year. Students who wish to appeal their dismissal should direct a written appeal to the dean of the appropriate college. Appeals for dismissal made by non-degree students must be directed to the Dean of Graduate Studies.

Credit Load

Full-time graduate students register for nine or more 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 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, consistent with standards of quality education. Request forms can be obtained from the faculty or the program office. Some departments may have further restrictions regarding independent study.

Degree Requirements

In each of the graduate programs offered by Grand Valley, 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 studies 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 briefly summarizes the institutional minimums for the master's degree: In those degree programs where the department requires more than the university minimum, their requirements take precedence:

1. A minimum of 33 semester hours of graduate level coursework.
2. A cumulative GPA of at least a 3.0 is required of all candidates for the master's degree.
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 at Grand Valley is viewed as the starting point of the eight-year period. If a course taken to complete the requirements for the master's degree does not fall within the eight-year period allowed for the degree, the course may be retaken for credit, with departmental approval. Otherwise another course of equivalent semester hours must be substituted in the program.
4. Graduate credit from graduate institutions with appropriate regional accreditation may be considered for transfer to a degree program at Grand Valley State University. Only coursework completed in the five years prior to application will be considered for transfer. Transfer credits must apply directly to the student's program as determined by the director of the graduate program. Only courses with grades of B (3.0) or above will be considered for transfer. Correspondence

courses will not transfer into graduate programs at Grand Valley State University.

5. All graduate students must complete a minimum of 24 hours in residency at Grand Valley State University.
6. Master's programs may include some courses that are dual numbered at the senior undergraduate and graduate level. Such courses must be approved for dual listing by the University Curriculum Committee and the Provost. Students registering for graduate credit will be required to perform at the graduate level. 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.
7. Candidates for advanced degrees must demonstrate not only their mastery of the subject matter but also 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. This demonstration may take the form of a thesis, comprehensive examination, or an appropriate project. A specific course may also be used to fulfill this requirement as long as it is structured as a capstone experience. In such a course there must be a written product that meets the objectives and is evaluated by the faculty in the program.

Second Master's Degree

Under certain circumstances a student may earn two master's degrees. Students who are considering such a plan should note the following information:

1. Meet all specified requirements for both degree programs.
2. Complete a minimum of 21 semester hours in residence at Grand Valley beyond the requirements for the first Grand Valley degree.
3. In keeping with the residency requirement, a student with a graduate degree from another institution with appropriate regional accreditation must earn a minimum of 24 semester hours in residence at Grand Valley. Note that the minimum total hours required for the second degree must be satisfied either through approved transfer hours or additional coursework at Grand Valley.
4. The time limit to satisfy degree requirements and the time limit on transfer of credits are applicable to the second master's degree.
5. Students who meet separate emphasis area requirements within a program but not the additional residence requirements for two degrees may have both emphasis areas certified and recorded on their academic record.

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.

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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.

Undergraduate Student Academic Advising 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 below.

College Academic Advising Centers/Offices

Contact information for academic advising centers and offices for each college are listed below. Students interested in programs in a particular college can contact the advising center or office to learn more about specific programs or courses.

Seidman College of Business: Seidman Undergraduate Student Services
101B DEV, (616) 331-7500, go2gvbiz@gvsu.edu

College of Liberal Arts and Sciences Academic Advising Center
MAK C-1-140, (616) 331-8585, clasadv@gvsu.edu

College of Community and Public Service Undergraduate Advising Center
218C DEV, (616) 331-6890, ccpsadvisor@gvsu.edu

College of Education Student Information and Services Center
101 EC, (616) 331-6650, coeserve@gvsu.edu

College of Health Professions - Student Services
244 CHS, (616) 331-3958, zwarda@gvsu.edu

Kirkhof College of Nursing
301 CHS, (616) 331-3558 or (800) 480-0406, kson@gvsu.edu

Seymour & Esther Padnos College of Engineering and Computing
Major Advising: School of Engineering:
136 KEN, (616) 331-6750, engineer@gvsu.edu

School of Computing and Information Systems:
C-2-100 MAK, (616) 331-2060, info@cis.gvsu.edu

Pre-Engineering or Pre-Computing and Information Systems Major Advising:
Padnos College Student Services: 315 KEN and C-2-218 MAK,
(616) 331-6025, pcec@gvsu.edu

Undergraduate Student Academic Success Center (SASC)

200 Student Services Building (616) 331-3588

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 Center. Advising is also available for those students who are non-degree seeking students taking courses at Grand Valley. SASC is the location for TRIO-McNair and TRIO ESP, federal grant programs to support student success.

The SASC is located in 200 Student Services Building and is open 8 a.m.-6 p.m. Monday through Thursday, and 8 a.m.-5 p.m. on Friday. Appointments can be made by phone (616) 331-3588 or by coming to the office.

Tutoring

201 Student Services Building (616) 331-3451
101B DeVos Center (616) 331-6407
2309 Mackinac Hall (Math/Stats Lab) (616) 331-2084
Web: www.gvsu.edu/tc

Tutoring encourages educational engagement, supports academic excellence and enhances student success. Tutoring Center staff coordinates peer tutoring activities, which support successful academic outcomes. Tutoring is free to students and tutorials are generally conducted in small group settings. Mathematics and Statistics tutoring are offered in an open lab environment at 2309 MAK. Tutoring also takes place at the Pew and Meijer Campus locations. Students are encouraged to request tutors early in the semester to maximize academic outcomes.

Structured Learning Assistance (SLA)

375 Padnos Hall (616) 331-3267

Structured Learning Assistance (SLA) is an academic support program that is attached to historically difficult courses, and is available to all interested students. SLA features weekly study and practice workshops in which students' master course content to develop and apply specific learning strategies. The workshops are led by trained facilitators, who in collaboration with faculty, develop the workshop materials. These sessions meet from one to three hours per week throughout the semester and are optional once the student achieves a grade of C or higher in the course. The additional hours are formally attached to the student's schedule and are offered at no additional charge. To view a full listing of the courses that are offered with SLA support or for additional information, please go to the SLA website at www.gvsu.edu/sla, or by contacting the SLA Coordinator at 331-3267.

Math and Science Student Support (MS³)

399 Padnos Hall (616) 331-3695

Math and Science Student Support is an academic assistance and enrichment program offered in the Learning Center, located in room 399 of the Seymour and Esther Padnos building. We offer academic support and problem-solving assistance for all students interested in the fields of mathematics and science. Our student facilitators, successful upper level students in biology, chemistry, biomedical sciences, mathematics, and physics, assist students by forming study groups, providing problem-solving assistance, and connecting students to other appropriate support services on campus. The Learning Center provides an area for both group and independent studying. The goal of MS³ is to assist students in the transition to upper-level science and mathematics courses. Additional information for the academic support program can be found at www.gvsu.edu/ms3/. You may also call MS³ at 331-3695, or the MS³ Coordinator at 331-3267.

Learning and Study Skills Development Services

200 Student Services Building (616)-331-3588

Graduate Information

Learning and Study Skills Development services offer one-on-one and group services to help students identify their learning styles, improve study skills, test taking skills, time-management skills, note-taking skills, memory strategies and other personalized instructional and learning strategies for students to successfully complete courses.

Pre-Major Advising

200 Student Services Building (616) 331-3588

Pre-major advisors are available to advise students who have not yet declared a major. 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.

LAKER Academic Center

165 Field House (616) 331-3328

The LAKER Academic 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.

Student Transfer Enrollment Partnership (STEP)

Grand Rapids Community College (616) 331-3588

A collaborative transfer assistance project between Grand Rapids Community College and Grand Valley State University that reaches out to GRCC students to help them ultimately achieve a bachelor's degree through Grand Valley.

TRIO-McNair and TRIO-ESP Programs

200 Student Services Building (616) 331-3401

Educational Support Program (ESP) provides academic support services (academic advising, study skills instruction, and career planning) to first-generation, financially eligible college students at Grand Valley.

The Ronald E. McNair Post-Baccalaureate Scholars Program provides research opportunities and academic advising to talented (3.0 grade point average or higher) juniors pursuing an education beyond a baccalaureate degree. The goal of the program is to provide assistance to financially eligible first-generation college students and under-represented minorities who wish to obtain a doctoral degree.

230 Student Services Building (616) 331-3441

Academic Standards and Other Services

200 Student Services Building (616) 331-3588

Testing Services

Testing Services offers math placement testing, College-Level Examination Program (CLEP), the Comprehensive English Language Test (CELT) for speakers of English as a second language, and accommodated testing for students with disabilities.

Grand Valley's math placement testing is offered for students wishing to challenge their math placement. Testing is offered several times a semester.

Grand Valley State University is an open test center for CLEP, which is offered twice per month. Credit is granted for subject examinations offered by CLEP. Minimum score requirements are listed in the Credit by Exam brochure. The CELT is a pre-admission requirement for Grand Valley applicants who speak English as a second language. CELT is offered once per month.

Course Evaluations and Substitutions

Responsible for course evaluations and substitutions for General Education Foundation/Culture requirements and degree cognate 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 the student 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.

Undergraduate Academic Programs

Grand Valley State University has over 200 areas of study, 78 undergraduate degrees, and 28 graduate degrees. Use the links below to find the program(s) that apply to you! Refer to the All Academic Programs A-H and All Academic Programs I-Z of the online catalog for a list of these programs.

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 within their program of study. Students should contact the 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 Office of Graduate Studies section of this catalog.

Academic Advising for graduate students is highly individualized for each student as he/she works with a faculty advisor to select an emphasis within a degree program, to develop an educational plan, to register for and complete courses, and, where required, to develop a research proposal, conduct the research, and write a research report. Those students selecting to complete a thesis or a research project work very closely with the faculty advisor and other appropriate faculty. Please note that some programs require a faculty advisor to agree to work with a student in a research area, before he/or she can be admitted to the degree program. To learn more about academic advising for graduate students, please contact the support services noted below.

Graduate Student Support Services:

Graduate Studies Office: (616) 331-7105, www.gvsu.edu/gs
Currently enrolled graduate students or persons interested in graduate studies at Grand Valley State University are welcome to visit the Graduate Dean for assistance, advice, or to provide feedback on any aspect of their graduate education.

Pew Campus Student Services (616) 331-7220,
www.gvsu.edu/pewcampus

This office coordinates activities with academic and non-academic 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 department seeks to identify student needs to find solutions that enhance learning and provide opportunities for involvement.

Fred Meijer Center for Writing and Michigan Authors (616) 331-2922,
(616) 331-6407, www.gvsu.edu/wc
With locations in Allendale, Grand Rapids, and Holland, the Fred Meijer Center for Writing and Michigan Authors assists all writers at any stage of their writing processes.

Student Assistance Center (616) 331-3327.
Student Assistance Centers are located in the Student Services Building in Allendale and in the DeVos Center Plaza in Grand Rapids and provide services for registering for classes, tuition payments, GVSU ID cards, transcripts and degree progress reports, applications for graduation, processing loan deferments, check-cashing, and distributing student payroll checks.

Academic Programs

Grand Valley State University has over 200 areas of study, 78 undergraduate degrees, and 28 graduate degrees. Use the links below to find the program(s) that apply to you!

Graduate Programs

Accounting

Accounting, M.S.A.

Biology

Biology, M.S.

Biomedical Sciences

Biomedical Sciences, B.M.S.

Biostatistics

Biostatistics, M.S.

Business

Business, M.B.A.

Business Administration and Law, M.B.A./J.D.

E-Commerce Certificate

Graduate Tax Studies Certificate

Cell and Molecular Biology

Cell and Molecular Biology, M.S.

Communications

Communications, M.S.

Computer Information Systems

Computer Information Systems, M.S.

Biomedical Informatics Certificate

Distributed Computing Certificate

Database Management Certificate

Information Systems Mgt. Certificate

Object Oriented Tech. Certificate

Software Design and Development Certificate

Software Engineering Certificate

Criminal Justice

Criminal Justice, M.S.

Education

Educational Leadership, M.Ed.

Educational Leadership

Special Education Administration

Educational Specialist Degree in Leadership, Ed.S.

Educational Technology, M.Ed.

Higher Education, M.Ed.

Adult and Higher Education

Instruction and Curriculum, M.Ed.

Advanced Content Specialization

Early Childhood Education

Educational Differentiation

Elementary Education

Secondary Level Education

Literacy Studies, M.Ed.

Reading and Language Arts

School Library Media Services

Teach Eng Speakers Other Languages (TESOL)

School Counseling, M.Ed.

Special Education, M.Ed.

Cognitive Impairment

Early Childhood Developmental Delay

Emotional Impairment

Learning Disabilities

Certificate Programs

Post Baccalaureate Teacher Certification

Graduate Teacher Certification Program (GTC)

Professional Certification-Program Description

Engineering

Engineering, M.S.E.

Manufacturing Egr Ctrl/Auto Certificate

Mechanical Engineering Design Certificate

Manufacturing Engineering Design Certificate

Production Engineering Operations Certificate

Professional Engineering Practice Certificate

English

English Language and Literature, M.A.

Health Administration

Health Administration, M.H.A.

Medical and Bioinformatics

Medical and Bioinformatics, M.S.

Nursing

Nursing, M.S.N.

Nursing, D.N.P.

Occupational Therapy

Occupational Therapy, M.S.

Physical Therapy

Physical Therapy, D.P.T.

Physician Assistant Studies

Physician Assistant Studies, M.P.A.S.

Professional Science Masters

Professional Science Masters (PSM)

Biostatistics, M.S.

Cell and Molecular Biology, M.S.

Medical and Bioinformatics, M.S.

Public and Nonprofit Administration

Public Administration, M.P.A.

Nonprofit Leadership Certificate

Social Work

Social Work, M.S.W.

School Social Work Certification

Taxation

Taxation, M.S.T.

Tax Studies, Graduate Certificate

Taxation and Law, M.S.T/J.D.

Student Life and Services

The Office of Graduate Studies

For information regarding the Office of Graduate Studies, refer to the *Office of Graduate Studies* section of this catalog or visit www.gvsu.edu/gsl/.

Student Life and Services

Student Life

Grand Valley State University reaches far beyond the typical college activity list to make life on campus exciting and enjoyable. Students can take advantage of a great variety of clubs and organizations, including cultural organizations, performing arts groups, recreational clubs, faith-based groups, social organizations, fraternities, and sororities, professional associations, special interest groups, leadership groups, and community service organizations.

Office of Student Life

Students are in class an average of 30% of the time during a week of college life. Historically, students who are successful have developed a plan for how they will spend the other 70% of their time. Students are encouraged to MAXimize their college experience through participation in a variety of campus experiences. Employers continue to look for employees who have a broad base of experiences and are comfortable working with others.

The Office of Student Life, located in the Kirkhof Center, creates an exciting environment for students to experience unlimited opportunities to interact with other students in addition to their traditional academic classroom times. This interactive environment provides a student development experience that fosters individual student growth. Students are encouraged to participate in student organizations, attend campus events, and become involved in leadership and service projects. The Office of Student Life annually registers more than 300 student organizations. More information is available at www.gvsu.edu/studentlife or by calling (616) 331-2345.

The Kirkhof Center, named in honor of Russell Kirkhof, is a place for students to come and enjoy an environment that offers the opportunity to gather in a formal and informal setting. The Kirkhof Center is charged with supporting the educational, cultural, social, and recreational needs of Grand Valley State University. Located within the student center are the Office of Student Life and Event Services, 2020 Information Desk, University Bookstore, Office of Multicultural Affairs, LGBT Resource Center, Women's Center, and Dining Services. The following services can also be found: food services, postal services, copy center, ATM machines, and commuter lockers.

Laker Late Night is a series of events that take place simultaneously over a five-hour period from 9 p.m. to 2 a.m. every Friday and Saturday night in the Kirkhof Center. Laker Late Night includes live music, comedy, game tournaments, free food, arts and crafts, and much more!

Kirkhof Center Daytime Programs provide activities for students throughout the week during the lunch hour and between classes. Programming includes a live music series, arts and crafts, karaoke, among other activities.

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, movies, or participate in videogame tournaments.

Information Desk

Located in the main lobby of the Kirkhof Center, the 2020 Information Desk provides the campus community with up-to-date information

regarding campus events and what to do in West Michigan. The student staff operating the desk is there to answer questions and assist students. Contact the 2020 Information Desk staff at (616) 331-2020 or follow them on Twitter at www.twitter.com/GVSU2020 or become a fan on Facebook, search for twentytwenty.

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/.

For additional information on campus events, contact the Office of Student Life at (616) 331-2345 or athletic event information (616) 331-8800.

University Promotions

The University Promotions Office provides graphic design and advertising to assist student organizations in promoting their events. Students produce various promotional pieces to publicize upcoming campus activities. Contact (616) 331-2340 for more information.

Laker Leadership Programs

Website: www.gvsu.edu/leadership

First Year Leadership Experience

The First Year Leadership Experience program is designed to assist newer leaders to create and enhance their personal philosophy of leadership while developing basic leadership skills and learning about the leadership opportunities the GVSU community has to offer. All students, especially first-year students, are encouraged to be a part of this program, particularly those who are interested in future leadership roles. This program teaches leadership through interactive activities and discussion led by student leaders and staff from the Office of Student Life.

Intermediate Leaders Institute

Opportunities are designed for those who are eager to improve their interpersonal leadership skills, team dynamics, networking, and communication abilities. This experience will help students become leaders in groups and in the community, while developing the characteristics needed to become established members of the Grand Valley leadership community.

Community Leader Seminar

This program is for experienced leaders who desire to increase their impact as a civically engaged member of the GVSU community. The interactive program teaches advanced skills, focusing on societal and lifelong leadership development. Through this program, students realize the experiences at Grand Valley can be transferred far beyond the reaches of this campus, to affect future workplaces or communities. There is a special emphasis on civic engagement and citizenship, which will allow these advanced leaders to adapt their skills for life after college. Participants will also be asked to share the skills that they have gained, to influence other future GVSU student leaders to follow in their paths.

Additional Leadership Opportunities

Leadership Summit is a one day statewide conference that provides student leaders and faculty from 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 multi-focused gatherings in the

state of Michigan. Leadership Summit provides excellent networking and developmental opportunities for student leaders at any level.

Workshops on Demand is a year-round program that the Office of Student Life offers free of charge to registered student organizations and university affiliated non-formal groups. The program offers specialized leadership and service related workshops. This is a great way to provide educational workshops and community building experiences to group constituents.

Venderbush Leadership Reception 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 past Grand Valley Alum, sharing their experiences and inspirations on the topic of leadership and service.

Community Service Learning Center (CSLC)

The Community Service Learning Center located in the Kirkhof Center, is an outreach office that encourages the GVSU population to engage themselves in community awareness through community issues education, volunteer skill set training, campus-wide volunteer/service opportunities, and community agency partnerships. Students are encouraged to become involved in a community service activity that will enhance their understanding of civic responsibility and challenge them to be committed to a life of community service. Students can connect with opportunities by visiting the website or the CSLC.

Campus Life Night

Campus Life Night, held the Tuesday evening after Labor Day in the Fieldhouse Arena, 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.

Traditions and Festivals

Student organizations and special committees work with professional staff in sponsoring and planning campus traditions including such events as Family Weekend, Homecoming, Renaissance Festival, Make a Difference Day, Dance Marathon, Battle of the Valleys, Intercultural Festival, Sibs and Kids Weekend, Presidents' Ball, Community Outreach Week (COW), and Relay for Life.

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 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, and staff educate on the diversity within the culture and offer campus-wide celebrations featuring traditional foods and presenting and teaching music and dance.

Intercultural Festival: Students, faculty, and staff sponsor booths showcasing cultural cuisine, traditions, and crafts specific to a culture of their choice. The campus community enjoys good food, lively entertainment, and an exchange of ideas as the world comes to Grand Valley.

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.

Student Organization Center

Located on the lower level of the Kirkhof Center, the Student Organization Center (SOC) provides an exciting environment for campus student organizations to interact and conduct their daily business. The SOC provides resources and information for students who are interested in getting involved. The SOC also features interactive spaces for the organizations to collaborate with each other. Additional resources include: computers, telephones, business center, resource information, library, and meeting spaces. More than 300 student organizations are supported by this center.

Student Organizations

Academic and Professional organizations focus on academic disciplines or are related to a specific professional field.

Cultural organizations educate the campus community about non-dominant cultures in order to enhance students' worldviews. 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 life-long opportunities for leadership, service, academic achievement, and social involvement through the association with a national organization (see the Fraternity and Sorority Manual at www.gvsu.edu/greeklife/.)

Performing Arts organizations provide opportunities for involvement and exposure to the performing arts.

Faith-Based organizations serve to enhance a student's spiritual life while providing fellowship and outreach opportunities.

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 co-curricular involvement of special interests and hobbies.

Sports and Recreation organizations provide opportunities for competition, personal fitness, recreational activities, and/or school spirit support.

Student Government organizations serve as governing bodies in various aspects of campus life.

Media and Entertainment organizations include two types of opportunities for students. Entertainment organizations provide campus with a variety of student sponsored entertainment events and programs. Media organizations provide an opportunity for students to gain hands-on experience with student media including newspaper, television, radio, film, and video.

- **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* office is located in 0051 Kirkhof, conveniently located close to the Student Organization Center. *The Lanthorn* staff includes editorial, advertising, business, graphic art, staff writing, and staff photography positions. Call (616) 331-2460 to find out more information.

Student Life and Services

- **GVTV** - Grand Valley State University's own student run broadcasting network offers hands-on experience in technical areas of producing as well as writing, reporting, promotions, directing, and acting. The channel is non-commercial and broadcasts on cable access channel 10. GVTV's office is located next to the Student Organization Center, lower level of Kirkhof. Contact GVTV (616) 331-4888 for more information.
- **WCKS** - The student-run campus radio station is located on the lower level of the Kirkhof Center. Opportunities for all aspects of radio production and broadcast are available to students. Contact (616) 331-2356 for more information.

Student Senate

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. Contact (616) 331-2333 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, aspiring artists, and many GVSU traditional events such as “Sibs and Kids” weekend. Students work together to choose and produce events while obtaining numerous event planning, marketing, and collaboration skills that will transfer into their professional lives. Contact (616) 331-2806 for more information.

Student Services

Intercollegiate Athletics

Grand Valley is a member of the Great Lakes Intercollegiate Athletic Conference (GLIAC). Membership in the GLIAC includes Ashland, Ferris, Findlay, Grand Valley, Hillsdale, Lake Erie College, Lake Superior, Michigan Tech, Northern Michigan, Northwood, Ohio Dominican, 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, 16 times; and has won the Director's Cup, the NCAA Division II all-sports trophy, the last six consecutive years. Grand Valley's men's teams have won conference championships in football 14 times; basketball, eight; baseball, 14; wrestling, six; tennis, one; golf, four; indoor track, nine; swimming & diving, two; outdoor track, six; and cross country, eight. In women's sports, Grand Valley has won championships in basketball eight times; cross country, ten; soccer, five; softball, 11; tennis, two; volleyball, ten; swimming & diving, one; indoor track, ten; outdoor track, ten; and golf, six.

Scholarships are offered in all men's and women's sports. GVSU competes in the following sports: Men — baseball, basketball, cross country, football, golf, swimming and diving, tennis, indoor track and outdoor track. Women — basketball, cross country, golf, lacrosse, soccer, softball, swimming and diving, tennis, indoor track, outdoor track, and volleyball.

The Barbara H. 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.A. GVSU recognizes that a foundation to a strong university education includes an understanding of other cultures as well as a global vision. With this in mind, the mission of the Barbara H. Padnos International Center is:

To engage the university community in the development of 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 H. 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, 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 GVSU community.

The Barbara H. Padnos International Center coordinates with Student Affairs and Admissions to recruit, admit, and advise international students. The office also works with universities, non-governmental 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 department to internationalize the curriculum and provide overseas study opportunities relevant to the curriculum.

International Partnership Agreements

Partnerships with overseas institutions to create meaningful opportunities for students, faculty, and staff that allow for educational and living experiences in other nations. Partnerships also increase the presence of international students and faculty at GVSU. Currently, GVSU has institution-to-institution agreements with the following institutions, which offer a variety of study abroad opportunities for students:

Australia: University of the Sunshine Coast, Queensland; Macquarie University, Sydney
China: China-Japan Friendship Hospital, Beijing; East China University of Science and Technology, Shanghai; East China Normal University, Shanghai; East China Normal University, Shanghai
England: Kingston University, Kingston-on-Thames; University of Brighton, Brighton
France: Groupe ESC Grenoble; L'Ecole Supérieure Des Sciences Commerciales of Angers l'Université Catholique de L'Ouest, Angers
Germany: Duale Hochschule Baden Württemberg, Mosback 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.
Jamaica: University of the West Indies - Mona Campus
Japan: International Christian University, Tokyo; The Japan Center for Michigan Universities
Hikone: Ritsumeikan Asia Pacific University, Beppu
Mexico: Universidad de las Américas-Puebla
Norway: University of Oslo

Poland: Cracow University of Economics
 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
 Midwest Consortium for Study Abroad (MCSA), various locations

Affiliate Programs

American Institute for Foreign Studies (AIFS), various locations
 Austalearn/Eurolearn/Asialearn, various locations
 Council on International Education Exchange (CIEE), various locations
 Cultural Experiences Abroad (CEA), various locations
 Edge Hill University (EHU), Ormskirk, England
 International Studies Abroad (ISA), various locations
 John Cabot University (JCU), Rome, Italy
 University of Deusto (CIDE), Bilbao, Spain
 European Study Abroad (EUSA), various locations
 Hellenic International Studies of the Arts (HISA), Paros, Greece
 Semester in India, Pondicherry, India

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 cross-cultural exchange activities. Also, the program provides support services that includes extensive orientation, cross cultural 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 — 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.

PIC 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 the Padnos International Center staff. 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 in which there is no comparable Grand Valley course, the original IS 380, with an appropriate subtitle, remains on the transcript.

Students may enroll in 1 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.

Global Programs

Students can acquire international experience through a variety of short-term Grand Valley-sponsored programs, generally led by Grand Valley faculty. Summer programs may include:

Central London, England - urbanization/geography and British culture
 Egypt - Middle Eastern studies
 El Salvador, Central America - social work
 Guadalajara, Mexico - Spanish language and culture
 Kingston, England - Art
 Krakow, Poland - Polish language, culture, and economics
 Nice, France - French language, culture
 Shanghai, China - Eastern philosophy, language, and civilization
 Sydney, Australia - public administration
 Tuebingen, Germany - German language and culture

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 - lecture series, break roundtables, conversation series and research forums - during the fall and winter semesters. Also, PIC works with the International Club in organizing the student-led "Global Issues Forum," a monthly discussion of various international issues.

For further information, contact the Padnos International Center, Room 130, Lake Ontario Hall, telephone (616) 331-3898.

The Bookstore

Textbooks for classes taught at Grand Valley State University are available through University Bookstore with locations in Allendale and Grand Rapids. Students attending classes on the Allendale campus will find their textbooks and required supplies at UBS on the first floor of the Kirkhof Center. In addition, the store offers a large selection of Grand Valley State University imprinted clothing and gifts, as well as a variety of classroom supplies, and books for leisure reading. The Allendale store also provides textbooks for students who attend classes at satellite locations throughout Michigan, including Holland, Muskegon, and Traverse City. Textbooks and merchandise may be ordered on the Web at www.ubs.gvsu.edu or by phone at (866) 299-0001.

UBS Allendale is open 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 may purchase their textbooks at University Bookstore 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.

Campus Ministry

The interdenominational Campus Ministry Council offers a ministry to the university community through worship services, Bible study

Student Life and Services

groups, speakers, retreats, discussions, service opportunities, and pastoral counseling. Weekly services include Sunday worship at 10:30 a.m. and 8 p.m. and Catholic Mass at 5:30 p.m. The Campus Ministry Offices are located in the Cook-DeWitt Center. Telephone (616) 331-3111 or (616) 331-3251.

Campus Recreation

Website: www.gvsu.edu/rec

Shaping students and the university community to commit to a healthy lifestyle

The Campus Recreation department (www.gvsu.edu/rec) is committed to the well being of the university community. Our programs and services are offered through Intramural Sports and the Fitness and Wellness Center. Together we strive to be a leader on campus by developing a culture that values health and wellness as a life-long goal.

Intramural Sports (phone 331-3218)

The intramural sports program provides a quality recreational sports experience for a diverse university community. Through sport and leisure activities, the program enhances the participant's university experience by promoting student development in a safe environment. The intramural sports program offers sports in the fall, winter and spring semesters in men's, women's and co-rec divisions of play for both competitive and recreational skill levels. GVSU students, faculty, and staff are eligible to participate. The intramural sports program includes: Basketball, Flag Football, Softball, Soccer, Volleyball, Tennis, Golf, Racquetball, Bowling, Table Tennis, Billiards, Dodgeball, Kickball, Punt-Pass-Kick, Roller/Floor Hockey, Rowing, 5K Run/Walk, Badminton and Indoor Track and Field.

Fitness and Wellness Center (phone 331-3659)

The Fitness and Wellness Center is located on the lower level of the Recreation Center. The center offers a variety of fitness and wellness services for the university community. Services include health risk appraisals, health screenings, fitness testing, exercise programming, equipment orientations, nutrition consultation group exercise classes, cholesterol testing, personal training, and massage. The Fitness and Wellness Center sponsors various programs such as recreation clinics, health fairs, CPR training, fitness challenges, and on-campus education outreach.

Communications

WGVU-TV 35/WGVU-DT 11 and WGK-TV 52/WGK-DT 5, affiliated with the Public Broadcasting Service, present a variety of 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 Michigan.

WGVU 88.5 FM Grand Rapids and 95.3 FM Whitehall are National Public Radio stations licensed to the Grand Valley Board of Trustees. The stations broadcast jazz and news and information programs from NPR. A strong commitment to local news is emphasized.

WGVU 1480 AM Grand Rapids and 850 AM Muskegon are National Public Radio stations also licensed to the Grand Valley State University Board of Trustees. The stations broadcast Oldies Music with NPR and local news.

For those planning careers in broadcasting or non-profit 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.

Computer Support

Over 30 classrooms/labs with Pentium Windows and Macintosh machines running over 180 student applications; ADA stations in most labs; SMART technology (computer, LCD projector, DVD, and VCR) available in all classrooms; wireless connectivity in all academic buildings and select housing locations; all classroom and student living areas networked for Internet access, email, courseware, registration, and many other student services; digital media assistance available to students and faculty; free music service to students, free anti-virus software for all campus computers including students in Grand Valley housing; and Computing & Technology Support services available to all faculty, staff and students.

Career Services

The Counseling and Career Development Center assists students in making career decisions. The center provides individual counseling sessions in which personal values, interests, abilities, and goals are assessed and then used as a basis for career exploration and decision making. Individual career counseling is available at the Allendale Campus office, the Robert C. Pew Campus in Grand Rapids, and the Meijer Campus in Holland. Call (616) 331-3266 to set up an appointment. The center also houses an extensive Career Resource Library in which up-to-date information on a wide range of careers is available. Also offered each semester are career seminars and study skills that help students plan for the future by addressing topics such as study skill techniques, planning for graduate school, and identifying potential careers. Current career information and job trends data are included in both individual career counseling sessions and career seminars through the use of numerous websites emphasizing career exploration and information. The Counseling and Career Development Center and Library are located in 204 Student Services Building. Telephone (616) 331-3266.

Internships, Cooperative Education and other Experiential Education Programs

In today's highly-competitive job market, employers hire candidates who possess not only a college degree, but also career-related experience. In a survey conducted by Grand Valley Career Services, 99% of employers agreed that most students would benefit from such an experience.

The best way to gain the experience employers are looking for is to complete one or more internships. In addition to the possibility of earning college credit, other educational benefits of internships/co-ops include learning new skills and applying theory to the world of work. Career development benefits include exploring career options, developing realistic career goals and expectations, and building relationships with professionals. Employment advantages include gaining career-related experience, supplementing (or compensating for) 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, it is up to the student to decide whether or not they wish to pursue receiving credit for their internship experience (occasionally, employers require interns to receive college credit for their experience). Students seeking credit are typically required to have completed 60 academic credits before signing up for internships or cooperative education experiences. Work hours normally equate to 150 hours for three academic credits. However, this may vary by department. 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.

Cooperative Education. A work-training program specified in engineering. Co-op is a specific type of work training experience in which students have at least two full-time or part-time supervised 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.

Criteria. Internships and co-ops may be initiated by the faculty advisor, the employer, the student, or the Career Services Office. When seeking credit for the experience, a faculty advisor within each academic department is responsible for final approval of internships and co-ops to ensure that the experience meets specific departmental criteria. Students are required to comply with academic departmental GPA requirements regarding internships or co-ops. The work setting must provide an opportunity for learning that is relevant to the intern's academic field. The employer provides a field supervisor and the academic department provides a faculty member to direct the experience. Field supervisors evaluate the student's work experience while the faculty member evaluates the work submitted by the student to fulfill departmental requirements for the experience. The length of the internship/co-op is determined prior to the beginning of the internship by the employer, the faculty advisor, and the student. An internship/cooperative education experience can be terminated prior to completion by the faculty advisor, field supervisor, or student. However, permission for course withdrawal is vested exclusively in the faculty.

Internships. A supervised work experience directly related to an academic discipline taking place outside of the classroom, and directed by a field supervisor and a Grand Valley faculty member. The internship may be full-or part-time and may or may not be a paid work experience. An internship typically lasts for one semester. A student may enroll for a maximum of 15 credits of internship. The internship must be planned and approved by the academic department the semester prior to when the experience will take place. Internships are available in most Grand Valley majors.

Career Services and Post-Graduation Employment Assistance

The Career Services Office provides extensive services to students and alumni as they prepare for internship/co-op and post-graduation employment. The staff assists students and alumni with preparing written application materials, along with developing interviewing skills and job search techniques. Individual appointments can be scheduled with an advisor, in addition to attending workshops and seminars. Students and alumni may take advantage of LakerJobs, a Web-based system to access current job/internship opportunities; sign up for on-campus interviews, and receive email correspondence regarding upcoming events and employment information. LakerJobs also includes a résumé database available to employers for résumé referrals. The office coordinates several career fairs each year including: Grand Valley State University Fall Careerfest, Winter Careerfest and Health Career Day, Summer Job Fair, Teacher Search, and Out-of-State Teacher Fair. The Career Contact Bank is a Web-based database, which contains professional contacts in various career fields that students can access to learn more about a career of interest. In addition, the office provides internship listings and assistance in locating internships for students.

The Career Services Office has two primary locations: 206 Student Services Building (616) 331-3311, and 116B DeVos Center (616) 331-6708. Both office locations have office hours 8 a.m. to 5 p.m., Monday through Friday. Services are also available at the L.V. Eberhard Center and Cook-DeVos Center for Health Science in Grand Rapids, at the

Meijer Campus in Holland, Muskegon Campus at Muskegon Community College, and Traverse City/Petoskey locations by appointment. Visit our website at www.gvsu.edu/careers/.

Student Employment

The Student Employment Office has a website to assist students find jobs both on and off campus. Visit www.gvsu.edu/studentjobs to view job postings, a gallery of pictures showing students working at all types of jobs on campus, the on campus wage schedule, the pay period calendar, hints for interviewing, student handbook, forms for employment, explanation of work study, and much more. The Student Employment office is located at 105 Student Services building. Telephone (616) 331-3238.

Employment Statistics for 2008-2009

The employment rate for Grand Valley graduates continues to be high. Students can enhance employment success by improving written and verbal communication skills, completing at least one internship, developing skills in areas outside of the major academic program area, and thoroughly preparing for the employment search. Assistance with preparation for the employment search is available through the Career Services Office.

Employment rates are affected by many factors, including the overall economy, local and national needs for people with particular skills, candidate's willingness to relocate, and individual performance. Below is breakdown of employment and graduate school attendance by college. For more specific information on individual majors, please contact the Career Services Office (career@gvsu.edu or (616) 331-3311).

2008-2009 Major*	Percent Employed Directly	Percent Enrolled in Graduate School
Accounting (master's)	88%	0%
Art History	50%	50%
Biology (master's)	100%	0%
Bioinformatics	100%	0%
Biostatistics (master's)	100%	0%
Biomedical Science	9%	78%
Biopsychology	0%	100%
Business General (master's)	96%	0%
Cell and Molecular Biology	64%	36%
Cell and Molecular Biology (master's)	0%	100%
Chemistry	17%	67%
Clinical Laboratory Science	100%	0%
Computer Information Systems (master's)	100%	0%
Computer Science	90%	10%
Earth Science	100%	0%
Economics	60%	20%
Education (master's)	93%	1%
Engineering	97%	0%
English (master's)	75%	25%
Exercise Science	59%	35%
Geology	40%	40%
Health Administration (master's)	80%	0%
Information Systems	86%	0%
Integrated Science	53%	33%
International Relations	60%	20%
Medical Imaging	89%	11%
Music	55%	27%
Nursing	86%	4%
Nursing (master's)	100%	0%
Occupational Safety & Health	100%	0%
Occupational Therapy (master's)	100%	0%
Philosophy	25%	75%

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Physical Therapy (doctorate)	95%	5%
Physician Assistant (master's)	100%	0%
Political Science	28%	61%
Reading (master's)	75%	6%
Russian Studies	0%	100%
Social Work	88%	0%
Social Work (master's)	94%	0%
Special Education/Psychology	68%	32%
Special Education/Psychology (master's)	97%	0%
Statistics	0%	90%
Taxation (master's)	83%	0%
Therapeutic Recreation	50%	33%

*The departments with a rate of 80% of respondents either Directly Employed or in Graduate School (combined).

Dean of Students Office

The function of the Dean of Students Office is to maintain the quality of campus life by providing leadership and supervision for the division's staff and programs. The Dean's Office serves as an information resource and problem-solving center for students and faculty, for academic departments, and student organizations, and as an advocate for student concerns. The office provides support services for returning adult students; coordinates the university judicial system and mediation program; and represents the division to constituencies inside and outside the institution. The Dean of Students Office is located in 202 Student Services Building. Telephone: (616) 331-3585.

Mediation

Mediation is a non-judicial, confidential, and voluntary process that helps people resolve their own conflicts and design their own solutions with the assistance of a trained facilitator. Trained staff are available to help students resolve conflicts.

Returning Adult Students

The Dean of Students Office serves as a resource and referral service for returning adult students, generally defined as nontraditional students over the age of 25.

University Judiciary

The University Judiciary is responsible for informing students about their rights and responsibilities on campus. Grievance procedures and judicial referrals are available for handling students' concerns regarding university practices. Prompt and confidential investigations and resolutions of judicial cases are standard procedures. Filing a complaint does not affect a student's standing at Grand Valley.

The Student Code lists Grand Valley rules and regulations and outlines campus judicial processes. Persons 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 judiciary bodies made up of students, faculty, and staff.

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, staff, and their families on a walk-in basis. Services include (but are not limited to) the diagnosis and treatment of illnesses and accidents, school, sports and work physicals, gynecologic exams, birth control counseling, STD screening and treatment, allergy injections, flu shots, immunizations, TB testing, lab testing, and referrals. Physician assistants and nurses staff the center Monday through Friday.

The Children's Enrichment Center

The Children's Enrichment Center enriches the lives of Grand Valley's youngest students. Located on West Campus Drive, it serves young children ages 2.5 to 12, both 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. 895.4146 or visit the website at www.gvsu.edu/child/. Hours are from 7 a.m. to 6 p.m. Monday through Friday year round.

Counseling Center

The staff of the Counseling and Career Development Center (CCDC) provides students with counseling on personal issues such as relationships, anxiety, depression, self-awareness, eating disorders, personal wellness, and substance abuse. The staff also works with students who have questions concerning future career direction including assessing career interests through testing, deciding on a major, exploring change of major, and gathering information on different careers. Counseling is provided to students using individual and/or group sessions at no cost to enrolled students. In addition, various seminars and workshops are offered each semester to help students make more effective decisions, develop better coping skills, and learn to handle the challenges associated with being students. Seminars and groups cover such topics as stress management, assertiveness training, relationship skills, finding a major, developing personal wellness, and building self-confidence. Seminars are held in the Counseling and Career Development Center in 204 Student Services Building and in the Residence Hall - North C (please visit www.gvsu.edu/counsel for seminar topics and times). Staff members are available for appointments from 8 a.m. to 6 p.m. Monday through Thursday and from 8 a.m. to 5 p.m. on Friday at the Allendale Campus office. AT the DeVos campus, staff is available from 10 a.m. to 7 p.m. on Mondays, Tuesday from 11 a.m. to 6 p.m. Drop-in appointments are also available from 10:00 – 12:00 each morning and 3:00 – 4:00 in the afternoon at the Allendale campus.

Lesbian/Gay/Bisexual/Transgendered (LGBT) Center

The LGBT Resource Center at Grand Valley State University strives to make the institution an inclusive and supportive environment for all university community members, including lesbian, gay, bisexual, transgender, questioning, and intersex students and their allies. The center is known for its welcoming environment, wide variety of helpful resources, involvement of peers in center operations, and commitment to trusting relationships. The center offers a comfortable gathering space where students can meet, talk and study. A special feature is the LGBT library. Ongoing offerings of the center include various programs and activities, information about campus and community LGBT resources, initial contact regarding personal LGBT concerns, referral to specialized or professional resources when appropriate, place of contact for concern related to any biased incident, including LGBT, and a place to hang out in an LGBT friendly environment. The LGBT Resource Center is located in 161 Kirkhof Center. Telephone: (616) 331-2530. Website: www.gvsu.edu/lgbtrc/, Email: lgbtcenter@gvsu.edu.

Multicultural Affairs

The Office of Multicultural Affairs (OMA) is committed to building an inclusive campus that yields social harmony and learning vitality. Through diversity and multicultural education programs, OMA fosters an appreciation and respect for the history, tradition, culture and diversity of all people.

The OMA advocated for the academic success of students by creating an environment in which students can thrive and graduate. OMA is home to the four Multicultural Cohort Programs (MCP): Multicultural Business Education Cohort (MBEC), Multicultural Higher Education

Cohort (MHEC), Multicultural Science Education Cohort (MSEC), and Multicultural Teacher Education Cohort (MTEC). The MCP serve as community learning centers where students who pursue similar educational interests can connect, interact, and share their educational experience. Members of the MCP also benefit from the one-on-one relationships with the program coordinator. By coordinating services with academic and student services departments, the MCP offers a comprehensive learning opportunity to students including academic support, tutoring and mentoring, professional development, intercultural competency and community service. The objective of these programs is to provide students with a positive transition to Grand Valley and to successfully retain and graduate students.

OMA administers two college-preparation programs, Wade H. McCree Incentive Program and King-Chavez-Parks GEAR UP/College Day Program, to prepare underrepresented students in selected school districts for post-secondary education.

Visit the office at 1240 Kirkhof Center or contact us at 616-331-2177, oma@gvsu.edu or through our website, www.gvsu.edu/oma/.

Women's Center

The Grand Valley Women's Center mission is to create meaning learning about women and gender and to advocate for gender justice through the education, engagement, and empowerment of students and the greater GVSU community. The center creates an environment where students increase self-awareness, connect with resources, apply skills, conduct research, and perform service learning around gender equality. The Women's Center is committed to creating an environment in which the diversity of all students is affirmed and appreciated. In response, programs and services are offered in a variety of formats and on many topics. In addition to programs and services, the Women's Center is also a physical space that provides an area for people to relax in the lounge, complete academic work at study tables, seek resources from the information desk, host meetings, or check out books. The Women's Center is located in 1201 Kirkhof Center. Telephone (616) 331-2748, visit the website at www.gvsu.edu/women_cen, or email womenctr@gvsu.edu.

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, along with student Resident Assistants arranges 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, whenever possible, students are allowed to choose their roommates. The traditional-style living centers accommodate approximately 900 freshman students. Traditional-style living centers accommodate two people per room with semi-private bathrooms in the hallway for all floormates to access. Suite-style living centers accommodate 1,000 students. The centers are divided into suites consisting of two double rooms (for four students) and a shared bathroom. 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.

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/. Approximately 3,000 spaces in the living centers are reserved for freshmen; the remaining spaces are available for upper class students. All rooms are smoke free.

Dining

Campus Dining offers meal plans to all of Grand Valley's students. There are three room-and-board plans for residents including the 10 Plus, 14 Plus, and 19 Plus. Additional plans are available for students living on and off campus. Meals are served in Kleiner, Fresh Food Company, Fuel, River Landing, Engrained and at the Plaza Café in the DeVos Center.

Kleiner:

- Marketplace: Flat Tops, Asian Kitchen, Montague's Deli, Pizza and Pasta.
- C3 Convenience Store: snacks, produce, frozen foods, breads, health and beauty items. Late night meals available daily, 10pm – 2am.
- Java City: espresso, cappuccino, specialty coffee drinks and blended drinks.

Commons:

- Fresh Food Company, upper level: a wide variety of entrée choices, from baked salmon and made-to-order pasta to steamed vegetables and Laker Bowls.
- Einstein Bros. Bagels, upper level: fresh baked bagels, gourmet breakfast sandwiches and a very tempting lunch menu.
- Fuel, lower level: four stations including: Bleecker Street, Jump Asian Cuisine, Freshens Energy Zone and Papa John's Express.

Kirkhof Center:

- River Landing, lower level: Crouton's, pizza and pastas, Zoca, Flat Tops, Subway and Sushi.
- The Lobby Shop, main level: featuring Java City Coffee and specialty drinks, Freshens Smoothie Co. and Convenience Store.

The Connection:

- Engrained: a sustainably rich restaurant with a rotation of entrees, made-to-order salads and deli.
- P.O.D.: an integrated market and c-store with many quick serve items and full coffee shop.
- Papa John's Pizza: carryout or delivery, late night hours, convenient online ordering.

Mackinac & AuSable Halls:

- C3 Express: freshly brewed coffee, beverages, fruits, snacks, fresh sandwiches and many other grab 'n' go options.

DeVos Center, downtown Pew Campus:

- Gazebo Market: salads, wraps, smoothies, sushi, snacks.
- Plaza Café: Flat Tops, sushi, salad and soup.
- Starbucks: salads, sandwiches, bakery items and coffee drinks.

Meal plans and Dining Dollars are accepted at all Campus Dining locations including c-stores, coffee shops, restaurants, and C3 Express locations. Further details regarding Campus Dining are available at www.gvsufood.com/.

Apartments

Grand Valle has apartment living available on both our Allendale Campus and the Robert C. Pew Campus in Grand Rapids. 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

Student Life and Services

in the complex, along 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. Each apartment has 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 Campus range from one-, two-, three-, four-bedroom, and single/double efficiency units. Secchia Hall units are partially furnished with a couch and a chair. Winter Hall is fully furnished and offers an on-site fitness center. Students residing here may also select a meal plan at an additional cost.

Family Housing is available for eligible students and requires a three semester contract/commitment. We offer two bedroom units on our Allendale Campus and limited availability in Secchia Hall one bedroom units. Furniture is not provided in Family Housing.

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/.

Housing Application Process

New students who want to live on campus should apply to the Office of Housing and Residence Life upon acceptance to GVSU. All first-year students are encouraged to apply before March 1 for the fall semester in which they plan to attend. Spaces are filled on a first-come, first-served basis. In order 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/.

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 online at our website.

Other Housing

Other 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 but does provide, solely as a service to students, a listing of available housing at www.gvsu.edu/housing/. The university will not knowingly list substandard housing but it does not inspect the units available, and students are advised to exercise normal caution in making rental agreements.

Department of Public Safety

The Department of Public Safety is a full-service law enforcement agency on the Allendale Campus. The department is charged with the responsibility of enforcing all state and local laws as well as university rules and regulations. Public Safety officers have full police authority and are licensed by the Michigan Commission on Law Enforcement

Standards. Allendale Fire Rescue provides campus with medical first aid support as well as fire response. The department maintains a Lost and Found Bureau and a Parking Violations Bureau and approves drivers for operating state vehicles. The department is located in the Service Building at the north end of campus. Telephone (616) 331-3255.

Public Safety Liaison Committee

The Grand Valley State University Public Safety Liaison Committee is an oversight committee for the Grand Valley State University Department of Public Safety, created under the authority of Act 120 of the Public Acts of 1990 of the State of Michigan.

The primary function of the committee is to consider grievances by persons with complaints related to the Department of Public Safety and its personnel. The Public Safety Liaison Committee is comprised of individuals nominated and elected by the faculty, students, and staff of Grand Valley State University as determined by the university president. The committee includes a minimum of two students, two members of faculty, and two members of staff who are neither members of faculty nor the public safety department. The director of Public Safety serves as an ex-officio and non-voting member. The committee encourages complainants to first attempt informal resolution of any dissatisfaction by working with the Grand Valley State University Department of Public Safety. For more information, please contact the Public Safety Liaison Committee at www.gvsu.edu/publicsafety/.

Parking

Approximately 8,100 parking spaces are available in 16 lots on the Allendale Campus and 3,000 spaces in 12 lots on the Robert C. Pew Grand Rapids Campus for students who wish to drive their cars to Grand Valley. Anyone wishing to park on the Allendale or Pew campus must have a parking permit. Permits for resident or commuting students can be ordered electronically at www.gvsu.edu/publicsafety/. The permit cost will be charged to the student's account.

Visitors to the Allendale campus can obtain a free visitor permit from the Department of Public Safety office located in the service building on the north end of campus. When visiting the Robert C. Pew campus, free visitor permits are available from the security office in the L.V. Eberhard Center. There is also metered parking available on both campuses.

Transportation Services

Transportation between, within, and around the Robert C. Pew Grand Rapids Campus and Allendale Campus is easy and convenient with the variety of shuttle service options available. Grand Valley State University offers five separate routes for students, faculty, and staff.

Campus Connector Route

Grand Valley State University's Campus Connector provides service between Allendale and Grand Rapids with runs Monday through Friday during the fall, winter, spring, and summer semesters. The Campus Connector makes round trips from the Pew Campus to the Kirkhof Center on the Allendale Campus with stops along Lake Michigan Drive and at Mackinac Hall.

CHS Express Route

The CHS Express provides service between the main Campus Connector stop on the Pew Campus and the Cook-DeVos Center for Health Sciences (CHS). The CHS Express runs Monday through Friday during the fall, winter, spring and summer semesters. Parking for all students attending class at the Center for Health Sciences is located in Grand Valley's Seward parking ramp at the corner of Lake Michigan Drive and Seward Avenue on the Pew Campus.

North Campus Apartment Shuttle

The Off-Campus Apartment Shuttle provides service between a variety of private apartment complexes immediately adjacent to the northwest portion of the Allendale campus and the Kirkhof Center. The North Campus Apartment Shuttle runs Monday through Friday during the fall and winter semesters only.

South Apartment Shuttle

The South Campus Express provides service between a variety of private apartment complexes immediately adjacent to the southwest portion of the Allendale Campus and the Kirkhof Center. The South Campus Apartment Shuttle runs Monday through Friday during the fall and winter semesters only.

Weekend Connector

The Weekend Connector combines all four other routes - The Campus Connector, CHS Express, the North Campus Express, and the South Campus Express into one continuous loop. It also provides service to the Rapid Transit Center for easy transfers to the Rapid system. The Weekend Connector runs Friday evening to Sunday evening each weekend during the fall and winter semesters only.

Schedules and frequencies for all services are subject to change, so please review current schedules at www.gvsu.edu/transportation/. Please note that frequencies of service are reduced during the spring/summer semesters as well as GVSU break periods. Questions about the shuttle bus services should be directed to the Robert C. Pew Grand Rapids Campus Operations Office at (616) 331-6700 or to bus@gvsu.edu.

ACES (Alcohol Campus Education Services)***Counseling and Career Development Center***

Because dangerous drinking affects us all, ACES is devoted to promoting and developing opportunities for students to increase existing knowledge and skills necessary to make healthy choices regarding alcohol and other drugs.

ACES is a multi-component and multi-disciplined program housed in the Counseling and Career Development Center. It addresses the needs of individuals who want to be informed about the facts regarding alcohol, may themselves be struggling with alcohol or other drugs issues, or are concerned or impacted by someone else's behaviors and wish to help. The program 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 by using the contact information listed below. We also facilitate the ACE's Group, an educational session provided to students who have had their first alcohol offense and who are required to attend an educational group as a part of their sanction.

Students who are in need of substance abuse counseling, assessment, or have had two or more alcohol offenses may access counseling services at the Counseling and Career Development Center located in Student Services Building, Room 204 (616) 331-3266 www.gvsu.edu/counsel/. The Counseling Center has several staff members who specialize in outpatient substance abuse counseling. Counseling Center staff can provide referral information if more intensive services are deemed necessary. Counseling services are free for currently enrolled Grand Valley students, however, there is a fee for court-ordered evaluations (please contact the Counseling Center for the most current information).

The ACES office also coordinates on-campus 12-Step Meetings for students in recovery. These meetings are offered daily and are held at our

office (10383 B 42nd Avenue). These groups are open to students, faculty, staff, and community members. The most current schedule can be found on our website www.gvsu.edu/aces/. We also keep a current listing of other local recovery services and agencies.

For more information, or to request a presentation, please contact us at (616) 331-2537 or at aces@gvsu.edu. You may also drop by our office at 10383 B 42nd Avenue, please see our website www.gvsu.edu/aces/ for current office hours.

Pew Student Services

The Robert C. Pew Campus Student Services Office coordinates activities with academic and non-academic 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 department seeks to identify student needs to find solutions that enhance learning and provide opportunities for involvement. It also coordinates orientation for newly admitted graduate students. For information visit the website www.gvsu.edu/pewcampus or call (616) 331-7220.

Working closely with students, faculty, and staff, including the offices of Dean of Students, Graduate Studies, Student Life, Multicultural Affairs, Women's Center and other stakeholders, our goals are to enhance learning, involve students, and help maintain a sense of community, fostering more opportunities for all students.

Within Pew Campus Student Services, students can obtain assistance in areas such as admissions, career planning and job seeking, counseling, disability support services, financial assistance, military veterans support, and study abroad programs. Additionally, undergraduate academic advising and other services are provided to business students through the Seidman College of Business Student Services department. Similar services for undeclared majors and specified programs are also available from representatives of the Advising Resource and Special Programs office.

The Advising Resource department also provides tutoring, writing, and testing services, including the WRT 305 assessment, College Level Examination Program (CLEP), and accommodated testing for students with disabilities through the Office of Academic Support.

For information regarding downtown tutoring services and hours, call (616) 331-6407; to request a WRT 305 assessment, call (616) 331-3588; finally, downloadable CLEP registration forms are available online at www.collegeboard.com/student/testing/clep/reg.html or call (616) 331-3588.

Academic Support Services**College of Community and Public Service Advising Center**

The College of Community and Public Service Advising Center provides advising assistance and information to current and prospective undergraduate students in the School of Criminal Justice (criminal justice and legal studies majors and minors), School of Public and Nonprofit Administration, School of Social Work, and Hospitality and Tourism Management department.

The center provides comprehensive, centralized services to assist students with: degree planning including general education and major or minor requirements; development and review of degree progress plans; personalized course selection assistance; dissemination of Grand Valley policies and procedures, outreach and support to students in academic jeopardy; assistance with the creation of long-term goals; and referrals to faculty mentors in the academic programs or other university resources.

Student Life and Services

The advising center is located 261C DeVos Center. There is also a satellite office in Allendale. More information is available on the Web at www.gvsu.edu/ccpsadvising/. Contact the office by telephone at (616) 331-6890 or by email at ccpsadvisor@gvsu.edu for hours of availability or to schedule an advising appointment.

The College of Education: Student Information and Services Center

The College of Education: Student Information and Services Center provides advising and information that supports undergraduate and graduate students through a variety of transitions within the College of Education.

The center provides centralized services for: admitting students into the undergraduate and graduate schools of education; placing teacher assistants and student teachers in the field; providing informational advising at both the undergraduate and graduate levels; and teacher certification.

The College of Education: Student Information and Services Center is located at 101 Eberhard Center, (616) 331-6650.

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 and transfer orientation;
- Assisting in the development of an achievable academic plan;
- Disseminating Grand Valley State University 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 pre-professional programs such as pre-medical, pre-dental, pre-pharmacy studies and many other post-baccalaureate 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 non-traditional students and students returning to GVSU 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: clasadv@gvsu.edu.

Additional information can also be found on the center's website: www.gvsu.edu/clasadvising/.

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, and a walk-in center available for students with papers in all GVSU classes, particularly Supplemental Writing Skills courses. Students 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, Pew, and Holland campuses. Follow us on Twitter at: twitter.com/GVWritingCenter.

Math and Science Student Support (MS³)

Math and Science Student Support is an academic assistance and enrichment program offered in the Learning Center, located in room 377 of the Seymour and Esther Padnos Hall of Science. We offer academic support and problem-solving assistance for all students interested in the fields of mathematics and science. Our student facilitators, successful upper level students in biology, chemistry, biomedical sciences, mathematics, and physics, assist students by forming study groups, providing problem-solving assistance, and connecting students to other appropriate support services on campus. The Learning Center provides an area for both group and independent studying. The goal of MS³ is to assist students in the transition to upper-level science and mathematics courses. Additional information for the academic support program, can be found at www.gvsu.edu/clasadvising/.

Structured Learning Assistance

Structured Learning Assistance (SLA) is an academic support program within science and mathematics that is attached to historically difficult courses. It is available to all interested students. SLA features weekly study and practice workshops in which students' master course content to develop and apply specific learning strategies. The workshops are led by trained facilitators, who in collaboration with faculty, develop the workshop materials. These sessions meet from one to three hours per week throughout the semester and are optional once the student achieves a grade of C or higher in the course. The additional hours are formally attached to the student's schedule and are offered at no additional charge.

Transitions Fall Orientation: Transitions is a four day program for all first year students the weekend before school begins each fall. Transitions Leaders are Grand Valley student leaders who facilitate Grand Valley traditions, academic sessions and campus knowledge to groups of first year students. Through the program they participate in large and small groups to become acquainted with Grand Valley.

Business Advising: Seidman Undergraduate Student Services

Seidman Undergraduate Student Services' mission is "to facilitate business students' successful progress through graduation." This office provides all routine advising for program requirements and course sequencing for undergraduate business students. Students are encouraged to maintain contact with the office for support in meeting all graduation requirements. The office is located in 101B DeVos Center, and can be contacted via email at go2gvbiz@gvsu.edu, or via telephone at (616) 331-7500. Appointments and walk-ins are accepted at the Richard M. DeVos Center. Appointments are also offered in Allendale during the fall and winter semesters.

Inclusion and Equity Division

The mission of the Inclusion and Equity Division is to provide leadership in the development and implementation of a university-wide integrated approach to enhancing diversity awareness and intercultural competency for students, faculty, and staff. The division is made up of three offices:

The Affirmative Action Office provides leadership to the campus for all facets of promoting and monitoring equal opportunity and affirmative action. It develops and monitors institutional goals and plans related to all equal opportunity compliance obligations of the university. The Affirmative Action Office works with campus community to define connections between unit plans and affirmative action goals and provides guidance and monitors the hiring activities of the university to improve recruitment and retention of under-represented groups. The office is responsible for developing training and education programs on affirmative action and equal opportunity laws, policies, and procedures, as well as issues of sexual harassment and discrimination and investigates and resolves discrimination complaints. It is also responsible for data analyses

and reporting, ongoing communication, and updating of the university's Affirmative Action Plan.

Disability Support Services

Grand Valley State University is committed to providing access to programs and facilities for all students, faculty, and staff. 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 disabilities upon request. The office is in 200 Student Services Building and can be reached by calling (616) 331-2490.

Intercultural Training Office

Intercultural Training Office at Grand Valley State University is committed to creating a campus climate that is welcoming and inclusive. The office initiates, designs, delivers and evaluates training and development programs related to enhancing diversity awareness and building intercultural competency skills. It supports colleagues and departments in learning to manage diversity by utilizing best practices that align values, guiding principles, and a commitment to equal opportunity. The office also fosters an environment for open communication through public opportunities to dialogue about race, gender, sexual orientation, disabilities, and other dimensions of diversity to promote understanding between cultures.

Please visit www.gvsu.edu/inclusion for more details.

Community Resources

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.
- 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; and
- (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 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 at their website: www.gvsu.edu/wri/.

Autism Education Center

The mission of the Autism Education Center (AEC) is to give professionals and parents the knowledge and skills to support individuals with autism spectrum disorder in reaching their greatest potential. The center is committed to developing and supporting the use of effective practices such as early, individualized, and systemic interventions that are empirically supported and evaluated, and that partner the family, health care, and educational professionals to ensure appropriate support and services in a range of settings.

The center offers resources and training through its Statewide Autism Resources and Training Project (START). START includes a Resource Center, Intensive Training, and Model Demonstration sites. The START Resource Center is comprised of a reference and lending library with books, videotapes, and curriculum materials, in addition to a website that provides project information and links to information on autism. START also sponsors conferences for professionals and family members. Intensive Training is offered to school based teams and tailored for each school program based on the individual needs of that site. Training is provided using an autism curriculum framework that addresses key competency areas, along with partnering of parents and community. The Model Demonstration sites offers intervention, assessments, and curriculum that are deemed most effective for individuals with autism spectrum disorder and serve as models for replication, regional resource centers, and local experts. Regional collaborative networks are supported to coordinate linkages among schools systems, agencies, organizations, and universities in each region of the state.

The Autism Center website is www.gvsu.edu/autismcenter/.

In addition, the Autism Education Center participates in a statewide Autism Collaborative Endorsement (ACE) program. The ACE program involves six universities working together to deliver an Internet-based endorsement program for teachers of students with autism. Certified teachers with at least one prior endorsement in special education are eligible to participate in this program.

For eligibility criteria and to apply as an ACE student please visit the website at <http://ace.mivu.org/>.

Business Resource Portal

The Grand Valley State University Business Resource Portal is one of the most comprehensive business support networks in Michigan, dedicated to sharing knowledge, expertise, and opportunities within the West Michigan business community and beyond.

Community Resources

Visit www.gvsu.edu/businessresource and search the directory by service category or by organization to tap into a wide variety of intellectual, technical, and human resources available through Grand Valley and its affiliated organizations.

The Center for Scholarly and Creative Excellence (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, assistance in finding collaborations, and publishing as a scholar.

In addition, the CSCE provides funding to help support faculty and faculty-mentored scholarship. Guidelines and forms for all grants are available on the CSCE homepage (www.gvsu.edu/csce). The CSCE has locations on both the Grand Rapids and Allendale Campuses. They can be contacted at (616) 331-2281.

Continuing Education

Where traditional learning ends, Continuing Education begins. Through an ever-changing ever-evolving array of programs, the Office of Continuing Education helps the university expand beyond the classroom to build communities of lifelong learners that 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 Continuing Education 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 exchange.

Led by university faculty 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/.

Professional Development

The Office of Continuing Education 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 while public programs are offered at our regional campus or site locations. 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/.

The Professional Development Partnership Program (PDP)

Coordinated through the Office of Continuing Education, 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 CEU's 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/pdp/.

Center for Scholarly and Creative Excellence

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In addition, the CSCE provides funding to help support faculty and faculty-mentored scholarship. Guidelines and forms for all grants are available on the CSCE homepage (www.gvsu.edu/csce). The CSCE has locations on both the Robert C. Pew Grand Rapids and Allendale campuses. They can be contacted at (616) 331-2281.

Hauenstein Center for Presidential Studies

The mission of the Hauenstein Center at Grand Valley is to advance discussion of the U.S. presidency among scholars, government leaders, student leaders, and the public.

Inspired by Ralph Hauenstein's vision, the center runs a leadership academy for students and young professionals committed to public service.

Through lectures, debates, and conferences, the center brings some of the nation's greatest scholars and writers to Grand Rapids to discuss U.S. presidents and their impact on domestic and world affairs. C-SPAN has covered two of its conferences, and the 2005 *War and Empire* debate was Web cast live to more than 3,500 viewers in 18 countries.

As a public service, the center features allpresidents.org - one of the fastest-growing websites in the nation devoted to the study of U.S. presidents. The Hauenstein Center works in partnership with the Gerald R. Ford Foundation and the Gerald R. Ford Presidential Library and Museum.

Dorothy A. Johnson Center for Philanthropy and Nonprofit Leadership

The Dorothy A. Johnson Center for Philanthropy was established in 1992 with support from the W.K. Kellogg Foundation. The Johnson Center serves nonprofits, foundations, and others that seek to transform their communities for the common good, and is adapting constantly to changing conditions.

The Johnson Center accomplishes this in three ways:

- Academically, by encouraging the civic engagement of students and faculty. As a public service and as a resource for classroom studies, the Johnson Center (www.johnsoncenter.org) provides resources for improving nonprofit leadership and management and assisting with acquisition of new community and regional information and technical skills. The Johnson Center supports university efforts to promote the study of philanthropy and nonprofit leadership. The Dorothy A. Johnson Library Archives and Special Collections serve as a resource for scholarly research by students, staff, faculty, and community members.
- Locally, by improving the quality of nonprofit leadership and management and community decision making in West Michigan. The Johnson Center's seminars and workshops support the development and networking of nonprofit leaders. The Community Research

Institute (www.cridata.org) provides innovative applied research and data for decision-making to assist communities in assessing their needs, forecasting trends for effective problem solving, and measuring the social impact of programs and services.

- Nationally, by enhancing the impact of foundations and nonprofit organizations. The Grantmaking School (www.grantmakingschool.org) is the first university-based continuing education program to teach principles of advanced grantmaking to foundation program officers; The Frey Chair for Family Philanthropy (freychair.johnsoncenter.org) is the nation's first endowed chair focusing on family philanthropy. The chair supports the Johnson Center's work in increasing the effectiveness of grantmakers and the nonprofit sector in Michigan and through national leadership. The Foundation Review (www.foundationreview.org) is the first peer-reviewed journal of philanthropy, written by and for foundation staff and boards. The journal strives to share evaluation results, tools, and knowledge about the philanthropic sector in order to improve the practice of grantmaking.

The Michigan Alternative and Renewable Energy Center (MAREC)

The Michigan Alternative and Renewable Energy Center (MAREC) is the first fully integrated Gold Certified LEED demonstration facility for distributed generation of electricity. Its power generation utilizes a 30 kW combine heat power micro turbine, a 30 kW photovoltaic solar roof, and a 1.8 kW skystream wind generator.

The MAREC center is also an energy technology and business incubator that promotes the development of business ventures in Muskegon and the lakeshore region. MAREC has 4,000-square-feet of space devoted to incubating businesses that focus on innovative development of advanced energy technologies. Incubator tenants are chosen based on their capacity to be a catalyst for economic development and job growth in the area. Currently there are three privately funded start-up companies located at MAREC.

In 2006, MAREC received a one-million dollar grant from the Michigan Public Services Commission to build a bio digester plant that converts animal manure to methane gas and subsequently to electricity. The plant is located in Ravenna, MI and has been operational since 2007. Bio digester plants are a key initiative in aiding the dairy farm businesses in meeting the stringent environmental requirements by converting the green house gas methane to electricity, eliminating hydrogen sulfide emissions, and producing near pathogen free fertilizer.

More recently, MAREC has received federal and state grants to develop an offshore wind energy research project in Lake Michigan. Working in partnership with the University of Michigan, private stakeholders and the Michigan Great Lakes Wind Council, MAREC will lead the effort to develop a greater understanding of offshore wind technology. In addition, MAREC contributes to Grand Valley's efforts to develop interdisciplinary alternative energy education within its campus and in collaboration with Muskegon Community College.

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 pre-college students. Pre-service 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, Elementary Science Olympiad 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.

The Kutsche Office of Local History

The Kutsche Office of Local History is a humanities-based learning initiative that blends academics with service. The office offers students studying in all disciplines an opportunity 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 under-recognized 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.

The Robert and Mary Pew Faculty Teaching and Learning Center

The Robert and Mary Pew Faculty Teaching and Learning Center supports faculty efforts to achieve teaching excellence. The Center presents programs throughout the calendar year, including workshops, mentoring programs, conferences, and consultations. Its directors offer leadership on teaching and learning issues across the university with a particular emphasis on teaching within a liberal education context. The Pew FTLC also provides tangible support and recognition of teaching excellence through a grants program and the campus-wide Pew Teaching Awards. The Pew FTLC is located in 324 Lake Ontario Hall.

Seidman Business Services

Center For Entrepreneurship

The Center for Entrepreneurship at the Seidman College of Business serves to promote, preserve, influence, and impact students, faculty, and the community through quality academic research, curriculum, and information services in the field of entrepreneurship. The Center plays an integral role in the development and oversight of the Entrepreneurship Minor, Certificate, and other curricular programs. It also supports the student Collegiate Entrepreneur Organization, the idea Pitch Competition, the Teen ENT Summer Academy, and the SCB Business Plan Competition. The center is a catalyst in the cross-disciplinary development of research and curriculum throughout the university serving to bring business and nonbusiness faculty and students together to foster the transfer of ideas into commercialized ventures. Further, it fosters the interaction and coordination of programs with local business organizations. The ENT website, www.gvsu.edu/ent/, provides a full description of the entrepreneurial activities of the Center.

Center for Business Ethics

The center provides a forum for members of the local business community and Grand Valley faculty 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 interested in participating in the dialog groups should contact Robert Frey.

Family Owned Business Institute

Grand Valley's Family Owned Business Institute's mission is to promote, preserve, influence, and impact family businesses through quality academic research, curriculum development, and the delivery of information services. 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. FOBI's website, <http://fobi.gvsu.edu> is designed to facilitate the quick and complete search for information within the family-owned business field. A family business Hall of Fame, permanently displayed in the Hager-Lubbers Exhibition Hall, honors those prominent West Michigan family businesses that have been instrumental in the leadership of their industry and community.

MI-Small Business Technology Development Center-Region 7

The Michigan Small Business Technology Development Center (MI-SBTDC) provides no-cost counsel, training, market research, and advocacy for small businesses in Kent, Ottawa, and Muskegon counties. It is a partnership between the U.S. Small Business Administration and Grand Valley. Companies receive business consultation services from an experienced team. Examples of assistance provided include: business plan development for funding, developing growth strategies, understanding cash flow/finance issues, marketing their products/services, and many other areas of business. Visit their website at: www.misbtcd.org/region7/.

MI-Small Business Technology Development Center State Headquarters

In 2001, Grand Valley was awarded the State Headquarters for the Michigan Small Business Technology Development Center (MI-SBTDC). As host of the MI-SBTDC State Headquarters, the Seidman College of Business oversees the twelve-region MI-SBTDC network. Entrepreneurs and small business owners may access the services of their nearest MI-SBTDC by calling (616) 331-7480. The state website is: <http://www.misbtcd.org/>.

Seidman Information Services

Often organizations need information and market research and are not quite sure where to find it. Seidman Information Services, for a small fee, will find the data. They also annually produce a publication called *Demographic Profile for the Grand Rapids and Lakeshore Areas*. Portions of the publication can be viewed at www.gybizinfo.com. It is available for purchase or can be found at most public libraries.

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 for the entire Lake Michigan shoreline area. The USEAC is housed at the Seidman College of Business at Grand Valley.

Van Andel Global Trade Center

The Van Andel Global Trade Center is housed under the Seidman College of Business.

Mission, Objectives, and Activity Summary

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. Founded in 1999 and located in the Richard M. DeVos Center on the Pew Grand Rapids Campus, the center accomplishes its mission by creating, developing, and offering programs and services that meet the needs of the Michigan community.

The objective of the Van Andel Global Trade Center is to be recognized worldwide as the most effective source of international information, training, and assistance services for the business and academic communities in Michigan. The VAGTC enters into strategic partnerships with members of the University and the business community to accomplish its objectives.

VAGTC services include a series of seminars, workshops, certificate programs, and conferences encompassing many different international business topics. In addition, the center provides vital customized import/export and foreign investment consulting services for small and medium sized companies. The center has global reference materials for international trade resources. The VAGTC has a corporate membership program that offers high value, high quality services to companies within Michigan and beyond.

The VAGTC has offered training programs in eight different states, and has provided training to over five-thousand employees. Since its inception in 1999, the VAGTC has offered consulting services to over 350 companies in the Michigan area. With a fast growing membership base, the VAGTC is poised to continue expanding its service area.

For students, the center is a training ground for working in the international arena. The center uses students to accomplish many of its objectives, and also provides a conduit for international careers through internships with its client companies.

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 region through international business

Services to the Community include:

- Consulting services, training services, resource development, and facilities
- Cultural education, language center and matchmaking/trade missions/business development
- Foreign visits and speaker series, information collector and broker, and intermediary of businesses
- Advocacy, service provider broker, statewide resource center and research provider

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 international business competition.

While leading Amway to record growth through international expansion, Jay Van Andel became convinced that the global marketplace would be pivotal in enhancing the prosperity of the region where he began his business. Recognizing that the Richard M. DeVos Center would be a focal point for international business education and activity, Mr. Van Andel became a major benefactor of the building where the VAGTC resides. 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 entrepreneurs.

Kent-Ottawa-Muskegon Foreign Trade Zone

The Van Andel Global Trade Center is home to the Kent-Ottawa-Muskegon Foreign Trade Zone (KOM-FTZ, #189). The center serves as the grantee administrator for the zone; related activities include marketing, strategic planning, administration, and zone support. The KOM-FTZ maintains a board of twelve individuals, three each from Kent, Ottawa, and Muskegon counties and three from Grand Valley State University. A Foreign Trade Zone is a secure and enclosed area, considered to be outside of the United States for purposes of Customs duty payments.

West Michigan Science & Technology Initiative

The West Michigan Science & Technology Initiative (WMSTI) at GVSU is dedicated to creating an environment that advances innovation and supports the commercialization of life science products and technologies.

The mission of WMSTI is to 1) build necessary life science industry support infrastructure; 2) provide commercialization and new business development services; 3) establish a seamless collaborative network of researchers, entrepreneurs, business service providers, and capital; and 4) educate regional leaders on how to best leverage West Michigan’s strengths into a productive and sustainable life sciences industry cluster.

The West Michigan Science & Technology Initiative is located at the Cook-DeVos Center for Health Sciences, office 536. WMSTI can be reached at 331-5859, or www.wmsti.org/.

Academic Degrees at Grand Valley

Degree Titles

- 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.**
- Doctor of Nursing Practice: D.N.P.**
- Doctor of Physical Therapy: D.P.T.**
- Educational Specialist: Ed.S.**
- 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 Public Administration: M.P.A.**
- Master of Physicians Assistant Studies: M.P.A.S.**
- 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.**
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- Master of Social Work: M.S.W.**

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Course Prefixes

(AAA) African/African American Studies
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 (ANT) Anthropology
 (ARA) Arabic
 (ARC) Archaeology
 (ART) Art
 (ATH) Athletic Training
 (BIO) Biology
 (BMS) Biomedical Sciences
 (BUS) Business
 (CAP) Advertising and Public Relations
 (CBR) Broadcasting
 (CFV) Film and Video
 (CHI) Chinese
 (CHM) Chemistry
 (CHS) Chinese Studies
 (CIS) Computer Information Systems
 (CJ) Criminal Justice
 (CJR) Journalism
 (CLA) Classics
 (CLS) Clinical Laboratory Science
 (CMB) Cell and Molecular Biology
 (COM) Communications
 (CPH) Photography
 (CTH) Theatre
 (DAN) Dance
 (EAS) East Asian Studies
 (ECO) Economics
 (ED) Education
 (EDC) Education Counseling
 (EDG) Education General
 (EDH) Education Higher Ed
 (EDL) Educational Leadership
 (EDR) Education Reading
 (EDS) Education Special Ed
 (EDT) Education Technology
 (EGR) Engineering
 (ENG) English
 (ENS) Environmental Studies
 (ENT) Entrepreneurship
 (ESL) English as a Second Language
 (FIN) Finance
 (FRE) French
 (GEO) Geology
 (GER) German
 (GPY) Geography
 (GRK) Greek
 (HBR) Hebrew
 (HNR) Honors College
 (HPR) Health Professions
 (HSC) History of Science

(HST) History
 (HTM) Hospitality/ Tourism Management
 (ICE) Intercultural Competence Experience
 (IR) International Relations
 (IS) International Studies
 (ITA) Italian
 (JPN) Japanese
 (KOR) Korean
 (LAS) Latin American Studies
 (LAT) Latin
 (LIB) Liberal Studies
 (LS) Legal Studies
 (MAT) Music, Art, Theatre
 (MES) Middle Eastern Studies
 (MGT) Management
 (MKT) Marketing
 (MOV) Movement Science
 (MTH) Mathematics
 (MUS) Music
 (NRM) Natural Resources Management
 (NUR) Nursing
 (OSH) Occupational Safety & Health
 (OT) Occupational Therapy
 (PA) Public Administration
 (PAS) Physicians Assistant Studies
 (PED) Physical Education
 (PHI) Philosophy
 (PHY) Physics
 (PLS) Political Science
 (POL) Polish
 (PSM) Professional Science Masters
 (PSY) Psychology
 (PT) Physical Therapy
 (RAD) Radiation Sciences
 (REC) Therapeutic Recreation
 (RI) Radiology Informatics
 (RIE) Radiologic and Imaging Sciences - Echocardiography
 (RIR) Radiologic and Imaging Sciences - Radiology
 (RIS) Radiologic and Imaging Sciences
 (RIT) Radiologic and Imaging Sciences - Therapy
 (RIU) Radiologic and Imaging Sciences - Ultrasound
 (RST) Russian Studies
 (RUS) Russian
 (SCI) Science
 (SOC) Sociology
 (SPA) Spanish
 (SS) Social Science
 (SST) Social Studies
 (STA) Statistics
 (SW) Social Work
 (US) University Studies
 (WGS) Women and Gender Studies
 (WRT) Writing

Academic Programs

Accounting

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/index.cfm

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.

Career Opportunities

Public Accounting

As trusted business advisors, accountants offer a broad array of services to help their clients become more successful, such as determining the value and market price for their initial stock offerings; establishing the value of estates and monitoring their distribution; investigating white collar crimes, security violations, and fraud; and auditing financial information and preparing tax returns. Public accountants work on a fast track that can lead into a variety of career opportunities.

Industry or Management Accounting

Corporate accountants enjoy a rewarding career working inside large corporations. They assist managers in evaluating their company's operations and manage strategies using concepts such as target costing and activity-based management.

Governmental Accounting

Opportunities include dynamic careers at the federal, state, and local levels. Governmental accountants protect the interests of citizens by uncovering fraud and embezzlement, identifying waste and abuse, overseeing the nation's security markets, and helping to collect taxes.

Bachelor of Business Administration in Accounting

Requirements for the B.B.A.

Cognate Degree Requirements

- CIS 150 - Introduction to Computing 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
- 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: 3
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates 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 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 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. However, at least 60 hours of the total program must be in nonbusiness courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as nonbusiness credit.

Requirements for a Major in Accounting

Accounting majors must complete all requirements for the B.B.A. degree (the business core, the cognate requirements, three business electives and one ethics requirement course) and take an additional 19 credit hours, as follows:

All of the following:

- 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

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. 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. Participation in the study-abroad ACC 330 course is recommended. Internships are strongly encouraged.

Specific requirements for the CPA-certification can be obtained by visiting the Michigan State Board of Accountancy website at http://www.michigan.gov/cis/0,1607,7-154-10557_12992_13878-40080-,00.html

or www.nasba.org/nasbaweb.nsf/exam. Specific requirements for the CMA certificate can be obtained by visiting the Institute of Management Accountants website at <http://www.imanet.org/ima/index.asp>.

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.

There are no prerequisites required for admission to the M.S.A. program, although foundation courses are required prior to 600-level course work as described below.

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 accredited college or university. These credits may be substituted for required courses, area of emphasis courses, or general elective credit as determined by the program director. To be considered for transfer, coursework must have been taken within five years of admission to the M.S.A. 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.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.B.A. program is offered in the Pew Campus DeVos Center in downtown Grand Rapids, Michigan.

Website: www.gvsu.edu/msa

Graduate Outcomes/Time to Program Completion

The Seidman faculty has identified the following learning objectives for M.S.A. students, and objectives are assessed regularly to ensure that they are being achieved:

Seidman M.S.A. graduates will be:

- Be technically competent
- Be effective accounting researchers
- Be effective communicators
- Be internationally literate
- Use enterprise systems to enhance accounting competencies
- Be prepared to recognize and respond to ethical questions encountered in the practice of accounting.

Requirements for the M.S.A. in Accounting

The M.S.A. program consists of 33 semester hours of 600-level coursework. Foundation work equivalent to the undergraduate business core must also be completed. Students who have completed an undergraduate business degree will have completed some or all of the foundation. Students who have undergraduate degrees with nonbusiness majors may need up to 18 semester hours of accelerated foundation courses.

Foundation Courses

Foundation requirements may be met by completion of either the 500-level accelerated courses or the undergraduate courses as indicated below:

Background Area	Background Course	GVSU Undergraduate Course(s)
Information Systems	MGT 510 - Principles of Mgt Information Systems	MGT 268 (3 credits)
Accounting	ACC 511 - Financial and Managerial Accounting Concepts	ACC 212 and 213 (6 credits)

Statistics	FIN 521 - Data Analysis in Business	STA 215 (3 credits)
Finance	FIN 522 - Finance Principles for Managers	FIN 320 (3 credits)
Legal Environment	BUS 531 - Legal Environment of Business	BUS 201 (3 credits)
Economics	ECO 542 - Economic Reasoning	ECO 210 and 211 (6 credits)
Marketing	MKT 551 - Marketing Management: Principles and Institutions	MKT 350 (3 credits)
Operations	MGT 561 - Production and Operations Management	MGT 366 (3 credits)

The relationship between foundation requirements and the M.S.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 above 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 foundation requirements is provided each student at the time of admission.

The M.S.A. is a program designed for both full-time students and working professionals. Classes are offered in the evenings and afternoons. The M.S.A. can be completed in three semesters of full-time study if the student has completed all foundation requirements and attends full time.

Program Curriculum

All M.S.A. students must complete at least 33 credits at the 600 level, including the following three-credit graduate accounting courses:

- ACC 607 - Ethics for Accountants Credits: 3
- ACC 613 - Financial Statement Analysis Credits: 3
- ACC 616 - Financial Accounting Systems Credits: 3
- ACC 617 - International Accounting Credits: 3
- ACC 618 - Advanced Accounting Credits: 3
- ACC 620 - Accounting Theory Credits: 3

To ensure that all M.S.A. graduates have basic competencies in each major area of accounting, all students are required to complete at least one course in intermediate accounting, federal income taxation, auditing, and cost or managerial accounting with a grade of C or better. These courses may be taken at either the undergraduate level prior to or while enrolled in the M.S.A. program. Courses taken at the graduate level to satisfy this requirement may be used as electives in the M.S.A. program with the approval of the student's faculty advisor. The following GVSU courses fulfill this basic competence requirement:

Required Course	GVSU Graduate Course	Undergraduate Course(s)
Intermediate Accounting	ACC 610	ACC 310, 311, and 240
Managerial or Cost Accounting	ACC 611	ACC 321 or 322
Auditing	ACC 614	ACC 413 or 414
Federal Income Taxation	ACC 609 or 615	ACC 317 or 318

Students will not be granted credit for ACC 609, 610, 614, or 615 if they have satisfactorily completed an undergraduate course in individual

Advertising

taxation, intermediate accounting, auditing, or corporate taxation, respectively. Students who have not taken intermediate accounting prior to matriculating in the program should take this course in the first semester of graduate work.

The remaining 3-15 credits for the M.S.A. may be selected from among other Seidman graduate offerings or, with permission of the student's faculty advisor, from graduate program offerings outside the Seidman College of Business.

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. 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

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

The advertising and public relations program is designed to provide understanding of key aspects of the advertising and public relations professions and the basic knowledge required for success in these fields. Practical experience is gained through classroom projects, independent study, and internships.

The objective of this professional program is practical orientation within a liberal arts environment. Major-field electives help students to concentrate in the areas of advertising or public relations, according to their particular interest or talent. Among careers students can prepare for are advertising and public relations management, copywriting, advertising sales, corporate communications, public relations writing, campaign development, and media strategy and planning.

Student Organizations (www.gvsu.edu/stuey)

Student organizations include the Ad Club affiliated with the American Advertising Federation (AAF) and PRSA which is affiliated with the Public Relations Society of America (PRSA). The students are offered an opportunity to participate in the National Student Advertising Competition sponsored by AAF and the Bateman Public Relations Campaign Competition sponsored by PRSA.

Career Opportunities

Among careers students can prepare for on either the agency or client side are advertising and public relations management, copywriting, advertising sales, corporate communications, public relations writing, campaign development, and media strategy and planning.

Bachelor of Arts or Bachelor of Science in Advertising and Public Relations

Requirements for a Major in Advertising and Public Relations

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 - Theories of Communication Credits: 3

And one of the following:

- COM 201 - Speech Credits: 3
- 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. Cognates

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. cognate or the B.S. cognate that is intended for a particular undergraduate program.

B.A. Cognate

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

Advertising Emphasis

Advertising Core Credits: 33

- 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 400 - Advertising/Public Relations Campaign Credits: 3
- CAP 413 - Media Planning Credits: 3
- CAP 490 - Internship in Advertising/Public Relations Credits: 1 to 6
- CJR 256 - News Reporting I Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3

Electives Credits: 6 Minimum

With advisor approval, select a minimum of two courses at the 200 level or above from the following areas: art and design, advertising and public relations, business, broadcasting, hospitality and tourism management, management, marketing, photography, psychology, or writing.

Capstone Credits: 3

- COM 495 - Issues in Communication (capstone) Credits: 3

Public Relations Emphasis

Public Relations Core Credits: 33

- 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 400 - Advertising/Public Relations Campaign Credits: 3
- CAP 423 - Writing Corporate Communications Credits: 3
- CAP 490 - Internship in Advertising/Public Relations Credits: 1 to 6
- CJR 256 - News Reporting I Credits: 3
- PHI 325 - Ethics in Professional Life Credits: 3

Electives Credits: 6 Minimum

With advisor approval, select a minimum of two courses at the 200 level or above from the following areas: advertising and public relations, business, broadcasting, hospitality and tourism management, journalism, management, marketing, photography, political science, psychology, public and nonprofit administration, or writing.

Capstone Credits: 3

- COM 495 - Issues in Communication (capstone) Credits: 3

Advertising and Public Relations Minor**Requirements for Minor in Advertising and Public Relations**

Requirements for a minor in advertising and public relations are courses selected with the permission of an advisor for a total of 21 credits.

However, in addition to two electives, the following courses are required:

- 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

African/African American Studies

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

Director: Mangala; Professors: Cole, Tripp; Associate Professors: Alvarez, Buckridge, Corr, Joseph, McLeod, Stewart, Tucker; Assistant Professors: Green-Smith, McClure, Moore, Tunstall, Yidana.

Website: www.gvsu.edu/aaa

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 to 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 Africa 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. African and African American studies, being a socially engaged discipline, is committed to foster the value of social and civic engagement.

Career Opportunities

By providing a multidisciplinary and rigorous intellectual grounding both in an important world region (Africa) and a major US ethnic group (African Americans), the minor represents an excellent academic and personal investment for students who intend to pursue career opportunities in a broad range of fields (sociology, anthropology, geography, political science, international relations, history, psychology, modern languages, business, social work, public and nonprofit administration, nursing, hospitality and tourism, education, health sciences, communications and criminal justice among others) as well as those who intend to go on to graduate school.

Student Organizations

Students are encouraged to participate in African, African American and international student organizations on campus and to engage the larger community. West Michigan is home to a sizeable African American community as well as a growing number of new African immigrants. For information on community organizations, please consult the program director or visit www.gvsu.edu/stuey.

African/African American Studies Minor**Requirements for a Minor in African and African American Studies**

African and African American Studies are required to complete 21 to 22 credit hours. Students will be required to choose between two tracks: track 1 (Africa) and track 2 (African American).

All minors will be required to complete two core courses (6 credits)

- AAA 200 - Understanding Africa
- **OR** AAA 201 - Introduction to African American Studies **AND** AAA 302 - African Diaspora

Track I: AFRICA.

Students choosing the Africa track will be required to

1. Successfully complete
 - FRE 202 - Intermediate French II
 - **OR** ARA 202 - Intermediate Arabic II 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 341 - Civil Conflicts in Africa Credits: 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 - African Civilizations 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 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 399 - Independent Readings Credits: 1 to 3
 - AAA 499 - Independent Study and Research Credits: 1 to 4
 - LIB 320 - Social Autobiography in the U.S. Civil Rights Movement 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 382 - 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.

Aging and Adult Life

Additional Information

No more than 3 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 US 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

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Coordinator: Rynbrandt.

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 described below 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

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. Students must complete the following:

- BMS 375 - The Biology of Aging Credits: 3
- LIB 314 - Life Journey Credits: 3
- PSY 332 - Adult Development and Aging Credits: 3
- SOC 388 - Middle Age and Aging Credits: 3

Additional Course Requirements

Students must also complete three additional courses to be selected from courses such as:

- REC 316 - Therapeutic Recreation with the Elderly Credits: 3
- SOC 323 - Families in Society Credits: 3
- SOC 356 - Sociology of Health Care Credits: 3
- SS 381 - Death and Dying Credits: 3

Annis Water Resources Institute

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Steinman. Professors: Luttenton, Steinman;
Associate Professors: McNair, Rediske;
Assistant Professors: Biddanda, Ruetz, Thum.

The Robert B. Annis Water Resources Institute (AWRI) is a multidisciplinary research organization 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 freshwater resources.

Website: 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; hydrology; land use; watershed, stream, and wetland ecology; water quality; 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 Annis Water Resources Institute. 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 ecology, hydrology, environmental chemistry, environmental toxicology, microbial ecology, aquatic molecular ecology, and fisheries ecology. Students are encouraged to contact individual faculty members to learn more about specific areas of research.

Career Opportunities

Professional and career opportunities for graduate students pursuing an aquatic sciences emphasis within the Master of Science in Biology degree program include jobs in higher education, government, non-governmental organizations, and private consulting firms.

Fieldwork and Research Opportunities

AWRI is housed in the Lake Michigan Center, which is located on the Muskegon Lake waterfront in Muskegon, Michigan. The Lake Michigan Center features a full analytical chemistry laboratory, research laboratories, experimental mesocosm tanks, a geospatial technologies information center, and a boat fleet that includes two research vessels as well as a variety of smaller boats including an electroshocking boat. Students working at AWRI are encouraged to work in a collaborative environment, taking advantage of the physical resources and our nine faculty members, 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 multi-disciplinary approaches, and graduate committees often include faculty from other Universities.

Scholarships: Undergraduate

D.J. Angus - Sciencetech Educational Foundations Internship

Each summer AWRI offers up to 4 competitive summer semester internships made possible by a gift from the K.J. Angus-Sciencetech Educational Foundation, located in Indianapolis, Indiana. These internships are awarded to Grand Valley students majoring in the sciences, including engineering, computer, health, natural resources management, biological, chemical, and physical sciences.

R.B. Annis Undergraduate Student Internships

Each summer AWRI offers up to 3 competitive summer semester internships made possible by a gift from the R.B. Annis Foundation. The internships are awarded to Grand Valley students from any discipline who will conduct research at the Annis Water Resources Institute during their undergraduate tenure at GVSU.

Bill and Diana Wipperfurth Student Research Scholarship

AWRI offers a student research scholarship made possible by a gift from Bill and Diana Wipperfurth. The Wipperfurths started this scholarship because of their love of water and wanted to support promotion of water quality, particularly in the Great Lakes. The scholarship is awarded to a full-time student at Grand Valley entering either their Junior year, Senior year, or at the graduate level.

Dr. Ronald W. Ward Scholarship

AWRI awards this scholarship, of up to \$5,000 to undergraduate students studying the sciences and/or engineering at GVSU. Preference for this scholarship is given to students from the Indianapolis, IN area. Additional requirements include a cumulative grade point average of 3.0 or better (on a 4.0 scale) and an ACT score of at least 24 (or SAT of at least 1100).

Education/Outreach Internship and Volunteers

Opportunities are available to assist with the AWRI education and outreach program during spring semester. Pre-service teachers can gain hands-on experience with K-12 classes in the Annis Educational Classroom at the Lake Michigan Center and on the GVSU vessels. For more details, contact Janet Vail.

Scholarships: Graduate

AWRI has assistantships available to full-time graduate students interested in pursuing a Master of Science degree in Biology with an emphasis in aquatic sciences. Graduate assistantships are offered through two funding sources:

- AWRI Graduate Research Assistantship
- R.B. Annis Graduate Student Assistantship

Both assistantships include a generous 12-month stipend and tuition waiver that is eligible for annual renewal. Accepted applicants will assist with research projects conducted by faculty and staff at AWRI in addition to performing research related to their thesis/project. Some of the current research projects at AWRI involve aquatic toxicology, chemical stressors on aquatic ecosystems, wetland ecology, invasive species, nonpoint source pollution, hydrological modeling, primary productivity in streams and lakes, microbial ecology, and GIS-based investigations into watershed management. AWRI maintains state-of-the-art analytical and GIS laboratories, and has two research vessels and several smaller watercraft.

To be eligible for consideration, students must be accepted to the Master of Science degree program in the Department of Biology at GVSU as a full-time student, and a faculty member at AWRI must serve as their major advisor. Students interested in assistantships are strongly encouraged to contact prospective advisors at AWRI early in the application process.

Anthropology

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Rhoads. Professors: Brashler, Hull; Associate Professor: Corr, Rhoads, Weibel; Assistant Professors: Arnold, Madden, Molla, Schwartz, VanWormer; Affiliate Professor: Borders.

Anthropology is the study and understanding of humans in all places and throughout time, including the effects of culture on individuals and of individuals on their society. Anthropology offers a perspective for critically analyzing culture and prepares students for multicultural career settings in the United States and abroad. An anthropology major and minor are available.

Website: www.gvsu.edu/anthropology

Career Opportunities

Professional and career opportunities for students majoring in anthropology include jobs in international development/assistance (nonprofit and government), government, education, museums, international business, zoos, human services, and health care.

Particularly important is the way students coordinate their major with other disciplines. For example, anthropology majors with an interest in business and foreign language proficiency are ideally suited to work for companies with overseas operations. Majors interested in working with people can consider an emphasis in social work, the health sciences, or related fields. Students interested in museum work should combine their anthropology major with coursework in art history, classics, and/or

history. It is important for students to identify their interests as early as possible so that they can work with an advisor to develop the best academic program possible.

For many career paths in anthropology, it is important to engage in one or more practicum experiences or actual fieldwork. These opportunities are available with appropriate planning and coordination with your advisor. Internship experiences are available for students interested in museum work and a number of other activities in local communities. Students interested in practicum experiences need to begin planning with their advisor for the experience as early as possible in their college career.

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. Post-field 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

Inter-departmental minor in archaeology: Students with an anthropology major might want to pursue a minor in the new interdisciplinary program. More information on the archaeology minor is available here.

Scholarships**Richard E. Flanders (University Club Scholarship).**

This scholarship, in honor of the late Richard E. Flanders, who founded the anthropology program, is available to full-time junior and senior students majoring or minoring in anthropology or a related discipline with a strong background in anthropology. Award amounts vary depending on number of applicants.

Walter Boston Koch Scholarship. This scholarship honors Walt Koch, a long-time member of the anthropology faculty. It is available to part-time and full-time sophomores, juniors, or seniors who are majoring or minoring in anthropology. Award amounts vary depending on number of applicants.

Student Organizations**Anthropology Club**

The Anthropology Club is open to all majors and interested students. Its members work with Lambda Alpha Honor Society in sponsoring speakers and fundraising events, and participate in local, regional, and national meetings of anthropology. The club is involved in local and international community service projects.

Honors Organization

Lambda Alpha is the National Scholastic anthropology fraternity. Grand Valley State University's Michigan Beta Chapter of Lambda Alpha is dedicated to promoting and recognizing scholarly achievement by anthropology majors and minors, or students with a strong interest and background in anthropology. Meetings are informal gatherings aimed at organizing speakers, events, fundraising for service projects, and travel to professional meetings several times a year. Membership is open to any student with 12 or more credits in anthropology holding a 2.75 overall GPA and a 3.0 GPA in anthropology.

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.

Anthropology

Majors must complete at least 37-38 hours in the following:
(37 hours for a B.A. degree or 38 hours for a B.S. degree)

Core Courses:

1. ANT 204 - Introduction to Cultural Anthropology Credits: 3
2. ANT 206 - Human Origins Credits: 3
3. ANT 220 - Introduction to Archaeology Credits: 4
4. ANT 310 - Perspectives in Bioanthropology Credits: 4
OR ANT 346 - Kinship and Culture Credits: 3
5. ANT 405 - Anthropological Theory Credits: 3
6. ANT 495 - Practicing Anthropology (capstone) Credits: 3

Cognate Degrees:

Students majoring in anthropology may earn either a B.A. or a B.S. degree. The B.A. degree requires third-semester proficiency in a foreign language and ANT 346; the B.S. degree requires the completion of a one-year sequence in and of the following natural sciences (BIO 111 & 112, CHM 115 & 116, GEO 111 & 112, or PHY 220 & 221), one upper level natural science course from the same discipline, and ANT 310.

B.A.

- Third-semester proficiency in a foreign language.
- ANT 346 - Kinship and Culture Credits: 3

B.S.

- ANT 310 - Perspectives in Bioanthropology Credits: 4
- One upper level natural science course
- One year of science courses

AND EITHER

- BIO 120 - General Biology I Credits: 4 AND BIO 121 - General Biology II Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 5
AND CHM 116 - Principles of Chemistry II Credits: 5
- GEO 111 - Exploring the Earth Credits: 4
AND GEO 112 - Earth History Credits: 5
- PHY 220 - General Physics I AND PHY 221 - General Physics II

Other Required Courses:

- 3 credits in sociology
- ANT 300 - Research Methods in Anthropology Credits: 3
- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
OR ANT 490 - Practicum: Career-Service

Electives:

Choose one course from each of the following categories:

Cultural Anthropology:

- ANT 311 - Native Peoples of North America Credits: 3
- ANT 315 - Comparative Religions Credits: 3
- ANT 330 - Ethnology of Selected World Areas Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- ANT 346 - Kinship and Culture Credits: 3 (Elective for Students pursuing a B.S.)
- ANT 355 - Migration in Americas Credits: 3
- ANT 360 - Ethnology of Mesoamerica Credits: 3
- ANT 370 - Cross-cultural Perspectives on Gender Credits: 3

Archaeology:

- ANT 325 - Archaeology of North America Credits: 3
- ANT 347 - Environments and Cultures of the Great Lakes Region Credits: 3
- ANT 350 - Archaeology of Mid-East Credits: 3

Biocultural:

- ANT 310 - Perspectives in Bioanthropology Credits: 4 (Elective for Students pursuing a B.A.)
- ANT 316 - Death, Burial, and Culture Credits: 3
- ANT 320 - Culture and Disease Credits: 3
- ANT 340 - Culture and Environment Credits: 3

Note: ANT 380's may meet requirements. Consult an Anthropology faculty advisor.

Additional Requirements

In addition, students are required to take either ANT 307 (Field Techniques and Laboratory Methods in Anthropology) or ANT 490 (Practicum). No more than six hours of ANT 307 and ANT 490 combined may count toward the major, though students are encouraged to acquire as many practical experience credits as possible. Field experiences can be in archaeology or cultural anthropology, or students can arrange a practicum 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.

Suggested Order of Coursework for a Major in Anthropology (B.A.)

First Year

- Electives/General Education
- ANT 204 - Introduction to Cultural Anthropology Credits: 3
- ANT 206 - Human Origins Credits: 3
- Electives/General Education
- ANT 220 - Introduction to Archaeology Credits: 4

Second Year

- First Semester Language
- Electives/General Education
- STA 215 - Introductory Applied Statistics Credits: 3
- ANT Subfield Requirement
- Second Semester Language
- Electives/General Education

Third Year

- Third Semester Language
- ANT Subfield Requirement
- Electives/General Education
- ANT 300 - Research Methods in Anthropology Credits: 3
- ANT Subfield Requirement
- Electives/General Education
- ANT 346 - Kinship and Culture Credits: 3

Fourth Year

- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
OR ANT 490 - Practicum: Career-Service
- ANT 405 - Anthropological Theory Credits: 3
- 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 - Introduction to Cultural Anthropology Credits: 3
- Electives/General Education
- ANT 220 - Introduction to Archaeology Credits: 4

Second Year

- First Semester Science
- Electives/General Education
- STA 215 - Introductory Applied Statistics Credits: 3
- ANT Subfield Requirement
- Second Semester Science
- Electives/General Education

Third Year

- Upper Level Science
- ANT Subfield Requirement
- Electives/General Education

- ANT 300 - Research Methods in Anthropology Credits: 3
- ANT Subfield Requirement
- Electives/General Education
- ANT 310 - Perspectives in Bioanthropology Credits: 4

Fourth Year

- ANT 307 - Field Techniques and Laboratory Methods in Anthropology **OR** ANT 490 - Practicum: Career-Service
- ANT 405 - Anthropological Theory Credits: 3 Credits: 3
- ANT 495 - Practicing Anthropology (capstone) Credits: 3

Courses of Instruction

- ANT 111 - Peoples of the World Credits: 3
- ANT 204 - Introduction to Cultural Anthropology Credits: 3
- ANT 206 - Human Origins Credits: 3
- ANT 207 - Language and Culture Credits: 3
- ANT 215 - Origins of Civilization Credits: 3
- ANT 220 - Introduction to Archaeology Credits: 4
- ANT 300 - Research Methods in Anthropology Credits: 3
- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
- ANT 310 - Perspectives in Bioanthropology Credits: 4
- ANT 311 - Native Peoples of North America Credits: 3
- ANT 315 - Comparative Religions Credits: 3
- ANT 316 - Death, Burial, and Culture Credits: 3
- ANT 320 - Culture and Disease Credits: 3
- ANT 325 - Archaeology of North America Credits: 3
- ANT 330 - Ethnology of Selected World Areas Credits: 3
- ANT 340 - Culture and Environment Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- ANT 346 - Kinship and Culture Credits: 3
- ANT 347 - Environments and Cultures of the Great Lakes Region Credits: 3
- ANT 350 - Archaeology of Mid-East Credits: 3
- ANT 355 - Migration in Americas Credits: 3
- ANT 360 - Ethnology of Mesoamerica 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 405 - Anthropological Theory 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

Social Science Courses

The following are interdisciplinary social science courses that may be used for an anthropology major or minor. Consult with your advisor for further information.

- SS 300 - Research Methods in the Social Sciences Credits: 3
- SS 351 - Family & Gender in the Developing World Credits: 3

Anthropology Minor

A student who minors in anthropology is required to complete 21 hours in the department, including the courses listed below.

- ANT 204 - Introduction to Cultural Anthropology Credits: 3
- ANT 206 - Human Origins Credits: 3
- ANT 215 - Origins of Civilization Credits: 3
- OR** ANT 220 - Introduction to Archaeology Credits: 4

The remaining 12 credit hours must come from 300 or 400 level courses.

Courses of Instruction

- ANT 300 - Research Methods in Anthropology Credits: 3
- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
- ANT 310 - Perspectives in Bioanthropology Credits: 4
- ANT 311 - Native Peoples of North America Credits: 3
- ANT 315 - Comparative Religions Credits: 3

- ANT 316 - Death, Burial, and Culture Credits: 3
- ANT 320 - Culture and Disease Credits: 3
- ANT 325 - Archaeology of North America Credits: 3
- ANT 330 - Ethnology of Selected World Areas Credits: 3
- ANT 340 - Culture and Environment Credits: 3
- ANT 345 - Perspectives on Globalization Credits: 3
- ANT 346 - Kinship and Culture Credits: 3
- ANT 347 - Environments and Cultures of the Great Lakes Region Credits: 3
- ANT 350 - Archaeology of Mid-East Credits: 3
- ANT 355 - Migration in Americas Credits: 3
- ANT 360 - Ethnology of Mesoamerica 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 405 - Anthropological Theory 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

Archaeology

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Coordinator: Morison.

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.

Career Opportunities

A minor in archaeology opens the way to many interesting opportunities. Students who complete the archaeology minor often pursue graduate training or find employment in areas such as writing or publishing, law, museums and galleries, communications, and government service.

Participating Programs

Anthropology Department
Classics Department
History Department

Student Organizations

Archaeological Society of GVSU

Archaeology Minor

Requirements for a Minor in Archaeology

Students pursuing the minor in archaeology will complete seven courses (minimum 22 credits) distributed as follows:

- Three Core Courses (10 hours total),
- Two Regional Issues courses (6 hours total),

Art and Design

- One Cross-disciplinary elective (3, 4, or 5 hours depending on chosen course)
- One Field Research practicum (3 hours minimum)

Core Courses (all three are required):

- ANT 220 - Introduction to Archaeology Credits: 4
- ARC 400 - Archaeological Methods & 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 Credits: 4 (or other modern language at intermediate level)
- ART 420 - Asian Art Credits: 3
- BIO 311 - Biological Basis of Society Credits: 3
OR BIO 452 - Human Evolution
- CHM 115 - Principles of Chemistry I Credits: 5 (for non-CHM, BIO, or GEO majors) OR CHM 322 - Environmental Chemical Analysis
OR CHM 425 - Instrumental Analysis II
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- GEO 112 - Earth History Credits: 5
OR GEO 312 - Sedimentation-Stratigraphy
OR GEO 320 - Geomorphology (Earth Science Capstone)
- LAT 350 - Roman Literature and Culture Credits: 3 (or other ancient language at 300-level)

Field Practicum

All students must complete a minimum of three credits field research, under the direction of the archaeologists on the CLAS faculty or in another pre-approved program.

- ANT 307 - Field Techniques and Laboratory Methods in Anthropology Credits: 1 to 9
OR
- CLA 499 - Independent Study and Research Credits: 1 to 3
OR
- HST 490 - History Internship Credits: 1 to 3
OR
- GEO 315 - Geological Field Methods Credits: 2 or equivalent course.

Art and Design

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Jenkins. Professors: Henke, Jenkins, Seley, Thomas, Wong-Ligda; Associate Professors: Colley, Eggers, Fisher, Hosterman, Keister, Strom, Weis, Wittenbraker, Zettle-Sterling; Assistant Professors: Campbell, Chen, Colley, Danielson, Gopalakrishnan, King, Lee, Viviano, Zaszlavik.

Website: www.gvsu.edu/art

The Department of Art and Design 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. An art minor program in studio art is also available. 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 an art and design advisor, 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 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.

Course work 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, non-art 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 programs offered by the Department of Art and Design. Once a student has been admitted to Grand Valley and, most importantly, declares an interest in pursuing any of the art programs 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 at www.gvsu.edu/art/apply.html/.

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 an application 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.

Art and Design admission details and application packets are available at www.gvsu.edu/art/apply.html/.

Accreditation

The department is accredited by the National Association of Schools of Art and Design.

Career Opportunities

A major in studio art provides students with the foundation for careers working as artists and teachers in arts organizations and museums. The program also builds the transferable skills of critical thinking, communication, and problem solving that are necessary for professional careers outside of the arts.

Student Organizations

The Department of Art and Design has several arts related groups organized by students and faculty. Representing a variety of interests, these activities are open to majors and non-majors alike.

AIGA: The Professional Association for Design

This is a student chapter of the national organization for designers. AIGA offers a resource for the discussion of design, educational programs, and opportunities to attend national conferences.

C.C.A.: Contemporary Ceramics Association

This group seeks to educate and stimulate a passion for the arts at GVSU by building awareness for and understanding of the ceramic arts. They regularly attend national conference, sponsor workshops, as well as work with civic projects.

S.E.A.S.: The Society for Experimental Artistic Services

This student group promotes an experiential role for the visual arts in contemporary society through public service, public scholarship, and projects that engage with the community.

Bachelor of Fine Arts in Art and Design

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 Art and Design

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 below. 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.A. in art and design. Some of the material in ART 101 will be duplicated in the required coursework, art majors are advised to take one of the other classes in the General Education Arts category.

Foundations Review and Courses

After completing the Foundations program (ART 150, 151, 152, 153, 155, and 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.

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 degree program.

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 - Creative Problem Solving 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 B.F.A. 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 present their work to art and design faculty, culminating in a group exhibition of their work. See the B.F.A. 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 component 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
- 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
- ART 478 - Advanced Ceramics 2
- ART 479 - Glaze Calculation
- ART 495 - Issues in Art (capstone) Credits: 3
- ART 498 - Senior Project Credits: 6

Graphic Design Credits: 54-55

Studio Electives, Credits: 18

Required Emphasis, Credits: 36-37

- ART 210 - Graphic Design I Credits: 3
- ART 211 - Graphic Design II Credits: 3
- ART 257 - Life 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

CPH 171 or 175: Consult advisor to make CPH course selection. Access to studio courses in the School of Communication 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 418 - Practicum in Television Graphics Credits: 3
- ART 417 - Practicum in Graphic Design Credits: 3
- ART 491 - Internship in Studio Art Credits: 1 to 6
(If ART 491 is selected, students must register for a minimum of 3 credits.)

Students must substitute ART 218 - Design History for one of the two Art History Elective courses.

Studio Elective, Credits: 18

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 and Design

- ART 280 - Special Topics in Art and Design 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 - Jewelry Repair Credits: 1
- 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 445 - Business Practices for the Artist Credits: 2
- 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 6-9 courses, 3 credits each, Credits: 18-27

Required emphasis, Credits: 27-36

The visual studies curriculum includes 17 courses combining required and elective classes. 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 Major in Art and Design

Freshman Year

Fall Semester Credits: 16

- One general education course Credits: 3
- ART 150 - Foundations: 2-D Design
- ART 151 - Foundations: 3-D Design
- OR ART 153 - Creative Problem Solving
- ART 155 - Foundations: Introduction to Drawing I
- MTH 110 - Algebra Credits: 4

Winter Semester Credits: 16

- One general education course Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3
- OR ART 153 - Creative Problem Solving Credits: 3
- ART 152 - Foundations: Color and Design Credits: 3
- ART 157 - Foundations: Introduction to Drawing II Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

Sophomore Year

Fall Semester Credits: 15

- Emphasis Requirements Credits: 6
- Two general education courses Credits: 6
- ART 221 - Survey of Art History I Credits: 3

Winter Semester Credits: 18

- Emphasis Requirements Credits: 6
- Three general education courses Credits: 9
- 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 or theme courses Credits: 6

Winter Semester Credits: 15-18

- Emphasis requirements and electives Credits: 9
- Art history elective Credits: 3
- One general education or theme course Credits: 3
- Junior Level Writing, if needed Credits: 3

Senior Year

Fall Semester Credits: 18

- Emphasis Requirements and electives Credits: 6

- ART 401 - Senior Seminar Credits: 3
- ART 495 - Issues in Art (capstone) Credits: 3

Winter Semester Credits: 15

- Emphasis Requirements and electives Credits: 6
- One general education course Credits: 3
- ART 498 - Senior Project Credits: 6

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, 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 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 majors are advised to take one of the other classes in the General Education Arts category.

Requirements for a Major in Art Education

Degree Cognates

B.A. Degree Cognates:

- Foreign language (third-semester proficiency in a foreign language).

B.S. Degree Cognates:

- Science: select three courses from the following list:
- CIS 150 - Introduction to Computing Credits: 3
- OR PHI 103 - Logic Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3 OR SS 300 - Research Methods in the Social Sciences 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. 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 degree program.

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 - Creative Problem Solving 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 495 - Issues in Art (capstone) Credits: 3

Completion of the art history component of the B.A. or B.S. program is a prerequisite for ART 495. Students must register for sections taught by art education faculty.

Art Education Requirements

Required Courses:

- ART 332 - Introduction to Art Education Credits: 3

- ART 333 - Curriculum Development and Practice Credits: 3
- ART 334 - Teaching the Nontraditional Canon Credits: 3
- ART 495 - Issues in Art (capstone) Credits: 3

Art methodology courses (ART 332, 333, and 334) 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 directed teaching.

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 at the 300 level from the Emphasis area selected. Credits: 6.

One advanced studio emphasis course at the 400 level. Credits: 3.

Two studio art or art education electives. Credits: 6

Additional Requirements

Prerequisite Courses:

- PSY 301 - Child Development Credits: 1 to 3
- ED 315 - Diverse Perspectives on Education Credits: 3
- ED 337 - Introduction to Learning and Assessment Credits: 3

These prerequisite courses require a 2.7 GPA or better, with no grade lower than "C".

Michigan Basic Skills Test: must be complete prior to submitting application to the College of Education.

Application to the College of Education: Admission to the College of Education requires a minimum 3.00 GPA (75 credit hours) in the art major. If students do not have a 3.00 GPA they may apply for a Secondary Review Process that includes passing the Michigan Test for Teacher Certification (MTTC) (#95 Visual Arts Education).

Certificate Requirement: Pass the Michigan Test for Teacher Certification (MTTC) (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 Art and Design while allowing them to select from courses offered in other departments across the GVSU campus.

Career Opportunities

A degree in art history gives students a foundation for careers in the arts and other professional fields. The program prepares them for work in galleries, museums, community arts organizations, and arts publishing. After graduate study they may teach at universities, work as museum curators, or as art conservators. The discipline's emphasis on the transferable skills of research, analysis, and writing also prepares students for the professional fields of communication, editing, law, business, and arts administration.

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 and design. Students will also meet

Art and Design

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.

Foundation Courses: 6 credit hours:

All art history majors are required to take the two introductory courses to provide them with an introduction to 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 courses 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 3 hours towards the distribution requirements.

Ancient through Early-Modern Art

Choose two courses

- ART 380 - Special Topics in Art and Design Credits: 1 to 3 (history emphasis)
- CLA 250 - Classical Art and Archaeology Credits: 3

Modern and Contemporary Art

Choose two courses

- ART 325 - Nineteenth-Century Art Credits: 3
- ART 327 - Art Since 1945 Credits: 3
- ART 380 - Special Topics in Art and Design Credits: 1 to 3 (history emphasis)

World Art

Choose one course

- ART 380 - Special Topics in Art and Design Credits: 1 to 3
- ART 420 - Asian Art Credits: 3

Studio Requirements: 6 credit hours

Select two courses from the list below:

- 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 - Creative Problem Solving 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 will take a capstone seminar, which offers them a discussion-intensive classroom experience. During their final semester, students will 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 325 - Nineteenth-Century 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
- CLA 250 - Classical Art and Archaeology Credits: 3
- CFV 225 - Film Culture Credits: 3

- CFV 348 - Film Theories Credits: 3
- COM 373 - Women and Minorities in Film and Television Credits: 3
- CPH 366 - History of Photography II Credits: 3
- PHI 220 - Aesthetics Credits: 3
- SOC 346 - 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 will 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
- 1st semester foreign language Credits: 4
- One general education elective Credits: 3

Freshman Year, Winter Semester:

- ART 222 - Survey of Art History II Credits: 3
- 2nd semester foreign language Credits: 4
- Two general education electives Credits: 6

Sophomore Year, Fall Semester:

- Two art history distribution courses Credits: 6
- 3rd 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 theme 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 theme course Credits: 3
- One studio elective Credits: 3
- WRT 305 if necessary or 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 designed to offer students 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

1. ART 221 - Survey of Art History I Credits: 3
2. 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)

1. CLA 250 - Classical Art and Archaeology Credits: 3
2. ART 380 - Special Topics in Art and Design Credits: 1 to 3 (history emphasis)

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 380 - Special Topics in Art and Design Credits: 1 to 3 (history emphasis)

World Art Credits: 3 (Choose one of the following)

- ART 380 - Special Topics in Art and Design Credits: 1 to 3 (history emphasis)
- ART 420 - Asian Art Credits: 3

Art History Electives: Credits: 6

Select two courses from the list below:

- ART 218 - Design History Credits: 3
- ART 325 - Nineteenth-Century Art Credits: 3
- ART 327 - Art Since 1945 Credits: 3
- ART 380 - Special Topics in Art and Design Credits: 1 to 3
- ART 420 - Asian Art Credits: 3
- ART 421 - Surrealism Credits: 3
- CLA 250 - Classical Art and Archaeology Credits: 3
- CFV 225 - Film Culture Credits: 3
- CFV 348 - Film Theories Credits: 3
- COM 373 - Women and Minorities in Film and Television Credits: 3
- CPH 366 - History of Photography II Credits: 3
- PHI 220 - Aesthetics Credits: 3
- SOC 346 - 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 topics.

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 Foundation section lists ART 101 - Introduction to Art as a choice. ART 101 is not required for the BA or BS in Art and Design. Some of the material in ART 101 will be duplicated in the required coursework, art majors are advised to take one of the other classes in the General Education Arts category.

Foundation and Review Courses

After completing the Foundation Program (ART 150, 151, 152, 155, and 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.

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 degree program.

- ART 150 - Foundations: 2-D Design Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3
- ART 157 - Foundations: Introduction to Drawing II Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3
- ART 152 - Foundations: Color and Design Credits: 3

Students seeking a major in studio art can earn either the B.A. or B.S. degree. Requirements include completion of the following:

Other Requirements:

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 - Issues in Art (capstone) Credits: 3

Completion of the art history component 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 cognates:

Foreign language (third-semester proficiency in a foreign language).

B.S. degree cognates:

Science (three courses)

- CIS 150 - Introduction to Computing Credits: 3 **OR** PHI 103 - Logic Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3 **OR** STA 216 - Intermediate Applied Statistics Credits: 3
- SS 300 - Research Methods in the Social Sciences 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
- 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

Art and Design: Studio - Minor**Requirements for a Minor in Studio Art**

The art minor offers students in other majors the opportunity to pursue their interest in the visual arts. Students take seven courses for the minor.

Minor Requirements:

Students seeking a minor in studio art are required to take one art history course at the 200 level or above, and two additional studio courses at the 200 level or above for a total of 21 credits and the following:

Athletic Training

- ART 101 - Introduction to Art Credits: 3
- ART 150 - Foundations: 2-D Design Credits: 3
- ART 151 - Foundations: 3-D Design Credits: 3
- ART 155 - Foundations: Introduction to Drawing I Credits: 3

Athletic Training

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/index.cfm

Career Opportunities

Athletic Training is an allied health care profession. Certified athletic trainers are health care professionals who specialize in preventing, recognizing, managing and rehabilitating injuries that result from physical activity. As part of a complete health care team, the certified athletic trainer works under the direction of a licensed physician and in cooperation with other health care professionals, athletics administrators, coaches and parents.

Students who are interested in pursuing a career as a certified athletic trainer must go through an accredited athletic training education program. Areas of formal instruction will include injury/illness prevention, first aid and emergency care, assessment of injury/illness, human anatomy and physiology, therapeutic modalities, and nutrition. Classroom learning is enhanced through clinical education experiences.

Certified athletic trainers can be found almost anywhere people are physically active. Examples of employment settings include:

- Secondary schools
- Colleges and universities
- Professional sports
- Hospitals
- The military
- Industrial and commercial
- Performing arts

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:

1. PED 217 - Modern Principles of Athletic Training Credits: 3
2. ATH 210 - Directed Observation in AT Credits: 1
3. MOV 300 - Kinesiology Credits: 3
 - a. Note: *Students must receive a B or better in all prerequisite coursework.*
4. Current First Aid and CPR Certification
5. Proof of current immunizations as defined by the CDC for health care workers.
6. Cumulative GPA of 2.8 or Higher
7. One semester attendance at Grand Valley State University

Admission Eligibility

Once the above 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
2. Practical Test (Students must receive a 70 percent or higher to qualify for an interview.)
3. Admission Application
4. Interview
5. Recommendations
6. Successful 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 Athletics Training Policies and Procedures Manual.)

Transfer Student Policy for the Athletic Training Education Program

- 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.
- Transfer students must meet all admission criteria in the Grand Valley State University Undergraduate and Graduate Catalog.
- Transfer students must meet all Grand Valley athletic training program prerequisite and admission criteria.
- 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. Degree Cognates (Credit hours: 11)

- BMS 208 - Human Anatomy Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3

Coursework (Credit Hours: 62-68)

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: 3
- ATH 490 - Internship in Athletic Training Credits: 6 to 12
- ATH 495 - Organization and Administration Credits: 3
- BMS 105 - Basic Nutrition Credits: 3
- BMS 202 - Anatomy and Physiology Credits: 4
- BMS 208 - Human Anatomy Credits: 3
- BMS 309 - Laboratory in Human Anatomy Credits: 1
- BMS 355 - Anatomy of Joints Credits: 2
- MOV 101 - Foundations of Physical Education and Sport Credits: 3
- MOV 304 - Physiology of Activity Credits: 3
- MOV 320 - Exercise Testing and Prescription Credits: 3
- MOV 321 - Exercise Testing Lab Credits: 1
- MOV 470 - Exercise for Special Populations Credits: 3
- PHY 200 - Physics for the Life Sciences Credits: 4

GPA Retention Policies

Once admitted to the athletic training education program students will be required to maintain a 3.0 GPA in all major course work with no grade lower than a C, and 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 above GPA requirements will place students in a probationary status for one semester. Failure to maintain the above 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 Physical Education and Sport Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- BMS 202 - Anatomy and Physiology Credits: 4
- BMS 208 - Human Anatomy Credits: 3
- BMS 105 - Basic Nutrition Credits: 3
- MTH 110 - Algebra Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- General Education Requirement

Second Year

- PED 217 - Modern Principles of Athletic Training Credits: 3
- ATH 210 - Directed Observation in AT Credits: 1
- MOV 300 - Kinesiology Credits: 3
- BMS 309 - Laboratory in Human Anatomy Credits: 1
- General Education Requirement
- General Education Requirement
- BMS 355 - Anatomy of Joints Credits: 2
- ATH 314 - Athletic Injury Assessment I Credits: 3
- ATH 225 - AT Emergency Care Credits: 3
- ATH 220 - Athletic Training Clinical I Credits: 2
- STA 215 - Introductory Applied Statistics Credits: 3
- General Education Requirement

Third Year

- MOV 304 - Physiology of Activity Credits: 3
- ATH 315 - Athletic Injury Assessment II Credits: 3
- ATH 230 - Athletic Training Clinical II Credits: 2
- PHY 200 - Physics for the Life Sciences Credits: 4
- WRT 305 - Writing in the Disciplines Credits: 3
- MOV 320 - Exercise Testing and Prescription Credits: 3
- MOV 321 - Exercise Testing Lab Credits: 1
- ATH 316 - Therapeutic Exercise Credits: 3
- ATH 405 - Therapeutic Modalities Credits: 3
- ATH 320 - Athletic Training Clinical III Credits: 2
- General Education Requirement

Fourth Year

- ATH 406 - Intervention and Referral Credits: 3
- ATH 495 - Organization and Administration Credits: 3
- ATH 330 - Athletic Training Clinical IV Credits: 2
- MOV 470 - Exercise for Special Populations Credits: 3
- General Education Requirement
- General Education Requirement
- ATH 490 - Internship in Athletic Training Credits: 6 to 12
- General Education Requirement
- General Education Requirement

Bachelor of Arts or Bachelor of Science in Behavioral Science

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

The psychology and sociology departments cooperate to offer a major in behavioral science for students who want a broad background in the behavioral sciences. Students may concentrate in either psychology or sociology.

Requirements for a Major in Behavioral Science

Students must complete a minimum of 36 hours, in the major. For the psychology concentration, the 36 hours should also include PSY 300, PSY 360 and PSY 492 (capstone). For the sociology concentration, the 36 hours should also include SS 300, SOC 360 and SOC 495 (capstone).

Of the 36 hours required, students must take a minimum of 12 hours from the area that is not the concentration (from psychology if the area of concentration is sociology, from sociology if the area of concentration is psychology).

In addition to the 36-hour major, three other courses are to be selected in consultation with the student's advisor from such courses as human heredity, statistics, and advanced courses in philosophy, political science, economics, or history.

For a list of course descriptions see the separate listings under the psychology and sociology programs.

Course Restrictions in the Major

Students should note that no more than six credit hours of PSY 399 and 499 may be counted toward the major if students choose to take these courses.

Students may earn a B.A. or B.S. Degree

The B.A. requires third-semester proficiency in a foreign language.

The B.S. degree cognate sequence in the psychology concentration is STA 215, PSY 300, and PSY 400. The B.S. degree cognate sequence in the sociology concentration is STA 215, SS 300, and SOC 360.

Biology

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: MacDonald. Professors: Dunn, Griffin, Hunt, Lombardo, Luttenton, MacDonald, Northup, N. Shontz, Staves, Thorpe; Associate Professors: Blackman, Burton, Dietrich, Dobson, Greer, Jacquot, Joseph, Menon, Morgan, Nikitin, Ostrow, Rueth, Snyder, Trier, Vigna; Assistant Professors: Aschenbach, Evans, Ghiasvand, Henshaw, Hollister, Keenlance, Matthews, Naegle, Nordman, Russell, Sass, Woller-Skar.

Website: 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 our bodies 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, crop development, biotechnology, wildlife management, environmental preservation, and systematics.

Degrees offered: Master of Science, Biology Concentration in Masters of Education, Bachelor of Science, Bachelor of Arts in Biology, Bachelor of Science in Biopsychology, major and minor for secondary teaching certification.

Career Opportunities

Advances in the field of medicine and the numerous biological problems associated with human beings and their environment provide promising opportunities for work in biology. Careers in biology that require a bachelor's degree include agronomist, aquatic biologist, biotechnologist,

Biology

botanist, conservationist, fisheries biologist, genetics technician, horticulturist, marine biologist, microbiologist, quality control technician, park naturalist/ranger, teacher, wastewater plant technician, zoologist, and positions with seed, fertilizer, pesticide, chemical, medical supply, or drug companies, museums, zoos, governmental agencies, and private environmental consulting firms. Many careers in biology require additional training at the graduate or professional level, including college professor, dentist, ecologist, genetic counselor, genetic researcher, marine biologist, medical doctor, molecular biologist, physical therapist, and veterinarian.

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.

Biopsychology Major

Students interested in this interdisciplinary major should consult the psychology department for specific requirements.

Scholarship Opportunities

Please see the biology department web page for application materials, deadlines, and scholarship amounts, which vary.

Howard and Rose Stein Biology

This scholarship is open to students entering at least their junior undergraduate year. Must be enrolled full time as a biology, natural resources management, or cell and molecular biology degree-seeking student. Cumulative GPA of 3.2 or better. Renewable for one year provided student maintains satisfactory academic progress and required enrollment level.

John Salski Memorial Fund

Applicants must have a minimum overall G.P.A. of 3.0, be an undergraduate majoring in biology or natural resources management, and completed 15 credits in biology or natural resources management at GVSU. The award will only be given for biology/natural resources management summer enrollment or research.

Huizenga Biology Education Scholarship

Eligibility: Awarded to students entering at least their junior year of study. Must be enrolled as a full-time student with a biology major and seeking secondary teacher certification. Priority will be given to candidates based on a combination of academic merit and financial need. Renewable for a total of four semesters.

The John Shontz Native Plants Biology Scholarship

Eligibility: Candidates must be entering their sophomore, junior or senior year and enrolled with full-time status as a degree-seeking student, majoring in biology with an emphasis in plant biology.

The Barbara Waddell Native Plants Research Scholars

Eligibility: Candidates must be enrolled with full-time status as a degree-seeking student, majoring in biology or natural resources management. A faculty mentor is required. The candidate must submit a written proposal that demonstrates plans to increase current knowledge about native plants and application of that knowledge to improving and expanding the use of native plants for one or more of the following: gardening, landscaping, ecosystem restoration, eradication of undesirable invasive species, or conservation of native species of plants.

The Arlene Treanor Native Plants Internship

The internship shall be at a wholesale or retail plant nursery or landscaping business and the purpose of the internship shall be to learn about and participate in use of native plants in landscaping. The internship awardee will be chosen from applications that must include the support of a faculty mentor. The awardee will receive reimbursement for travel and materials as well as a stipend.

Student Organizations

Biology Club - The Biology Club is an academic student organization that provides excellent opportunities for biology students and other majors to get to know faculty, staff, and fellow students who have an interest in the biological sciences. It gives students the chance to interact with the community through a variety of activities. It promotes environmental awareness and seeks to expose members to academic and career opportunities in biology. The Biology Club is also a great way to learn about biology through recreational activities.

Preveterinary Club - The Preveterinary Club is an academic student organization devoted to assisting students seeking careers as veterinarians and veterinary technicians by enhancing leadership skills and responsibility as well as providing a friendly, professional and intriguing collegial experience at Grand Valley State University. The purpose of the organization is to provide Grand Valley State University students with guidance and useful information to promote success in the veterinary pathway. The organization also provides volunteer opportunities to enrich the surrounding community, and networking possibilities to allow students to get involved with others in the field.

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 life sciences. The biology faculty believe it is vital for students at the undergraduate level to become familiar with the major principles and unifying concepts of biology. Thus, the curriculum introduces the fundamental areas of biology and still provides flexibility. Students who wish may select from several emphasis areas, including

teacher certification, genetics and cell/molecular, premedical, pre-physical therapy, plant biology, animal biology, wildlife biology, aquatic and fisheries biology, preveterinary medicine, and environmental health. Any of these areas, in addition to the basic major, may be used as the foundation for graduate study. Biology majors, in consultation with their advisors, are able to tailor programs to fit career needs or interests. All majors must complete 38 credits in biology.

The biology major requires fulfillment of General University Degree Requirements, Biology Core Requirements, Biology Cognate Requirements, and Biology Elective Requirements.

Requirements for a Major in Biology

Biology Core (25 credits):

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- BIO 215 - General Ecology Credits: 4
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- BIO 405 - Cell and Molecular Biology Credits: 4
- BIO 406 - Cell and Molecular Biology Laboratory Credits: 2
- BIO 495 - Evolutionary Biology (capstone) Credits: 3

Major Cognate Requirements:

B.S. Degree Cognate courses are:

- BIO 120 - General Biology I Credits: 4
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1

B.A. students must take the listed courses and satisfy the foreign language requirement.

a. Chemistry

- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5

AND EITHER

- CHM 231 - Introductory Organic Chemistry Credits: 4
AND CHM 232 - Biological Chemistry Credits: 4
- OR
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
AND CHM 242 - Organic Chemistry For Life Sciences II Credits: 4

b. Statistics and Mathematics

Satisfies B.S. degree cognates.

Choose one of the following:

- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

c. Physics

Those students planning to attend graduate or professional school, or planning to seek secondary teaching certification are urged to take PHY 220 and 221 or 230 and 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

Biology Electives

To reach a total of 38 credits from among biology courses numbered 209 or above (except BIO 355) and the following BMS courses may be counted towards biology electives:

- 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 290 - Human Physiology Credits: 3
AND BMS 291 - Laboratory in Human Physiology Credits: 1

Plant Biology

One course must be taken from the Plant Biology category.

- BIO 303 - Plants and Fungi Credits: 4
- BIO 323 - Aquatic and Wetlands Plants Credits: 3
- BIO 333 - Systematic Botany Credits: 3
- BIO 403 - Plant Structure and Function Credits: 4
- BIO 413 - Freshwater Algae Credits: 3
- BIO 423 - Plant Biotechnology Credits: 3
- BIO 573 - Plants of the Great Lakes Area Credits: 3 (with permission)

Animal Biology

One course must be taken from the Animal Biology category.

- BIO 222 - Natural History of Vertebrates Credits: 3
- BIO 232 - Natural History of Invertebrates Credits: 3
- BIO 272 - Insect Biology and Diversity Credits: 3
- BIO 302 - Comparative Vertebrate Anatomy Credits: 4
- BIO 342 - Ornithology Credits: 3
- BIO 352 - Animal Behavior 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
- BIO 572 - Field Zoology Credits: 3 (with permission)
- 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

Excluded 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
- BIO 309 - Plants and Human Health Credits: 3
- BIO 310 - Biological Diversity of the Americas Credits: 3
- BIO 311 - Biological Basis of Society Credits: 3
- BIO 329 - Evolution of Social Behavior Credits: 3
- BIO 349 - The Darwinian Revolution Credits: 3

Additionally:

Any other Biology course whose course description prevents it from being used in the major.

Emphases (optional):

1. Teacher Certification Emphasis:

Students preparing to teach in secondary schools must complete the biology major outlined above. Secondary admission to the College of Education requires at least a 2.7 GPA in the major.

Students with a baccalaureate degree and a major in biology from another institution can be certified to teach by earning at least five credits in the biology department and completing the professional education requirements of the College of Education. The required courses in biology must be approved by the department chair or designee.

2. Premedical, Preosteopathic, and Predental Emphasis:

Students planning careers as physicians and dentists may major in biology. There is no absolute list of required courses for persons seeking admission to medical or dental schools, though some of these schools have more specific course requirements than others. Careful consultation with your faculty advisor throughout the undergraduate program is strongly advised. Initial academic advising for these preprofessional areas is also available through the College of Liberal Arts and Sciences Academic Advising Center located in Mackinac Hall, (616) 331-8585.

- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5

Biology

- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- 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 Electives

- BIO 302 - Comparative Vertebrate Anatomy Credits: 4
- BIO 357 - Environmental Microbiology 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 212 - Introductory Microbiology Credits: 3
AND BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 290 - Human Physiology Credits: 3
AND BMS 291 - Laboratory in Human Physiology Credits: 1
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 461 - Biochemistry I Credits: 4
- CHM 462 - Techniques in Biochemistry Credits: 3
- CHM 463 - Biochemistry II Credits: 3

3. Preveterinary Medicine Emphasis:

This emphasis includes all the course requirements currently necessary for admission to the Michigan State University School of Veterinary Medicine with the exception of an introductory course in animal nutrition. An MSU-approved animal nutrition course is currently available online at several universities. Consult your advisor or MSU for details. Additionally, MSU encourages applicants to accumulate experience outside the classroom working with veterinary professionals at both the small and large animal level. If you intend to apply to a veterinary school other than MSU, you need to contact that school to see if there are additional requirements. Early consultation with the pre-vet advisor is strongly encouraged. Initial academic advising for this preprofessional area is also available through the College of Liberal Arts and Sciences Academic Advising Center located in Mackinac Hall, (616) 331-8585.

Students preparing for careers as veterinarians may major in biology. Students should complete the following courses:

- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- 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
- BIO 357 - Environmental Microbiology Credits: 4
OR BMS 212 - Introductory Microbiology
AND BMS 213 - Laboratory in Microbiology

Additional Requirements

Students must have competency in college algebra and trigonometry and must choose biology electives from the following courses:

- BIO 222 - Natural History of Vertebrates Credits: 3
- BIO 232 - Natural History of Invertebrates Credits: 3
- BIO 302 - Comparative Vertebrate Anatomy Credits: 4
- BIO 303 - Plants and Fungi Credits: 4
- BIO 352 - Animal Behavior Credits: 3
- BIO 422 - Embryology Credits: 3
- BIO 432 - Comparative Animal Physiology Credits: 4

Non-biology Students

Non-biology students may prepare for admission to Michigan State University School of Veterinary Medicine by completing the following courses plus any required pre-requisites, and the animal nutrition course and veterinary experience as noted above. Students must have competency in college algebra and trigonometry, completion of MTH 201 fulfills this requirement.

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4

- BIO 357 - Environmental Microbiology Credits: 4
OR TAKE BOTH BMS 212 - Introductory Microbiology Credits: 3
AND BMS 213 - Laboratory in Microbiology Credits: 1
- BIO 375 - Genetics Credits: 3
- BIO 405 - Cell and Molecular Biology Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

4. Pre-physical Therapy Emphasis:

Students planning to apply to the M.S. program in physical therapy may select biology as their undergraduate major. The following modifications to the preprofessional sample curriculum, which is printed in the Physical Therapy section of the Grand Valley State University Undergraduate and Graduate Catalog, are strongly recommended to ensure that all requirements are met in the most efficient manner.

Students must take the following courses to complete the biology major.

- BIO 121 - General Biology II Credits: 4
- BIO 215 - General Ecology Credits: 4
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- BIO 405 - Cell and Molecular Biology Credits: 4
- BIO 406 - Cell and Molecular Biology Laboratory Credits: 2
- BIO 495 - Evolutionary Biology (capstone) Credits: 3

And a plant biology course

From the following:

- BIO 303 - Plants and Fungi Credits: 4
- BIO 323 - Aquatic and Wetlands Plants Credits: 3
- BIO 333 - Systematic Botany Credits: 3
- BIO 403 - Plant Structure and Function Credits: 4
- BIO 413 - Freshwater Algae Credits: 3
- BIO 423 - Plant Biotechnology Credits: 3
- BIO 573 - Plants of the Great Lakes Area Credits: 3 (with permission)

5. Plant Biology Emphasis

Requires the following as biology electives.

- BIO 303 - Plants and Fungi Credits: 4
- BIO 333 - Systematic Botany Credits: 3
- BIO 403 - Plant Structure and Function Credits: 4

6. Animal Biology Emphasis

Requires the following as biology electives.

- BIO 222 - Natural History of Vertebrates Credits: 3
- BIO 232 - Natural History of Invertebrates Credits: 3
- BIO 302 - Comparative Vertebrate Anatomy Credits: 4
- BIO 432 - Comparative Animal Physiology Credits: 4

7. Wildlife Biology Emphasis

Requires the following as biology electives and the NRM course as a cognate.

- BIO 222 - Natural History of Vertebrates Credits: 3
- BIO 333 - Systematic Botany Credits: 3
- BIO 342 - Ornithology Credits: 3
- BIO 408 - Wildlife Management Credits: 4
- NRM 281 - Principles of Soil Science Credits: 4

8. Aquatic Sciences Emphasis:

The Aquatic Sciences Emphasis provides broad academic training to students with an interest in aquatic sciences. Students selecting the emphasis will complete coursework that covers the two major regional aquatic habitats (lakes and rivers) and the major groups of organisms (fish, plants, invertebrates). The emphasis is specifically designed to prepare students to be particularly competitive for graduate school admission or entry-level positions in the field of aquatic science.

Students will consult with their academic advisor to develop a plan of study that fits their interests and career goals.

All students will complete the following courses:

- BIO 440 - Limnology Credits: 4
- BIO 450 - Stream Ecology Credits: 4

Additional Courses

All students must also choose at least one course from each of the following three categories:

Category 1

- BIO 362 - Fisheries Biology Credits: 4
- OR BIO 442 - Fish Ecology Credits: 3

Category 2

- BIO 232 - Natural History of Invertebrates Credits: 3
- OR BIO 402 - Aquatic Insects Credits: 3

Category 3

- BIO 323 - Aquatic and Wetlands Plants Credits: 3
- OR BIO 413 - Freshwater Algae Credits: 3

9. Genetics and Cell and Molecular Emphasis:

Students considering graduate study in one of the specialties relating to cellular and molecular biology or genetics, or pursuing work in the aforementioned fields and/or biotechnology may wish to select the genetics and cell and molecular biology emphasis. The genetics and cell and molecular biology emphasis requires:

- PHY 221 or 231, although optional, is highly recommended
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4
- CHM 461 - Biochemistry I Credits: 4
- CHM 462 - Techniques in Biochemistry Credits: 3
- AND EITHER**
- PHY 220 - General Physics I Credits: 5 OR PHY 230 - Principles of Physics I Credits: 5

Biology Electives

Courses in the Biology electives category must include BIO 423 (Plant Biology elective), 426, six credits of 490 and/or 499, 422 or 432 (Animal Biology elective), and two courses chosen from 411, 414, and 416.

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

In addition to the requirements listed in the Graduate Admission section of the Grand Valley State University Undergraduate and Graduate Catalog, candidates must satisfy all of the following admissions criteria:

- Satisfactory GRE score.
- Official transcripts submitted directly from each institution of higher education previously attended.
- A 500-word essay detailing educational and professional goals.
- Three letters of reference.

A baccalaureate graduate desiring acceptance as a candidate in the Master of Science in Biology Program should request a graduate admission packet for the biology program. Admission will be based on the materials submitted by the potential candidate and by the perceived ability of the University to successfully provide appropriate academic support for the candidate.

A minimum overall 3.0 GPA is required. Students may be given full or conditional admission. Conditional admission may be granted to students with identified deficiencies in their background, but who are otherwise qualified for program admission. Specific requirements to remediate any such deficiencies will be defined by the Biology Graduate Program Committee and the student's graduate committee chair. Note that prospective candidates are strongly encouraged to contact the Biology Graduate Program Coordinator as early as possible to begin the process of identifying a prospective graduate committee chair.

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, 212 Henry Hall, 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

Course Listing

- Appropriate 400-level courses (as approved by the Graduate Program Coordinator)
- BIO 535 - Aquatic Microbial Ecology Credits: 3
- BIO 580 - Special Topics in Biology Credits: 1 to 4
- BIO 651 - Emerging Issues in Water Resources Credits: 2
- BIO 610 - Scientific Methodology Credits: 3
- BIO 696 - Perspectives in Biology Credits: 3
- BIO 680 - Special Topics in Biology Credits: 1 to 3

Biology

- BIO 695 - Thesis Research Credits: 3 to 9
- BIO 691 - Graduate Internship Credits: 3 to 9
- BIO 693 - Graduate Project Credits: 3 to 9
- 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 course work 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 655 Perspectives in Biology).
- Fifteen-to-eighteen* 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. Undergraduate credits will not count in the graduate program.
- 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 mentor 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, the mentor (who may also be the graduate committee chair) be determined before the end of the student's first semester of enrollment 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 course work, 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 Grand Rapids area. Students in this emphasis will have opportunities to conduct research and take classes 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 course work, 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 conduct research and take classes 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 Fish Ecology
- Plankton Ecology
- Aquatic Toxicology
- Emerging Issues in Water Resources
- Wetland Ecology

Courses previously taught as NRM 580 and NRM 680

- Advanced Fisheries Management
- Advanced Watershed Management
- Hydrologic Modeling
- Aquatic Ecosystem Management
- BIO 680 Special Topics in Biology
- BIO 699 Independent Study

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 money 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.

Departmental Contact. Biology Department Graduate Program Coordinator, 212 Henry Hall, Biology Department at Grand Valley State University, Allendale, Michigan, 49401-9403. Telephone (616) 331-2470.

Master of Education Advanced Content Specialization in Biology

The M.Ed. degree in Advanced Content Specialization with a concentration in biology is offered by the College of Education in cooperation with the Department of Biology. The primary purpose of the degree is to provide middle school and high school teachers with opportunities to update and expand their knowledge in the rapidly changing field of biology.

Admission

Admission to the M.Ed. program requires teaching certification with either a major or a minor in biology or integrated science. Students must submit three letters of recommendation, transcripts of all previous coursework, and copies of teaching certificates. Students must have at least a 3.0 GPA. For additional details, see the College of Education section of the Grand Valley State University Catalog.

Curriculum Overview

The program requires completion of 33 graduate credits, 18 credits in education and 15 in biology or health sciences. The specific degree requirements can be found in the Graduate Program section of the College of Education Grand Valley State University Catalog section.

Upon admission to the program, the student will meet with a College of Education advisor and an advisor from the Biology Department or the Department of Biomedical Sciences who will evaluate all previous coursework taken in biology. A curricular plan reflecting the student's needs, interests, and goals will be agreed upon. Each student must complete a minimum of 15 credits from the following list of approved courses:

- BIO 400-level courses with permission of advisor
- BIO 525 - Teaching Reproductive Health Credits: 3
- BIO 557 - Microbiology for Teachers Credits: 4
- BIO 565 - Modern Genetics Credits: 3
- BIO 572 - Field Zoology Credits: 3
- BIO 573 - Plants of the Great Lakes Area Credits: 3
- BIO 575 - Ecology of the Great Lakes Credits: 4
- BIO 680 - Special Topics in Biology Credits: 1 to 3
- BIO 699 - Independent Study Credits: 1 to 3
- BMS 410 - Immunology Credits: 3
- BMS 412 - Medical Bacteriology Credits: 3
- BMS 508 - Advanced Human Physiology Credits: 3
- BMS 680 - Special Topics in the Biomedical Sciences Credits: 1 to 3

Biology Minor

Requirements for a Minor in Biology

The biology minor consists of a minimum of 24 credits in biology exclusive of BIO 104, 105, 107, 109, 205, 309, 310, 311, 329, 349, and any other Biology course whose course description prevents it from being used in the minor. CHM 109 or CHM 115 is a required cognate in addition to the 24 credits. Requirements of the minor are:

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- BIO 325 - Human Sexuality Credits: 3

One course chosen from each of the following three categories:

Genetics category

- BIO 355 - Human Genetics Credits: 3

OR

- BIO 375 - Genetics Credits: 3

AND

- BIO 376 - Genetics Laboratory Credits: 1

Animal Biology category

- BIO 222 - Natural History of Vertebrates Credits: 3
- BIO 232 - Natural History of Invertebrates Credits: 3
- BIO 342 - Ornithology Credits: 3
- BIO 352 - Animal Behavior Credits: 3
- BIO 572 - Field Zoology Credits: 3 (with permission only)
- BMS 202 - Anatomy and Physiology Credits: 4

OR

- BMS 208 - Human Anatomy Credits: 3
AND BMS 309 - Laboratory in Human Anatomy Credits: 1

Plant Biology category

- BIO 323 - Aquatic and Wetlands Plants Credits: 3
- BIO 333 - Systematic Botany Credits: 3
- BIO 403 - Plant Structure and Function Credits: 4
- BIO 573 - Plants of the Great Lakes Area Credits: 3 (with permission only)

Additional Requirements

The following courses count in the minor toward the required 24 credits in biology.

- BMS 212 - Introductory Microbiology Credits: 3
AND BMS 213 - Laboratory in Microbiology Credits: 1
- BMS 290 - Human Physiology Credits: 3
AND BMS 291 - Laboratory in Human Physiology Credits: 1

Cognate Courses

- CHM 109 - Introductory Chemistry Credits: 4 **OR** CHM 115 - Principles of Chemistry I Credits: 5

Teacher Certification Permissions

Biomedical science majors selecting a biology minor for teacher certification are not permitted to double count the following 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 290 - Human Physiology Credits: 3
AND BMS 291 - Laboratory in Human Physiology Credits: 1

Biomedical Sciences

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Nieuwkoop. Professors: Kopperl, Nieuwkoop, Nochera, Strickler; Associate Professors: D. Burg, M. Burg, Capodilupo, Graham, Hecht, Kipp, Nizielski, Sylvester; Assistant Professors: Adams, Algee-Hewitt, Baxter, Bergman, Kegley, Kurjiaka, Linn, Lown, Reed, Richiert, Sridhar, Taylor, Thomas; Affiliate Professor: Chesla.

Website: www.gvsu.edu/bms

Degrees offered

Bachelor of Science in Biomedical Sciences and Master of Science in Biomedical Sciences.

Career Opportunities

The biomedical science major prepares students for careers in biomedical research; medical, dental, osteopathic, and pharmacy schools; and obtaining the Ph.D. in a variety of biomedical disciplines. This major provides a student with a number of exciting and meaningful career paths.

Students majoring in biomedical sciences have multiple career paths. The curriculum provides a student excellent preparation for professional schools such as medicine, pharmacy, dentistry, and osteopathy. Successful students are also highly competitive for graduate education leading to the Ph.D. in such disciplines as anatomy, physiology, cell and molecular biology, microbiology, pharmacology, and biochemistry. In addition to these opportunities of further education, our students are highly qualified for employment in research laboratories in academia, industry, and government. Our students can obtain employment in non-research related fields such as governmental regulatory agencies, and industrial sales positions.

Biomedical sciences graduates have entered programs at a number of institutions within and outside the state, including Michigan State University Colleges of Human and Osteopathic Medicine; University of Michigan Schools of Dentistry, Medicine, and Graduate Studies; Wayne State University School of Medicine; Chicago College of Osteopathic Medicine; Scholl College of Podiatry; George Washington University School of Medicine; and Georgetown University School of Medicine, as well as graduate Ph.D. programs throughout the nation.

Graduate Opportunities

The Master of Science in Biomedical Sciences offers an opportunity for practicing allied health professionals to seek career advancement or a higher level of certification. This degree also prepares students for entry into professional programs leading to the Ph.D., M.D., D.O., and D.D.S. as well as careers in research, health, and allied health programs.

Study Abroad

Students have an opportunity to spend a semester or a year studying at Kingston University 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. Contact the department for further information.

Bachelor of Science in Biomedical Sciences

Requirements for a Major in Biomedical Science

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. Required Cognate Courses

- BIO 120 - General Biology I Credits: 4
- BIO 355 - Human Genetics Credits: 3
OR BIO 375 - Genetics BIO
AND BIO 376 - Genetics Laboratory BIO
- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 232 - Biological Chemistry Credits: 4
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- CHM 242 - Organic Chemistry For Life Sciences II 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 Science Courses

Six additional hours of upper-division (BMS 300 level and higher) biomedical sciences courses.

In addition, the following courses outside of BMS may also be included in these six hours:

- BIO 405 - Cell and Molecular Biology Credits: 4
- BIO 406 - Cell and Molecular Biology Laboratory Credits: 2
- BIO 422 - Embryology Credits: 3
- CHM 461 - Biochemistry I Credits: 4

Biomedical Sciences - Microbiology Emphasis

Program Advisors: Baxter, D. Burg, Graham, Hecht, Nieuwkoop.

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 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 322 - Bacterial Physiology Credits: 3
- BMS 323 - Bacterial Physiology Laboratory Credits: 1
- BMS 499 - Research in the Biomedical Sciences Credits: 1 to 3

3. Required Cognate Courses

- BIO 120 - General Biology I Credits: 4
- BIO 355 - Human Genetics Credits: 3 OR BIO 375 - Genetics BIO
AND BIO 376 - Genetics Laboratory BIO
- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- CHM 242 - Organic Chemistry For Life Sciences II 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
AND EITHER
- CHM 232 - Biological Chemistry Credits: 4
- CHM 461 - Biochemistry I Credits: 4

4. Science Courses

Six additional hours of upper-division science courses from the following:

- BIO 414 - Molecular Biology of the Gene Credits: 3
- BMS 410 - Immunology Credits: 3
- BMS 411 - Immunology Laboratory Credits: 1
- 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

Program Advisors: Lown, Nizielski, Nochera.

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 pre-physician 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 306 - Advanced Human Nutrition Credits: 3
- BMS 307 - Advanced Clinical 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
- BMS 495 - Concepts in Wellness (capstone) Credits: 3

3. Required Cognate Courses

- BIO 120 - General Biology I Credits: 4

- BIO 355 - Human Genetics Credits: 3 **OR** BIO 375 - Genetics BIO **AND** BIO 376 - Genetics Laboratory BIO
- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 232 - Biological Chemistry Credits: 4
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- CHM 242 - Organic Chemistry For Life Sciences II 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

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

The graduate program offers a Master of 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 Requirements

- Requirements for graduate admission as identified in the Admissions section of the Grand Valley State University Undergraduate and Graduate Catalog.
- GPA of 3.0 (B) from all undergraduate courses and satisfactory score from the General Test of the Graduate Record Examination.
- Names of 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 Sciences Graduate Core

Students must complete a minimum of 33 semester hour credits, including the biomedical sciences graduate core (12 credits) and formal thesis (six credits).

Core Credits: 12

- BMS 460 - Regional Human Anatomy Credits: 4
- BMS 508 - Advanced Human Physiology Credits: 3
- BMS 523 - Epidemiology Credits: 2
- BMS 601 - Experimental Design Credits: 3

Thesis Credits: 6

- BMS 695 - Master's Thesis Research Credits: 3 or 6

2. Courses of Study

Completion of courses of study in a curriculum designed in cooperation with the student's graduate committee.

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.

Emphasis in Physical Therapy

Baccalaureate-prepared physical therapists may select an emphasis in physical therapy within the Master of Biomedical Sciences program.

Emphasis Requirements:

1. Biomedical Sciences Core Courses Credits: 12

2. Additional Requirements Credits: 9–12

- BMS 528 - Neuropathology Credits: 3

- BMS 679 - Clinical Practicum Credits: 3 to 6
- NUR 642 - Teaching Health Professionals Credits: 3

3. Clinical Electives Credits: 3-6

- PT 675 - Clinical Education III Credits: 6

History of Science Minor

Faculty: Castelão-Lawless, Kopperl.

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 Biopsychology

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

This program is an interdepartmental major offered jointly by the departments of Biology and Psychology. Students may earn either a B.A. or B.S. degree in biopsychology.

Requirements for a Major in Biopsychology

The following psychology courses are required for biopsychology majors:

- PSY 101 - Introductory Psychology Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- PSY 363 - Learning Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3
- PSY 400 - Advanced Research in Psychology Credits: 3
- PSY 420 - Theories of Personality Credits: 3
- PSY 430 - Physiological Psychology Credits: 3

In addition

The following related courses are also required:

- BIO 120 - General Biology I Credits: 4
- BIO 302 - Comparative Vertebrate Anatomy Credits: 4
- BIO 352 - Animal Behavior Credits: 3
- BIO 355 - Human Genetics Credits: 3 **OR** BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- BIO 432 - Comparative Animal Physiology Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4
- CHM 231 - Introductory Organic Chemistry Credits: 4
- CHM 232 - Biological Chemistry Credits: 4
- CIS 150 - Introduction to Computing Credits: 3

Biostatistics

- MTH 201 - Calculus I Credits: 5
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

Course Restrictions in the major

Students should note that no more than six credit hours of PSY 399 and 499 may be counted toward the major if students choose to take these courses.

Students may earn either a B.A. or B.S. degree

B.A.

The B.A. degree requires third-semester proficiency in a foreign language.

B.S.

For the B.S. degree, students must complete the degree cognate from either the psychology or biology departments:

Psychology:

Students who choose the psychology cognate must complete the Psychology Capstone (PSY 492).

- PSY 300 - Research Methods in Psychology Credits: 3
- PSY 430 - Physiological Psychology Credits: 3
- PSY 431 - Introduction to Neuropsychology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Biology:

Students who choose the biology cognate must complete the biology capstone (BIO 495).

- BIO 120 - General Biology I Credits: 4
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- MTH 125 - Survey of Calculus Credits: 3
- MTH 201 - Calculus I Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

Biostatistics

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

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 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 8 consecutive years from entry into the first graduate course.

Requirements for the M.S. in Biostatistics

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 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 8 consecutive years from entry into the first graduate course.

Students must complete the following requirements:

1. The 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. The 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. The PSM Seminar Courses (Credits: 2)

- PSM 661 - Seminar in Professional Science Practice I Credits: 1
- PSM 662 - Seminar in Professional Science Practice II Credits: 1

4. An Internship Experience (at least 4 credits):

- PSM 691 - Internship Credits: 1 to 9

Broadcasting

For additional information about opportunities your college offers, please refer to The School of Communications.

Website: www.gvsu.edu/soc

The broadcasting major prepares students for entry into any of the various electronic media commonly understood by the terms: television, radio, cable, direct broadcast satellite (DBS), and whatever Internet-based convergence ultimately evolves. This is an especially exciting time for broadcasters, who will be a part of the creation of the new media.

The core is required of all majors. It ensures that students will have broad understanding of the history, operation, regulation of broadcast media, and economic, social, and cultural influences on those media. The major then divides into two tracks, broadcast production and broadcast news. The overriding objective of both tracks is to provide the intellectual and ethical tools that will allow students to operate successfully and responsibly in the professional world of broadcasting.

Career Opportunities

Broadcast Production majors will learn studio-based, multiple-camera TV production. This emphasis prepares students to step into a TV studio or video production facility and function professionally at the entry level.

Broadcast News majors will learn the basic reporting concepts and practices common to print, video, and radio. This emphasis prepares students to step into small to medium market TV or radio stations as a reporter.

Most media outlets today have developed an Internet outlet. Broadcasters are hiring print journalists to assist with online information delivery. Print publishers are hiring broadcast majors to assist with audio and video online presentations. There are lots of opportunities for a graduate with specialized skills.

Internships

Broadcast majors are strongly encouraged to take multiple internships in a variety of settings: print, broadcast and online. Most local media have developed on line services, where students also find a variety of internship opportunities. Students may apply up to 15 internship credits toward graduation. 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.

Broadcasting majors are offered internship opportunities with television, radio, and cable stations in West Michigan. The Grand Rapids area is a top-50 market for television and it features three commercial television stations, two public TV/radio stations and over 50 radio stations.

Scholarships

The School of Communications' Scholarships honor upper level School of Communications students who have demonstrated promise in their chosen field of study.

The Corky Meinecke Memorial Scholarship is intended to benefit students with an interest in a career in sports, be it in radio, television or print media, or in media relations.

The Grand Valley Lanthorn Merit Scholarships benefits student staff members working in editorial, advertising and business departments.

The Jennifer Youssef Journalism Scholarship benefits a student who intends to pursue a career in print or broadcast journalism.

Warren Reynolds Scholarship

Purpose: This scholarship is named in honor of the longtime sports director at WOOD-TV in Grand Rapids. Warren Reynolds, who died of cancer in 2000 and was a champion of charitable causes throughout the region, left a legacy of integrity in broadcast journalism. This scholarship is intended for students who exemplify these ideas and show a passion for electronic media.

Eligibility: Must be enrolled as a full time junior or senior in the School of Communications. Must have demonstrated leadership in courses, internships, broadcasting assignments and extracurricular activities. Must have demonstrated financial need by completing the Free Application for Federal Student Aid (FAFSA). Preference will be given to students pursuing a career in sports broadcasting.

Amount: In the range of \$1000 per semester.

Renewal: May be renewed without reapplication provided the recipient continues to meet the qualifications. May be awarded for a maximum of four total semesters.

Student Organizations

The primary student media outlet is the twice-weekly print edition of the Grand Valley Lanthorn and its on line associated outlet, www.lanthorn.com. Staff positions in all departments are paid.

Students also have the opportunity to gain experience at WCKS, the student-run radio station, and GVTV, the student-run television station.

Bachelor of Arts or Bachelor of Science in Broadcasting

Requirements for a Major in Broadcasting

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 - Theories of Communication Credits: 3

And one of the following:

- COM 201 - Speech Credits: 3
- 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. Cognates

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. cognate or the B.S. cognate that is intended for a particular undergraduate program.

B.A. Cognate

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

The B.S. Cognate for Broadcasting is:

- COM 375 - Communication Research Credits: 3

Business Administration

- MKT 352 - Marketing Research Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

2. Broadcasting Requirements Credits: 18

All majors take the following core courses

- CBR 220 - Beginning TV Studio Production Credits: 3
- CBR 240 - Survey of Electronic Media Credits: 3
- CBR 340 - Life on Television Credits: 3
- CBR 350 - Broadcast Operations Credits: 3
- CBR 411 - Broadcast Seminar Credits: 3
- CFV 125 - Media Production I Credits: 4

3. Select one of the following sequences:

Broadcast Production Credits: 13

- CBR 281 - Audio Production I Credits: 3
- CBR 320 - Advanced TV Studio Production Credits: 3
- CBR 382 - Audio Production II Credits: 3
- CFV 261 - Scriptwriting I Credits: 3

Broadcast News Credits: 12

- CBR 368 - Broadcast News I Credits: 3
- CBR 468 - Broadcast News II Credits: 3
- CBR 484 - TV News Workshop Credits: 3
- CJR 256 - News Reporting I Credits: 3

4. Electives Credits: 6

After consulting with a communications advisor

- Choose at least six credits from any School of Communications discipline at the 200 level or above.

5. Capstone Credits: 3

- COM 495 - Issues in Communication (capstone) Credits: 3

Business Administration

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

Dean: Williams. Associate Dean: Reifel; Faculty: Accounting and Taxation: Bettinghaus, Cannon, Danko, DeBruine, de la Rosa, Dunn, Fanning, Godwin, Goldberg, Grant, Harris, Kessler, Lindquist, Ratliff-Miller, Sergeant, Sopariwala, Stovall, Williams, Yuhus; Economics: Dalmia, Giedeman, Isely, Lowen, Ogura, Reifel, Sicilian, Simons, Singh, Smith Kelly, Sturgill, Sun; Finance: Bhagwat, Blöse, Chang, Dimkoff, Edwards, Gondhalekar, Griggs, Pettengill, Sundaram, Willey; Management: Akbulut, Crampton, Frey, Hodge, Hu, IsHak, Jones-Rikkers, Joshi, Klein, Koch, Kosalge, Koste, Kumar, Levenburg, Magal, Margulis, McKendall, Mishra, Mothersell, Motwani, Mudde, Sanchez, Sanford, Swift, Marketing: Benet, Cotter, Cowart, Dalela, Good, Kraft, Lane, Lohnert, Little, Pope, Robideaux, Rudolph, Walz.

Website: www.gvsu.edu/business

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 and reclassified as pre-business students. 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 Student Services Office for assistance. Once students re-establish themselves in good standing with Seidman 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 Director of Undergraduate Business Programs.

Academic Advising

All routine advising for program requirements and scheduling for undergraduate students is provided by the Seidman Undergraduate Student Services Office, 101B DeVos Center. Appointments are available at either DeVos or Allendale by calling 331-7500. It is the student's responsibility to contact the office for program planning. Freshman and sophomore business students are encouraged to contact any faculty member or the Seidman Undergraduate Student Services 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. Application forms are available at the Seidman Undergraduate Student Services Office. Students selected will intern for a varied number of hours each week depending on the number of credits of the internship. Coordination for each internship is provided by the Seidman Internship Supervisor. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements.

Minority Business Education Center

The Minority Business Education Center Program provides student participants weekly career educational opportunity meetings in which students develop personally and professionally through writing resumes, discussing topics such as time management and how to "dress for success," and holding mock interviews and business etiquette workshops. For more information and applications, contact the Multicultural Affairs Office, 130 Commons, telephone (616) 331-2177.

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 Student Services Office before registering for classes.

Career Opportunities

General business majors typically fall into one of two groups: those who prefer to take a generalist approach to their business education and those who have entrepreneurial interests such as small business management, a family-owned business, or the development of a new business.

If you choose the generalist approach you may work in one of the more than 90 percent of all businesses that have fewer than 25 employees. Such businesses employ about one-half of the nation's workforce. Jobs in these organizations require generalists who can tackle a variety of responsibilities.

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.

The Legal Education Admission Program (LEAP) is open only to students who matriculate as first-year students at Grand Valley. Students may apply anytime 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.

Student Organizations

President’s Council

The Presidents Council is composed of officers from the Seidman College of Business student organizations. Members work together to facilitate interaction among the Seidman student organizations; avoid overlap of extracurricular activities within Seidman; and assist with recruiting and orientation of incoming Seidman students. Members also serve as advisors to the Dean’s office, providing insight and assistance in a variety of areas.

American Marketing Association

The Seidman student chapter of the American Marketing Association is an affiliate of the national organization, which strives to advance the discipline of marketing. The national organization consists of more than 40,000 marketing practitioners, educators, and students. The Seidman student chapter attempts to enhance student participation in the real world of marketing by sponsoring conferences, events, and workshops on the latest topics and issues in marketing. The chapter also exposes students to top marketing professionals, thereby providing valuable business contacts for their future.

APICS - The Educational Society for Resource Management

The Grand Valley student chapter of the APICS, The Educational Society for Resource Management (APICS), is an affiliate of the organization that was established in 1957 to provide professionals and organizations in the manufacturing and service industries with the resources they need to enhance performance and ensure continued success. APICS has more than 70,000 members worldwide and more than 180 affiliated student chapters at college campuses throughout the country. Chapter activities include working closely with the practicing managers in West Michigan through the Grand Rapids chapter; participating in seminars, workshops, and conferences on current topics; fundraising; organizing field trips; and offering social events.

Collegiate Entrepreneurs Organization (CEO)

The Grand Valley student chapter of the Collegiate Entrepreneurs Organization is an affiliate of the national CEO organization, which is the premier global entrepreneurship network serving more than 500 colleges and universities. The mission of CEO is to inform, support,

and inspire college students to be entrepreneurial and seek opportunity through enterprise creation. Students meet regularly to network, train, and inspire students from all fields (business and non-business) to foster and encourage the transfer of innovative ideas to commercialization. Interaction with successful entrepreneurs locally, attendance at the national CEO conference, business plan competitions, and an intercollegiate online chat, are a few of the group’s activities. All majors are welcome bringing a rich multi-discipline flavor to the organization and its activities.

Delta Sigma Pi

This professional, interdisciplinary, coeducational-business fraternity has a national alumni membership in excess of 120,000 businessmen and women. The Grand Valley chapter operates as one of more than 200 currently active collegiate chapters. Membership activities encourage academic and professional development by operating the chapter as a business. Chapter activities include bringing business leaders to campus, conducting fundraisers, organizing field trips, and offering social events. Membership is open to pre-business and business students from all Seidman business disciplines who meet Seidman College academic standards.

Grand Valley State Organization for Internal and IT Auditors

The Grand Valley State Organization for Internal and IT Auditors is a student organization focused on providing students with supplemental information in internal and IT auditing. The organization is focused on bringing in professional speakers, attending professional meetings outside of the Grand Valley campus, and also offering students information to help them succeed in careers in internal and IT auditing such as exam prep courses [LA3] .

Investment Portfolio Organization (IPO)

The club’s goals are to foster interaction among students interested in finance and to enhance members’ career opportunities. The functions of the club include regular meetings, trips, speakers, and social events. Another function is the supervision and management of the student investment portfolio. This portfolio was financed initially with income from the Seidman Endowment and later supplemented with funds from the Henry Crown Fund. Club members decide how funds are invested.

Society for the Advancement of Management (SAM) and International Business

The Grand Valley Student Chapter of the Society for Advancement of Management (SAM) is an affiliate of a national organization that strives to integrate different business disciplines. The national organization encompasses more than 160 campus chapters involving practitioners, educators, and students. Membership in the association helps students make the transition from campus to career and is open to all business majors. The association gives students a personal introduction to practicing managers in the local community, exposes students to the most successful management techniques and current views, and provides a forum for students with common interests, problems, and career objectives.

Society for Human Resource Management

Students interested in human resource management are eligible to join the student chapter of the Society for Human Resource Management. Students who join SHRM join thousands of human resource management executives, staff specialists, and students with similar responsibilities, needs, and issues. SHRM helps members become more effective on the job by offering opportunities for idea exchange and numerous career development services including publications, problem-solving channels, professional development aids, public affairs programs, research, and employment assistance.

Grand Valley Economics Club

The Grand Valley Economics Club is open to all Grand Valley State University students who have an interest in economics. The Club conducts numerous social and scholarly activities throughout the year, including:

Business Administration

current events panel discussions, job and internship opportunities updates, explorations about graduate and professional school opportunities, and field trips.

Seidman Real Estate Group

The goal of the Seidman Real Estate Group is to aid students in attaining real estate industry specific knowledge and offer networking opportunities for students interested in real estate related careers. The group accomplishes this by hosting speakers from different real estate disciplines, touring ongoing and past developments, as well as discussing market trends specific to real estate. The group is open to all majors.

Honors Organizations

Beta Alpha Psi

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, and 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 meetings held in the Midwest regional area 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 a 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 a 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 certain 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.

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 and 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 towards the end of the Winter Semester.

Core and Cognate Degree Requirements for the Bachelor of 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 and basic skills; business core; business major, major requirements listed with information on individual majors; cognates; and electives.

Cognate Degree Requirements

- CS 150 - Introduction to Computing 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
 - 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: 5
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates if applicable.

- ECO 440 - Public Economics and Ethics Credits: 3
- MGT 340 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 credits total), however, these courses can be applied toward a second business major.

Electives

Students may elect non-business or business courses to fulfill their elective course requirements. However, at least 60 hours of the total program must be in non-business courses. 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 or cognate courses, except the internship, on a credit/no-credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as non-business credit.

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 and basic skills; business core; business major, major requirements listed with information on individual majors; cognates; and electives.

Cognate Degree Requirements

- CIS 150 - Introduction to Computing 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
- 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: 5
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3
- MGT 340 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3
- FIN 330 - Ethics in Finance Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 credits total), however, these courses can be applied toward a second business major.

Electives

Students may elect non-business or business courses to fulfill their elective course requirements. However, at least 60 hours of the total program must be in non-business courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as non-business credit.

Suggested Order of Coursework for Seidman Majors**First Year:**

- Fulfill Basic Skills math and freshman writing requirements
- Begin general education foundations and cultures requirements
- CIS 150 - Introduction to Computing

Second Year:

- Complete general education foundations and cultures requirements
- Begin theme
- Include at least one course designated as supplemental writing skills
- Begin and complete 200 level Seidman cognate and core requirements

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)
- Continue or complete theme
- Fulfill Junior level writing requirement

Fourth Year:

- Complete Seidman major and elective courses
- Seidman capstone
- Complete theme
- Complete second supplemental writing skills course no later than senior year

Business Economics

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

Career Opportunities

Individuals, corporations, and governments employ limited resources to produce goods and services in the competitive marketplace and the scarcity of these resources forces us to choose among alternate opportunities. The business economics program at Grand Valley State University's Seidman College of Business teaches you to understand the forces that drive the actions of corporations and consumers, the way an economy works, and the importance of global trade. You may choose one of two emphasis areas within business economics.

Bachelor of Business Administration in Business Economics**Requirements for a Major in Business Economics****Requirements for the B.B.A.****Cognate Degree Requirements**

- CIS 150 - Introduction to Computing 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
- 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: 5
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates if applicable.

- ACC 333 - Corporate Governance and Accounting Ethics Credits: 3
- ECO 440 - Public Economics and Ethics Credits: 3

Business Administration

- FIN 330 - Ethics in Finance Credits: 3
- MGT 340 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 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. However, at least 60 hours of the total program must be in nonbusiness courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as nonbusiness credit.

General Business Economics

Students who take this emphasis will focus on applications in business and public policy issues. This 18-credit-hour emphasis can provide careers in banking, insurance services, marketing research and public organizations. An economic emphasis is a solid foundation for graduate programs.

Required Courses:

The upper-division economics course selected as part of the cognate 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
- ECO Elective at the 300 or 400 level Credits: 3

Real Estate Business Economics

Students who take this emphasis can pursue careers as real estate agents, commercial and residential appraisers, mortgage brokers, commercial lenders, urban planners, title examiners, location specialists, REIT managers, and regional developers. Students who obtain the economics B.B.A. with the real estate emphasis will take the following courses:

Required Courses:

The upper-division economics course selected as part of the cognate requirements cannot count as an economics major course.

- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- ECO 435 - Urban Economics Credits: 3
- ECO 436 - Real Estate Economics Credits: 3
- ECO 495 - Senior Economic Project (Capstone) Credits: 3
- FIN 350 - Real Estate Principles Credits: 3

Additional Courses

The 18 required credit hours specified above complete the real estate economics emphasis requirements. In order to provide a complementary set of skills, any of the following courses are recommended if students have the flexibility to take more courses:

- FIN 331 - Risk and Insurance Credits: 3
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- GPY 309 - Introduction to City and Regional Planning Credits: 3
- PA 307 - Local Politics and Administration Credits: 3
- PA 449 - Public Policy Credits: 3

Business (General)

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.

Cognate Degree Requirements

- CIS 150 - Introduction to Computing 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
- 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: 5
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates 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 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 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. However, at least 60 hours of the total program must be in nonbusiness courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as nonbusiness credit.

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

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 - Introduction to International Business 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 cognate requirements cannot double-count in a general business major.

Master of Business Administration

In a world of changing opportunities and challenges, individuals need to find ways to enrich their skills and increase their value in the marketplace. The M.B.A. program offers strategic advantages that make a real difference in students' careers.

There are no prerequisites required for admission to the M.B.A. program, although foundation courses are required prior to 600-level course work as described below.

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 accredited college or university. These credits may be substituted for required courses, area of emphasis courses, or general elective credit as determined by the program director. To be considered for transfer, coursework must have been taken within five years of admission to the M.B.A. 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.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 in the Pew Campus DeVos Center in downtown Grand Rapids, Michigan.

Website: www.gvsu.edu/mba

Graduate Outcomes/Time to Program Completion

The Seidman faculty has identified the following learning objectives for M.B.A. students, and objectives are assessed regularly to ensure that they are being achieved:

Seidman M.B.A. graduates will be:

- Effective managers of business organizations
- Effective communicators
- Internationally literate
- Proficient with information and information systems
- Prepared to recognize and respond to ethical questions encountered in the practice of business
- Critical and analytical thinkers
- Skilled in strategic analysis

The Seidman faculty has adopted APA as the standard citation style for M.B.A. course work. Unless a faculty member indicates otherwise, students are expected to use this citation method where appropriate in their written course work.

Requirements for the M.B.A.

The M.B.A. program consists of 33 semester hours of 600-level coursework. Foundation work equivalent to the undergraduate business core must also be completed. Students who have completed an undergraduate business degree will have completed some or all of the foundation. Students who have undergraduate degrees with non-business majors may be up to 18 semester hours of accelerated foundation courses.

Foundation Courses

Foundation requirements may be met by completion of either the 500-level accelerated courses or the undergraduate courses as indicated below:

Background Area	Background Course	GVSU Undergraduate Course(s)
Information Systems	MGT 510 - Principles of Mgt Information Systems	MGT 268 (3 credits)
Accounting	ACC 511 - Financial and Managerial Accounting Concepts	ACC 212 and 213 (6 credits)
Statistics	FIN 521 - Data Analysis in Business	STA 215 (3 credits)
Finance	FIN 522 - Finance Principles for Managers	FIN 320 (3 credits)
Legal Environment	BUS 531 - Legal Environment of Business	BUS 201 (3 credits)
Economics	ECO 542 - Economic Reasoning	ECO 210 and 211 (6 credits)
Marketing	MKT 551 - Marketing Management: Principles and Institutions	MKT 350 (3 credits)
Operations	MGT 561 - Production and Operations Management	MGT 366 (3 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

Business Administration

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 above 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 foundation requirements is provided each student at the time of admission.

The M.B.A. is a program designed for working professionals. Classes are offered in the evenings and afternoons. Student who have completed the foundation requirements and enroll for six credits each semester graduate in two years. The M.B.A. can be completed in three or four semesters of full-time study if the student has completed all foundation requirements and attends full time.

Core Courses

The following five core courses are required of all M.B.A. students:

- BUS 610 - Management Information Systems & Org Processes Credits: 3
- BUS 631 - Leadership and Organizational Dynamics Credits: 3
- BUS 671 - Global Competitiveness Credits: 3
- BUS 677 - Business Ethical Problems & Perspectives Credits: 1.5
- BUS 681 - Strategy Credits: 3

Elective Courses

In addition, all M.B.A. students must complete at least four of the following five directed elective courses:

- ACC 611 - Contemporary Managerial Accounting Credits: 3
- FIN 621 - Financial Policy for Managers Credits: 3
- ECO 641 - Business Economics and Strategy Credits: 3
- MKT 651 - Marketing Management Credits: 3
- MGT 661 - Operations Management Credits: 3

The balance of the program, 4.5 to 7.5 credits of business electives, will depend on the student's objectives and career interests.

Capstone Course

BUS 681 - Strategy is a capstone course and may not be taken until other core courses and at least four directed electives are complete, or concurrent with other required courses if it is the student's final semester.

M.B.A. Emphasis Areas

The M.B.A. is a degree of breadth rather than depth. However, for a variety of reasons, some M.B.A. candidates benefit by completing all electives in one area. Students earning the Seidman M.B.A. may choose all three electives in one area if they choose to complement the breadth of the degree with some depth in a functional area.

The Seidman M.B.A. also offers students an official emphasis in the innovation and technology management. The emphasis requires four 3-credit electives, which lengthens the M.B.A. program by 4.5 credits. 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 comprises the elective portion of the student's M.B.A. are BUS 656, Management of Technology; MGT 668, E-Commerce Technology and Applications; MGT 669, Process Analysis and ERP Systems; and one additional technology-related course offered at Grand Valley with the graduate programs director's approval.

An emphasis in Health Sector Management is also available and consists of three specific courses that complete the elective portion of the MBA 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. This emphasis increases the total credit hours for the MBA program to 36.

Those students interested in depth of study in finance may earn an emphasis in that discipline by selecting ACC 611, Contemporary Managerial Accounting; ECO 641, Business Economics and Strategy; and FIN 621, Financial Policy for Managers as three of their four directed electives. Also required for the elective portion of the program are FIN 624, Investments, and at least 9 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. This emphasis increases the total credit hours for the MBA program to 37.5.

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

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 anytime 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 100. Prerequisites for both programs must be met in addition to the 100 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. Thus, students pursuing this degree will complete, in addition to the M.B.A. prerequisites, the four required 3-credit core courses and four of five directed electives. 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.

Graduate Certificate in Management

A certificate in Management is available to degree-seeking Padnos College of Engineering & Computing graduate students who are in good standing. The certificate consists of the following five courses (12 credits):

- BUS 631 - Leadership and Organizational Dynamics Credits: 3
- BUS 677 - Business Ethical Problems & Perspectives Credits: 1.5
- BUS 634 - Sustainability Principles & Practices Credits: 1.5
- MGT 635 - Planned Change and Organizational Development Credits: 3
- MGT 633 - Management of Human Resources Credits: 3

Interested students must have approval of their engineering or CIS faculty advisor as well as the Seidman College graduate programs director. The MBA program business prerequisites are not required of the engineering and CIS students earning the certificate. Students must achieve a 3.0 cumulative GPA with no grade below "C" in the five courses that constitute the certificate. The certificate is not designed for MBA students, although MBA students will complete two of the five courses within the MBA core and may complete the remaining three courses as the elective portion of their program.

Cell and Molecular Biology

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Staves. Professors: Staves, Thorpe; Associate Professors: Blackman, Dietrich, McClinton; Assistant Professors: Hart, Patel, Szarecka, Tsou.

Associate Faculty: M.Burg, Elrod, Kurjiaka, Leonard, Nikitin, Powers, Sass, Sridhar, Taylor, Thum, Wallar.

Website: www.gvsu.edu/cmb

Cell and Molecular Biology (CMB) is focused on determining how cells function and the significance of those functions in the living organism. This interdisciplinary study draws on diverse fields such as biochemistry, biophysics, 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 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 critical 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

demanding curriculum, can be critical assets for 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.

Admission to Major Standing

To ensure that all CMB students benefit from a successful research experience, admission to the CMB program is by application. As students begin their work toward completion of a B.S. degree in CMB, they will declare themselves as pre-CMB majors. These students will then make application for admission into the CMB major. Application will normally take place in the first semester of the junior year, or after the student has completed CMB 250. In order to be admitted to major standing, applicants must have earned at least a C+ grade in each of the following courses:

- BIO 120
- BIO 375
- BIO 376
- CHM 115
- CHM 116
- CHM 241
- CHM 242
- CMB 250

Applications will be reviewed by the CMB Coordinating Committee, and recommendations will be made to the CMB Program Director. Demonstrated student interest as well as recommendations from potential research mentors will be considered as well as grades. Students whose applications are approved will be admitted to CMB major standing.

Career Opportunities

The overall goal of the CMB program is to provide our students with quality preparation for careers in research laboratories, as well as further study in graduate and professional schools. Cell and molecular biology, with its sub-disciplines of biotechnology, molecular genetics, pharmacology and biomedicine is the most rapidly growing and dynamic area of the life sciences. Some advances and important figures include:

- Development of environmental biotechnology products that make it possible to clean up hazardous waste more efficiently by harnessing pollution - eating microbes without the use of caustic chemicals.
- Application of DNA fingerprinting to dramatically improve criminal investigation and forensic medicine, as well as afford significant advances in anthropology and wildlife management.
- Use of adult and embryonic stem cells for therapeutic benefits, in addition to offering insight into vexing problems of genetic defects associated with terminal illnesses.
- Utilization of biotechnology foods that consumers already enjoy, such as papaya, soybeans and corn. Hundreds of biopesticides and other agricultural products also are being used to improve our food supply and to reduce our dependence on conventional chemical pesticides.
- The cell and molecular biology industry employs 198,300 people.
- The cell and molecular biology industry has mushroomed since 1992, with revenues increasing from \$8 billion in 1992 to \$70 billion in 2007.
- There are 1,473 cell and molecular biology companies in the United States, of which 342 are publicly held.
- There are more than 300 biotech drug products and vaccines currently in clinical trials targeting more than 200 diseases, including various cancers, Alzheimer's disease, heart disease, diabetes, multiple sclerosis, AIDS, and arthritis.

In addition to careers in industry and research, the CMB degree will provide excellent preparation for careers in intellectual property and

Cell and Molecular Biology

biotechnology law, pharmaceutical and drug sales, market analysis and education.

Graduate School Opportunities

Students graduating with the CMB major will be prepared for graduate programs in biology, biochemistry, cell and molecular biology and related areas. Our students have been accepted into graduate programs at: Albert Einstein College of Medicine, Carnegie Mellon Univ., Columbia Univ., Emory Univ., Grand Valley State University, Indiana Univ. Medical School in Indianapolis, Indiana Univ.-Bloomington, Indiana Univ.-Purdue, Johns Hopkins School of Medicine (NIH-JHU Graduate Partnership Program), Medical College of Wisconsin, Michigan State Univ., Northwestern Univ., The Ohio State Univ., Tufts Univ., Univ. of Alabama-Birmingham, Univ. of California-Davis, Univ. of Chicago, Univ. of Delaware, Univ. of Iowa, Univ. of Michigan, Univ. of Minnesota-Twin Cities, Univ. of North Carolina, Univ. of North Carolina (NIH-UNC Graduate Partnership Program), Univ. of Pittsburgh, Univ. of Texas, Southwestern, University of Wisconsin-Madison, Vanderbilt Univ., Virginia Commonwealth Univ., Washington University in St. Louis, Weil Medical College of Cornell.

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.

Student Organizations

American Society of Biochemistry and Molecular Biology.

A student organization for students interested in all areas of Cell and Molecular Biology. The group hosts visiting speakers, promotes undergraduate research and supports travel to the national annual meeting.

Bachelor of Science in Cell and Molecular Biology

Requirements for a Major in Cell and Molecular Biology

1. Cognate Degree Requirements

Completion of STA 215 - Introductory Applied Statistics, BIO 405 - Cell and Molecular Biology and CHM 242 - Organic Chemistry For Life Sciences II satisfy the B.S. degree cognate requirement for cell and molecular biology majors.

2. 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
- BIO 405 - Cell and Molecular Biology Credits: 4
- BIO 406 - Cell and Molecular Biology Laboratory Credits: 2
- BIO 426 - Nucleic Acids Laboratory Credits: 3
- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- 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

3. 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: 5
- MTH 202 - Calculus II Credits: 4
- PHY 231 - Principles of Physics II Credits: 5
- PHY 230 - Principles of Physics I 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 below:

Option A:

- CMB 490 Internship Credits: 3

Option B:

- CMB 499 - Research in Cell and Molecular Biology Credits: 1-3

4. Electives

With the required courses listed above, 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 411 - Genetics of Development and Cancer Credits: 3
- BIO 414 - Molecular Biology of the Gene Credits: 3
- 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 322 - Bacterial Physiology Credits: 3
- BMS 323 - Bacterial Physiology Laboratory Credits: 1
- BMS 410 - Immunology Credits: 3
- BMS 411 - Immunology Laboratory Credits: 1
- BMS 431 - Medical Virology Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 463 - Biochemistry II Credits: 3
- PHY 320 - Optics Credits: 3

Suggested Order of Coursework for a Major in Cell and Molecular Biology

First Year

- MTH/STA
- 3 Gen Ed classes
- BIO 120 - General Biology I Credits: 4
- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- WRT 150 - Strategies in Writing Credits: 4

Second Year

- MTH/STA
- Microbiology
- 2 Gen Ed classes
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- CHM 242 - Organic Chemistry For Life Sciences II Credits: 4

- CHM 241 - Organic Chemistry For Life Sciences I Credits: 4
- CMB 250 - Introduction to Biotechnology Credits: 3

Third Year

- CMB elective
- 2 Gen Ed courses
- BIO 405 - Cell and Molecular Biology Credits: 4
- BIO 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

- 3 CMB electives
- 3 Gen Ed 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: 1-3
- BIO 426 - Nucleic Acids Laboratory Credits: 3

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.

Requirements for the M.S. in Cell and Molecular Biology Biotechnology Emphasis (PSM) are:

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 II Credits: 1

PSM Internship (Credits: 4)

- PSM 691 - Internship Credits: 1 to 9

4 Credits Required. No more than 4 credits can be applied toward degree completion.

*Electives (minimum of 4 credits with advisor approval)

Requirements for the M.S. in Cell and Molecular Biology Research Emphasis are:

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 696 - Colloquium in Cell and Molecular Biology Credits: 2

Research and Thesis (Credits: 1-9)

- CMB 695 - Thesis Research Credits: 1 to 9

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 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: 1-6
- STA 616 - Statistical Programming Credits: 3

Chemistry

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Carlson; Professors: Baum, Carlson, Haas, Matchett, McBane, Miller, Nikkel, Qi, Smart; Associate Professors: Bender, Henderleiter, Herrington, Karpen, Kovacs, Lawrence, Leonard, Ngassa, Rener, Schaertel, Soman, Wallar, Winchester, Witucki; Assistant Professors: Barrows, Biros, DiCarlo, Hart, Lantz, Pentecost, Powers, Rice; Affiliate Professors: Mack, Morris, Ryan, Siu, Stevens.

Website: 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 materials we use to build our houses are all affected by discoveries made through the study of chemistry.

Students who select a chemistry major must choose one of five emphases: the professional emphasis, the technical emphasis, the education emphasis, the biochemistry and biotechnology emphasis, or the environmental emphasis. The professional emphasis offers a well-rounded education in chemistry and provides a strong background for employment at the bachelor level or entry into graduate school. Completion of the professional emphasis leads to a degree certified by the American Chemical Society. The technical emphasis is designed for students who wish to work in industry and do not intend to enter graduate or professional school. Students interested in attending biochemistry graduate school or in obtaining employment in biochemical and biomedical laboratories may choose the biochemistry and biotechnology emphasis. This emphasis is also appropriate for students interested in attending professional health schools, such as medical school and pharmacy school. Students interested in teaching high school chemistry may choose the education emphasis. This emphasis includes courses in chemistry teaching methods and also requires a certified minor and completion of the Secondary Education Professional Program.

Students may select the environmental emphasis if they wish to seek employment in a position related to environmental chemistry or an advanced degree that may be related to environmental issues.

We recommend that students start in the professional emphasis, because it is easier to transfer from there to one of the other emphases than vice versa. For any degree program in chemistry it is important to start the proper sequence of chemistry courses as soon as possible. Students who wish to major in chemistry should see a member of the Chemistry Department to plan their program at the earliest opportunity.

Accreditation

The Chemistry Department is accredited by the Committee on Professional Training of the American Chemical Society.

Chemistry

Degrees Offered

Bachelor of Science, Bachelor of Arts in Chemistry: minor in chemistry. Teaching certification (secondary) in chemistry major and minor. Masters of Education (General Education, Middle and High School Emphasis, with a concentration in Chemistry) offered in cooperation with the College of Education.

Career Opportunities

Chemistry is the study of the property, composition and transformation of matter. As such it affects all aspects of our lives. Our food, clothing, fuel, and medicine could not be produced without the work of chemists. Chemists with bachelor's degrees find employment in all areas of manufacturing, agribusiness, energy production, and health care, and in a wide variety of industrial, governmental, and medical laboratories. Areas of employment include product development and testing, quality control, environmental monitoring, and pollution control. Outside of the laboratory, chemists are employed by chemical and pharmaceutical companies in sales, technical service, and various other phases of business. High school teaching is another option for the chemist with a bachelor's degree and appropriate certification.

A degree in chemistry is excellent preparation for further study in biochemistry, medicine, food science, oceanography, environmental science, patent law, microbiology, physiology, and engineering. Advanced degrees in chemistry qualify individuals for careers in research and higher education.

Master's degree programs in chemical engineering accept students with degrees in chemistry. The B.S. in Chemistry, professional emphasis, with additional mathematics coursework, is recommended for admission to such programs.

Graduate School Opportunities

Students interest in Graduate School should take the following:

Chemistry

Instead of CHM 351 and 352, take:

- CHM 353 - Physical/Computational Chemistry Lab I Credits: 2
- CHM 355 - Physical Chemistry Laboratory II Credits: 1
- CHM 356 - Physical Chemistry I Credits: 3
- CHM 358 - Physical Chemistry II Credits: 3

Mathematics

- MTH 202 - Calculus II Credits: 4

Physics

Instead of PHY 220 and 221, take:

- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5

Participating Programs

The College of Education offers an M.Ed. in General Education with a concentration in Chemistry. This program is called Target Inquiry. Contact the chemistry office for more information.

The Geology Department offers a dual Geology-Chemistry major in cooperation with the Chemistry Department. For details, see the major listing in the Geology Department catalog.

Student Organizations

The Chemistry Club is a student affiliate chapter of the American Chemical Society. Membership in this club gives our majors a way to serve the university (tutoring) and community (chemistry shows at area malls), and to meet other students with similar interests.

Bachelor of Arts or 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. Completion of a major in chemistry requires the following:

Requirements for a Major in Chemistry

1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. Core Courses

A grade of C (2.0) or better in each of the following core chemistry courses. CHM 491 - Chemistry Seminar II is required of all chemistry majors. Junior Seminar (CHM 391 - Chemistry Seminar I) is required of all students who take their junior year at GVSU. Two semesters of seminar are required for one credit. Students should register for zero credit in their first semester and one credit in their second semester.

- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 222 - Quantitative Analysis Credits: 3
- CHM 225 - Instrumental Analysis I Credits: 3
- CHM 245 - Principles of Organic Chemistry I Credits: 3
- 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 391 - Chemistry Seminar I Credits: 1 CHM 246 - Principles of Organic Chemistry I Lab Credits: 1

CHM 241 and CHM 242 may substitute for CHM 245/246/247/248.

However, students must also take CHM 249 plus upper-level chemistry electives that include a total of 28 lab-hours.

3. Required Cognate Courses

A minimum 2.0 GPA in required cognate courses. Transfer students must complete at least 12 credits in chemistry at Grand Valley.

4. Emphasis:

All students must select one of the following emphases in addition to the core courses listed above.

A. Professional Emphasis

The professional emphasis offers excellent preparation for bachelor level employment and entry into graduate and professional schools (ACS certified).

- CHM 353 - Physical/Computational Chemistry Lab I Credits: 2
- CHM 355 - Physical Chemistry Laboratory II Credits: 1
- CHM 356 - Physical Chemistry I Credits: 3
- CHM 358 - Physical Chemistry II Credits: 3
- CHM 372 - Inorganic Chemistry Lab Techniques Credits: 1
- CHM 461 - Biochemistry I Credits: 4
- CHM 471 - Advanced Inorganic Chemistry Credits: 3 (capstone course)
- CHM 491 - Chemistry Seminar II Credits: 1

Elective Course

One elective course from the following:

- CHM 441 - Advanced Organic Chemistry Credits: 3
- CHM 442 - Polymer Chemistry Credits: 3
- CHM 463 - Biochemistry II Credits: 3
- CHM 473 - Organometallic Chemistry Credits: 3

Upper-level Chemistry Lab Courses

Including a total of 80 hours of lab time (lab hours listed in parentheses).

- CHM 322 - Environmental Chemical Analysis Credits: 3 (42)
- CHM 344 - Qualitative Organic Analysis Credits: 3 (42)
- CHM 425 - Instrumental Analysis II Credits: 3 (28)
- CHM 452 - Advanced Synthetic Techniques Credits: 2 (70)
- CHM 455 - Physical/Computational Chemistry Lab II Credits: 2 (28) May substitute for CHM 355.
- CHM 462 - Techniques in Biochemistry Credits: 3 (84)
- CHM 499 - Investigation Problems Credits: 1 to 5 (84) Two credits of CHM 499 can be applied to satisfy the lab elective requirement.

Cognate Courses

And the following cognate courses:

- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5

B. Technical Emphasis

The technical emphasis may be selected by those students planning to seek employment after graduation.

- CHM 311 - Green Chemistry and Industrial Processes Credits: 3
- CHM 344 - Qualitative Organic Analysis Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 425 - Instrumental Analysis II Credits: 3
- CHM 491 - Chemistry Seminar II Credits: 1

Elective Course

One elective course from the following:

- CHM 321 - Environmental Chemistry Credits: 3
- CHM 322 - Environmental Chemical Analysis Credits: 3
- CHM 441 - Advanced Organic Chemistry Credits: 3
- CHM 442 - Polymer Chemistry Credits: 3
- CHM 461 - Biochemistry I Credits: 4

Cognate Courses

And the following cognate courses:

- CIS 160 - Programming with Visual Basic Credits: 3 **OR** CIS 162 - Computer Science I Credits: 4
- MTH 201 - Calculus I Credits: 5
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

C. Education Emphasis

The education emphasis is designed specifically for students who plan to teach chemistry at the secondary level. Students in this emphasis must also complete a teachable minor and the Secondary Professional Program (College of Education). As part of the College of Education state certification requirement, students must complete BIO 120, BIO 121, and GEO 111. These or other courses may be taken as electives or as part of the general education program or as part of the minor.

- CHM 351 - Introduction to Physical Chemistry Credits: 3
 - CHM 352 - Applied Physical Chemistry Credits: 1
 - CHM 419 - Chemistry in Secondary Education Credits: 3
 - CHM 491 - Chemistry Seminar II Credits: 1
- AND EITHER**
- CHM 232 - Biological Chemistry Credits: 4
- OR**
- CHM 461 - Biochemistry I Credits: 4

Cognate Courses

And the following cognate courses:

- CHM 491 - Chemistry Seminar II Credits: 1
- MTH 201 - Calculus I Credits: 5
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

D. Biochemistry and Biotechnology Emphasis

The biochemistry and biotechnology emphasis prepares students for entry level employment in biotechnical or biomedical laboratories or for entry into professional health schools or biochemical graduate programs.

- BIO 120 - General Biology I Credits: 4
- BIO 375 - Genetics Credits: 3
- BIO 376 - Genetics Laboratory Credits: 1
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 461 - Biochemistry I Credits: 4
- CHM 462 - Techniques in Biochemistry Credits: 3
- CHM 463 - Biochemistry II Credits: 3 (capstone course)
- CHM 491 - Chemistry Seminar II Credits: 1

Cognate Courses

- MTH 201 - Calculus I Credits: 5
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

Cognate Elective Options

Take 10 additional credits from the following choices.

- BIO 406 - Cell and Molecular Biology Laboratory Credits: 2
 - BIO 416 - Advanced Genetics Laboratory Credits: 2
 - BIO 423 - Plant Biotechnology Credits: 3
 - BIO 426 - Nucleic Acids Laboratory Credits: 3
- OR** BMS 312 - Bacterial Genetics
- AND** BMS 313 - Bacterial Genetics Laboratory
- OR** BMS 322 - Bacterial Physiology
- AND** BMS 323 - Bacterial Physiology Laboratory
- CHM 490 - Chemistry Laboratory Internship Credits: 1 to 4 Credits: 1 to 5
 - CHM 499 - Investigation Problems Credits: 1 to 5

And either:

- BIO 357 - Environmental Microbiology Credits: 4
- OR**
- BMS 212 - Introductory Microbiology Credits: 3
- AND** BMS 213 - Laboratory in Microbiology Credits: 1

And either:

- BIO 432 - Comparative Animal Physiology Credits: 4
- OR**
- BMS 290 - Human Physiology Credits: 3 **AND** BMS 291 - Laboratory in Human Physiology Credits: 1

And either:

- BIO 405 - Cell and Molecular Biology Credits: 4
- OR**
- BIO 414 - Molecular Biology of the Gene Credits: 3

E. Environmental Emphasis

The environmental emphasis also requires specialization in a discipline outside of chemistry. Students must choose one of the following tracks to complete the emphasis. Each track includes two required lower-level courses to meet the prerequisite requirements of the track and two upper-level courses from the courses listed.

- CHM elective (two to three credits) at the 300–400 level (approval required)
- CHM 321 - Environmental Chemistry Credits: 3
- CHM 322 - Environmental Chemical Analysis Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 491 - Chemistry Seminar II Credits: 1

Cognate Courses

- CIS 150 - Introduction to Computing Credits: 3
- MTH 201 - Calculus I Credits: 5
- OSH 414 - Environmental Safety and Health Regulations Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- STA 215 - Introductory Applied Statistics Credits: 3

1. Biology Track:

- BIO 120 - General Biology I Credits: 4
- BIO 215 - General Ecology Credits: 4

And any two of the following courses:

- BIO 338 - Environmental Ethics Credits: 3
- BIO 357 - Environmental Microbiology Credits: 4
- BIO 440 - Limnology Credits: 4

2. Natural Resources Management Track:

- GEO 111 - Exploring the Earth Credits: 4
- NRM 281 - Principles of Soil Science Credits: 4

Chemistry

And any two of the following courses:

- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- NRM 320 - Introduction to Resource Systems Credits: 3
- NRM 451 - Natural Resource Policy Credits: 4
- NRM 452 - Watershed and Wetland Management Credits: 4

3. Geology Track:

- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 5

And any two of the following courses:

- GEO 440 - Geohydrology Credits: 3
- GEO 445 - Introduction to Geochemistry Credits: 4
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3

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: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5

Second Year

- CHM 222 - Quantitative Analysis Credits: 3
- CHM 225 - Instrumental Analysis I Credits: 3
- CHM 245 - Principles of Organic Chemistry I Credits: 3
- 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 231 - Principles of Physics II Credits: 5

Third Year

- CHM electives
- CHM 353 - Physical/Computational Chemistry Lab I Credits: 2
- CHM 355 - Physical Chemistry Laboratory II Credits: 1
- CHM 356 - Physical Chemistry I Credits: 3
- CHM 358 - Physical Chemistry II Credits: 3
- CHM 372 - Inorganic Chemistry Lab Techniques Credits: 1
- CHM 391 - Chemistry Seminar I Credits: 1

Fourth Year

- CHM electives
- CHM 461 - Biochemistry I Credits: 4
- CHM 471 - Advanced Inorganic Chemistry Credits: 3
- CHM 491 - Chemistry Seminar II Credits: 1

Master of Education Advanced Content Specialization in Chemistry

The M.Ed. in General Education (Middle and High School Emphasis) with a concentration in chemistry is offered by the College of Education in cooperation with the Department of Chemistry. The concentration area is designed to 1) provide teacher participants with an authentic chemistry laboratory research experience, 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. Advanced Content Specialization program with a chemistry concentration requires a teaching certification with a major or minor in chemistry and employment as a chemistry teacher concurrent with enrollment in CHM 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 GPA 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 chemistry. 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 chemistry.

Upon admission to the program, the students will meet with a College of Education advisor and an advisor from the Department of Chemistry who will evaluate all previous course work taken in chemistry. A curricular plan reflecting the student's needs, interests, and goals will be agreed upon.

Chemistry Concentration Requirements

The following courses must be taken to satisfy the chemistry concentration requirements.

- CHM 610 - Graduate Research Seminar Credits: 2
- CHM 611 - Research for Teachers Credits: 3
- CHM 612 - Applications of Research to Teaching Credits: 1
- CHM 621 - Education Research in Chemistry Credits: 3
- CHM 631 - Inquiry Curriculum Development Credits: 4
- CHM 632 - Inquiry Colloquium Credits: 1
- CHM 633 - Applications of Chemistry Education Credits: 1

Chemistry Minor

Requirements for a Minor in Chemistry

1. Minimum Requirements

A minor in chemistry requires a minimum of 24 credit hours, including the following courses:

- CHM 115 - Principles of Chemistry I Credits: 5
- 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: 4
OR CHM 245 - Principles of Organic Chemistry I Credits: 3
AND 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
AND CHM 248 - Principles of Organic Chemistry II Lab Credits: 1

Plus one elective course from the following:

- CHM 232 - Biological Chemistry Credits: 4
- CHM 321 - Environmental Chemistry Credits: 3
- CHM 322 - Environmental Chemical Analysis Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 419 - Chemistry in Secondary Education Credits: 3
- CHM 442 - Polymer Chemistry Credits: 3
- CHM 461 - Biochemistry I Credits: 4

2. 2.0 GPA Requirement

A minimum 2.0 GPA in all chemistry courses, which 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

Coordinator: Kovacs.

A Certificate in Green Chemistry will be a strong curricular addition to the degrees offered at GVSU. This 13-14 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.

Career Opportunities

A Certificate in Green Chemistry provides a major advantage to an applicant on the job market in the area of chemistry and environmental sciences. Entry-level positions in the field, such as chemical analysis, testing, quality control, and technical service are expected to list knowledge of green chemistry is desired (Cue Berkely, Pfizer, 2007) in job posting in the near future, as the industry recognizes its social responsibilities. The green job market involves a focus on environmentally responsible production. 'Green' companies are seeking employees with knowledge of the green chemistry principles and understanding of green chemical design. Hiring a person with green chemistry certification will bring in-house expertise and life-cycle thinking, two main components currently lacking from the training in the future workforce. The certificate will also augment career opportunities in public, private, and nonprofit organizations and agencies interested in environmental issues and in the promotion of sustainability.

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.

Requirements for a Certificate in Green Chemistry

Students who seek a Certificate in Green Chemistry are required to complete 13-14 credits from the courses below:

- CHM 311 Green Chemistry and Industrial Processes Credits: 3
 - CHM 321 Environmental Chemistry Credits: 3
 - CHM 399 Readings in Chemistry Credits: 1 or 2
 - CHM 490 Chemistry Laboratory Internship Credits: 1 to 4
 - CHM 499 Investigation Problems Credits: 1 to 5
- OR** CHM 499 Investigation Problems Credits: 1 to 5
(any combination of CHM 490/499 that add to a total of 3 credits satisfies this requirement)

And one of the courses listed below:

- CHM 322 Environmental Chemical Analysis Credits: 3
- NRM 330 Environmental Pollution Credits: 3
- GPY 412 Global Environmental Change Credits: 3
- ECO 345 Environmental and Resource Economics Credits: 3
- GEO 300 Geology and the Environment Credits: 3
- NRM 451 Natural Resource Policy Credits: 4 *
- GEO 445 Introduction to Geochemistry Credits: 4 *

*GEO 445 and NRM 451 are four credit courses; in case of opting for one of these two courses, the total number of required credits will be 14.

Chinese Language (minor)

Requirements for a Minor in Chinese Language

- CHI 202 - Intermediate Chinese II Credits: 4
- CHI 301 - Advanced Intermediate Chinese I Credits: 3
- CHI 302 - Advanced Intermediate Chinese II Credits: 3

And three elective courses from the following, including at least one course from CHI 341 and CHI 351:

- CHI 321 - Ancient Chinese Culture Credits: 3
- CHI 322 - Classical Chinese Culture Credits: 3
- CHI 333
- CHI 335
- CHI 336
- CHI 341 - Introduction to Classical Chinese Credits: 3
- CHI 351 - Practical Chinese Credits: 3
- CHI 380 - Special Topics in Chinese Credits: 3

Additionally, all minors will be required to participate in a Chinese Language Study Abroad Program, which consists of 6 credits as follows:

- CHI 180 - Special Topics in Chinese **OR** CHI 280 - Special Topics in Chinese
- AND**
- CHI 380 - Special Topics in Chinese

Chinese Studies

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

Chinese Studies Program Faculty:

Director: Wu. Professors: Ni, Wu; Associate Professors: Benjamin, Lai, Shan, Shang, Smith, Sun, Yu; Assistant Professors: Gu, Liang, Ma, Xu, Zhang, Zhao.

Website: 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 US culture and enriched self-understanding.

Housed in the Brooks 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.

Career Opportunities

The Chinese Studies major provides an essential foundation for anyone interested in pursuing a career that may involve knowledge about China, such as business, law, government, international relations, social work, or the humanities. Combined with a professional degree, the program prepares students for the challenges in an increasingly multicultural and international world.

Student Organizations (www.gvsu.edu/stuey)

The Chinese Language and Culture organization provides interested students of any major a place to learn about the culture and language of China. Students are also encouraged to participate in activities organized by on-campus groups such as the Asian Student Union (ASU) and the International Student Organization (ISO), as well as those spearheaded by local community organizations such as the Chinese Association of West Michigan and the Asian-American Association. Members of community organizations and businesses are also invited to take courses and participate in program activities.

Bachelor of Arts in Chinese Studies

The requirements for the B.A. in Chinese Studies are: 33 semester hours (24 required, 9 electives), with 6 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 - Survey of Modern Chinese History Credits: 3
- PHI 210 - Eastern Philosophy Credits: 3
- PLS 283 - Chinese Politics and US-China Relations Credits: 3

Classics

Elective Courses - 9 credits

- 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 of Asia Credits: 3
- HST 210 - Empire, Culture, and Conflict Credits: 3
- HST 340 - A History of East Asia to 1800 Credits: 3
- HST 341 - A History of East Asia since 1800 Credits: 3
- HST 342 - History of East Asian Religions Credits: 3
- PHI 306 - Eastern Great Philosophers Credits: 3

Study Abroad Requirement

All majors will earn at least 6 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
- Non-GVSU 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

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Pazdernik. Professors: Levitan, Rayor; Associate Professors: Anderson, Flaschenriem, Morison, Pazdernik; Assistant Professor: Rudolph.

Website: 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, 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 is one of the youngest and fastest-growing departments of Classics in the world. 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 first hand 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 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 Foundation or Theme requirements. Certain courses identified as Distributed Classical Civilization (DCC)

courses satisfy requirements for the major and minor programs in Classics.

Ancient Greek (GRK), Biblical Hebrew (HBR), 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.

Biblical Hebrew. As a cultural touchstone, the Hebrew Bible, known to Christians as the Old Testament, reflects the social, economic, and political changes in ancient Palestine that play a part in shaping cultural relations in the world today.

The Department offers elementary and intermediate instruction (courses marked HBR through the 200 level) in the language of the Hebrew Bible.

Biblical Hebrew will be of interest to students of the ancient Near East and the modern Middle East, to those exploring the history and traditions of Judaism, and to those preparing for seminary.

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. Cognate in Language Study

In addition to basic skills and 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, HBR 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 Foundation or Theme 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 Barbara H. Padnos International Center.

Career Opportunities

The study of Classics is well recognized as one of the strongest pre-professional degree programs. Classics graduates have careers in fields as varied as writing or publishing, teaching at the university or secondary level, law, business, medicine, communications, the ministry, library or museum work, government service, and anywhere else a strong and solid liberal arts education is valued. A degree in Classics does not limit a student to a single career track. Instead, it opens doors to many wide and exciting possibilities.

Graduate School Opportunities

Classics graduates pursue postgraduate study not only in Classics but also in archaeology, art history, history, law, library science, medicine, and the performing arts, and in seminary and theological studies. Many graduate programs in the humanities require or encourage prior preparation in a classical language.

Students who plan on graduate work in Classics should be mindful that many graduate programs prefer to admit students who have completed at least one year of advanced work (at the 300 level and above) in both languages; such students should consider pursuing advanced study of the languages beyond the minimum requirements of the Classical Languages emphasis.

Participating Programs

Faculty in Classics hold joint appointments in the Frederik Meijer Honors College and regularly staff the Honors Classical World arts and humanities sequence (HNR 211/212-221/222), the Honors Classical Mythology Junior Seminar (HNR 300), and the Honors Worlds of Late Antiquity Junior Seminar (HNR 324), 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).

Student Organizations (www.gvsu.edu/stuey)

Classics Society

Classics enthusiasts from all majors and disciplines are welcome to join the Classics Society, a student organization that seeks to promote an interest in the classical world. Every year the Classics Society hosts the Roman Banquet, an authentic Roman dining experience. Members have traveled to Chicago and Indianapolis in the past for classical art exhibits. Weekly gatherings include movie nights, discussions, and other Classics-oriented activities in a relaxed, informal atmosphere.

Bachelor of Arts in Classics

Requirements for a Major in Classics

Core Courses (at least 9 Credits)

Capstone Requirement:

- All Classics majors take CLA 495 - Notions of the Classics (capstone) Credits: 3 during their senior year.

Distributed Classical Civilization (DCC) requirement:

- Students majoring in Classics complete at least 6 credits of instruction in Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

Classics

List A:

- CLA 201 - Classical Literature Credits: 3
- CLA 275 - Ancient Drama Credits: 3
- CLA 287 - Roman Law Credits: 3
- CLA 311 - Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 - Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 - Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits)

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Emphases

Classical Languages Emphasis

(Minimum of 32 credits beyond completion or placement out of GRK or LAT 201):

The CLASSICAL LANGUAGES, GREEK, and LATIN EMPHASES offer full courses of undergraduate study in Classics that stress the languages and literature of the classical world. Students electing either the Greek or the Latin emphasis focus upon one of the two languages exclusively, whereas those electing the Classical Languages emphasis have flexibility in pursuing a course of study in both Latin and ancient Greek.

Requirements in addition to the Core:

- At least 23 credits of instruction in ancient Greek and Latin, including at least 6 credits in either ancient Greek or Latin at 300 level or above.

Greek Emphasis

(Minimum 30 credits beyond completion or placement out of GRK 201):

The CLASSICAL LANGUAGES, GREEK, and LATIN EMPHASES offer full courses of undergraduate study in Classics that stress the languages and literature of the classical world. Students electing either the Greek or the Latin emphasis focus upon one of the two languages exclusively, whereas those electing the Classical Languages emphasis have flexibility in pursuing a course of study in both Latin and ancient Greek.

Requirements in addition to the Core:

- At least 21 credits of instruction in ancient Greek at the 202 level or above, including at least 18 credits at the 300 level or above.

Classical Tradition Emphasis

(Minimum 33 credits beyond completion or placement out of GRK or LAT 201):

The Classical Tradition Emphasis focuses upon the legacy of the classical world and specifically investigates the relationship between Greek and Roman civilizations and the literary, artistic, intellectual, social, and political traditions of other cultures. Students who seek a broad acquaintance with the classical world, but whose interests do not fit easily into other emphases, have the opportunity to design individual programs to fit their talents, interests, and career goals.

Requirements in addition to the Core:

- At least 9 credits of instruction in either ancient Greek or Latin at 202 level or above, including at least 5 credits at the 300 level or above.
- At least 15 additional credits of departmental and non-departmental courses according to approved study plan.
- Senior Integrative Essay: Students also plan and submit a Senior Integrative Essay; consult the departmental advisor for further details.

Latin Emphasis

(Minimum 30 credits beyond completion or placement out of LAT 201): The Classical Languages, Greek, and Latin Emphases offer full courses of undergraduate study in Classics that stress the languages and literature of the classical world. Students electing either the Greek or the Latin emphasis focus upon one of the two languages exclusively, whereas those electing the Classical Languages emphasis have flexibility in pursuing a course of study in both Latin and ancient Greek.

Requirements in addition to the Core:

- At least 21 credits of instruction in Latin at the 202 level or above, including at least 18 credits at the 300 level or above.

Latin Secondary Education Emphasis

(Minimum 30 credits beyond completion or placement out of LAT 201):

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:

- At least 21 credits of instruction in Latin at the 202 level or above, including at least 18 credits at the 300 level or above, three of which must be LAT 353.

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 the required basics skills and General Education requirements not indicated below:

First Year:

- GRK 101 or LAT 101 (4 credits)
- CLA 101 Greek and Roman Mythology (3 credits; Gen Ed Philosophy and Literature Foundation)
- (Honors students): HNR 211/212 Classical World (6 credits)
- WRT 150 (3 credits; if required)
- GRK 102 or LAT 102 (4 credits)
- CLA 121 Greek Civilization or CLA 131 Roman Civilization (3 credits; Gen Ed Historical Perspectives Foundation)
- (Honors students): HNR 221/222 Classical World II (6 credits)

Second Year:

- Continue second year of language study (GRK 201 and 202 - or - LAT 201 and 202; fulfills B.A. Cognate and Gen Ed World Perspectives requirements)
- Classical Languages Emphasis: commence first year of study in the second classical language

- Complete one or both Distributed Classical Civilization (DCC) courses (Honors students fulfill the DCC requirements with HNR 211/212 and HNR 221/222)

Third Year:

- Classics majors are strongly encouraged to consider spending a semester or academic year in a Study Abroad program
- Continue third year of language study (GRK 300+ or LAT 300+)
- Classical Languages Emphasis: continue second year of study in the second classical language
- Classical Tradition Emphasis: complete elective courses according to approved study plan

Fourth Year:

- Complete CLA 495 Classics capstone
- Greek or Latin Emphasis, or majors contemplating postgraduate study in Classics: continue fourth year of language study (GRK 300+ or LAT 300+)
- Classical Tradition Emphasis: complete elective courses according to approved study plan and Senior Integrative Essay

Bachelor of Arts in Classics, Emphasis in Classical Languages

(Minimum of 32 credits beyond completion or placement out of GRK or LAT 201):

The Classical Languages, Greek, and Latin Emphases offer full courses of undergraduate study in Classics that stress the languages and literature of the classical world. Students electing either the Greek or the Latin emphasis focus upon one of the two languages exclusively, whereas those electing the Classical Languages emphasis have flexibility in pursuing a course of study in both Latin and ancient Greek.

Requirements for a Major in Classics, Classical Languages Emphasis**Core Courses (at least 9 Credits)**

- Capstone Requirement: All Classics majors take CLA 495 - Notions of the Classics (capstone) Credits: 3 during their senior year.
- Distributed Classical Civilization (DCC) requirement: Students majoring in Classics complete at least 6 credits of instruction in Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

List A:

- CLA 201 Classical Literature Credits: 3
- CLA 275 Ancient Drama Credits: 3
- CLA 287 Roman Law Credits: 3
- CLA 311 Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits):

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Additional Courses (at least 23 Credits)

At least 23 credits of instruction in ancient Greek and Latin, including at least 6 credits in either ancient Greek or Latin at 300 level or above.

Bachelor of Arts in Classics, Classical Tradition Emphasis

(Minimum 33 credits beyond completion or placement out of GRK or LAT 201):

The Classical Tradition Emphasis focuses upon the legacy of the classical world and specifically investigates the relationship between Greek and Roman civilizations and the literary, artistic, intellectual, social, and political traditions of other cultures. Students who seek a broad acquaintance with the classical world, but whose interests do not fit easily into other emphases, have the opportunity to design individual programs to fit their talents, interests, and career goals.

Requirements for a Major in Classics, Classical Tradition Emphasis**Core Courses (at least 9 Credits)**

- Capstone Requirement: All Classics majors take CLA 495 - Notions of the Classics (capstone) Credits: 3 during their senior year.
- Distributed Classical Civilization (DCC) requirement: Students majoring in Classics complete at least 6 credits of instruction in Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

List A:

- CLA 201 Classical Literature Credits: 3
- CLA 275 Ancient Drama Credits: 3
- CLA 287 Roman Law Credits: 3
- CLA 311 Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits):

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Additional Courses (at least 24 credits)

- At least 9 credits of instruction in either ancient Greek or Latin at 202 level or above, including at least 6 credits at 300 level or above.
- At least 15 additional credits of departmental and non-departmental courses according to approved study plan.

Senior Integrative Essay

- Students also plan and submit a Senior Integrative Essay; consult the departmental advisor for further details.

Bachelor of Arts in Classics, Emphasis in Greek

(Minimum 30 credits beyond completion or placement out of GRK 201):

The Classical Languages, Greek, and Latin Emphases offer full courses of undergraduate study in Classics that stress the languages and literature of the classical world. Students electing either the Greek or the Latin emphasis focus upon one of the two languages exclusively, whereas those electing the Classical Languages emphasis have flexibility in pursuing a course of study in both Latin and ancient Greek.

Classics

Requirements for a Major in Classics, Greek Emphasis

Core Courses (at least 9 credits)

- Capstone Requirement: All Classics majors take CLA 495 - Notions of the Classics (capstone) Credits: 3 during their senior year.
- Distributed Classical Civilization (DCC) requirement: Students majoring in Classics complete at least 6 credits of instruction in Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

List A:

- CLA 201 Classical Literature Credits: 3
- CLA 275 Ancient Drama Credits: 3
- CLA 287 Roman Law Credits: 3
- CLA 311 Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits):

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Additional Courses (at least 21 credits)

At least 21 credits of instruction in ancient Greek at 202 level or above, including at least 18 credits at 300 level or above.

Bachelor of Arts in Classics, Emphasis in Latin

(Minimum 30 credits beyond completion or placement out of LAT 201): The Classical Languages, Greek, and Latin Emphases offer full courses of undergraduate study in Classics that stress the languages and literature of the classical world. Students electing either the Greek or the Latin emphasis focus upon one of the two languages exclusively, whereas those electing the Classical Languages emphasis have flexibility in pursuing a course of study in both Latin and ancient Greek.

Requirements for a Major in Classics, Latin Emphasis

Core Courses (at least 9 credits)

- Capstone Requirement: All Classics majors take CLA 495 - Notions of the Classics (capstone) Credits: 3 during their senior year.
- Distributed Classical Civilization (DCC) requirement: Students majoring in Classics complete at least 6 credits of instruction in Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

List A:

- CLA 201 Classical Literature Credits: 3
- CLA 275 Ancient Drama Credits: 3
- CLA 287 Roman Law Credits: 3
- CLA 311 Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits):

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Additional Courses (21 credits)

At least 21 credits of instruction in Latin at 202 level or above, including at least 18 credits at 300 level or above.

Bachelor of Arts in Classics, Latin Secondary Education Emphasis

(Minimum 30 credits beyond completion or placement out of LAT 201): 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 for a Major in Classics, Latin Secondary Education Emphasis

Core Courses (at least 9 credits)

- Capstone Requirement: All Classics majors take CLA 495 - Notions of the Classics (capstone) Credits: 3 during their senior year.
- Distributed Classical Civilization (DCC) requirement: Students majoring in Classics complete at least 6 credits of instruction in Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

List A:

- CLA 201 Classical Literature Credits: 3
- CLA 275 Ancient Drama Credits: 3
- CLA 287 Roman Law Credits: 3
- CLA 311 Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits):

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Requirements in Addition to the Core:

At least 21 credits of instruction in Latin at 202 level or above, including at least 18 credits at 300 level or above, three of which must be LAT 353.

Classics Minor, Classical Tradition Emphasis

(Minimum 21 credits):

The Classical Tradition Emphasis focuses upon the legacy of the classical world and specifically investigates the relationship between Greek and Roman civilizations and the literary, artistic, intellectual, social, and political traditions of other cultures.

Requirements for a Minor in Classics, Classical Tradition Emphasis**Core Courses (at least 6 credits)**

- Distributed Classical Civilization (DCC) requirement: Students majoring in Classics complete at least 6 credits of instruction in Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

List A:

- CLA 201 Classical Literature Credits: 3
- CLA 275 Ancient Drama Credits: 3
- CLA 287 Roman Law Credits: 3
- CLA 311 Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits):

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Additional Courses (at least 15 credits)

- At least 6 credits of instruction in either ancient Greek or Latin at 200 level or above.
- At least 9 additional credits, of which at least 6 must be departmental courses, selected from the following list:
- Any CLA course at the 200 level or above, **OR:**
- ANT 215 - Origins of Civilization Credits: 3
- ANT 350 - Archaeology of Mid-East Credits: 3
- COM 203 - Argument and Analysis Credits: 3
- HNR 300 - Classical Mythology Credits: 3
- HNR 324 - Worlds of Late Antiquity Credits: 3
- HST 345 - The Ancient Mediterranean and Orient Credits: 3
- HST 350 Classical Greece and Rome Credits: 3
- PHI 220 - Aesthetics Credits: 3
- PLS 231 - Classical Political Thought Credits: 3

Classics Minor, Greek Emphasis

(Minimum 21 credits):

The Greek and Latin Emphases stress the languages and literature of the classical world. Students electing either the Greek or the Latin emphasis focus upon that language exclusively.

Requirements for a Minor in Classics, Greek Emphasis**Core Courses (at least 6 credits)**

- Distributed Classical Civilization (DCC) requirement: Students majoring in Classics complete at least 6 credits of instruction in

Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

List A:

- CLA 201 Classical Literature Credits: 3
- CLA 275 Ancient Drama Credits: 3
- CLA 287 Roman Law Credits: 3
- CLA 311 Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits):

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Additional Courses (at least 15 credits)

At least 15 credits of instruction in ancient Greek at 200 level or above, including at least 9 credits at 300 level or above.

Classics Minor, Latin Emphasis

(Minimum 21 credits):

The GREEK and LATIN EMPHASES stress the languages and literature of the classical world. Students electing either the Greek or the Latin emphasis focus upon that language exclusively.

Requirements for a Minor in Classics, Latin Emphasis**Classics Core Courses (at least 6 credits):**

- Distributed Classical Civilization (DCC) requirement: Students majoring in Classics complete at least 6 credits of instruction in Distributed Classical Civilization (DCC) courses. DCC courses are intended to introduce students to the interdisciplinary dimension of Classics and to provide detailed instruction in selected methods of inquiry and particular aspects of Greco-Roman civilization. Most DCC courses also fulfill certain general education requirements.

Students have two options for fulfilling the DCC Requirement:

Option 1 (6 Credits)

Complete one course from each of the following lists:

List A:

- CLA 201 Classical Literature Credits: 3
- CLA 275 Ancient Drama Credits: 3
- CLA 287 Roman Law Credits: 3
- CLA 311 Ancient Great Philosophers Credits: 3

List B:

- CLA 250 - Classical Art and Archaeology Credits: 3
- CLA 315 Ancient Religion Credits: 3
- CLA 320 - Women in the Classical World Credits: 3
- CLA 350 Issues in Classical Archaeology Credits: 3

Option 2 (12 Credits):

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

Additional Courses

At least 15 credits of instruction in Latin at 200 level or above, including at least 9 credits at 300 level or above.

Clinical Laboratory Sciences

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

Director: Stoddard. Associate Professor: Goossen; Assistant Professor: Stoddard; Instructor: Hall, Goodyear.

Degree offered: B.S. in Clinical Laboratory Science

Website: www.gvsu.edu/cls

Accreditation

The Clinical Laboratory Science program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences; 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119.

Clinical 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. Clinical laboratory scientists work in conjunction with pathologists and other physicians or scientists who specialize in clinical chemistry, microbiology, hematology, and other biological sciences.

Clinical 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 clinical laboratory scientists focus on the major areas of hematology, microbiology, immunology, clinical chemistry, transfusion medicine, and urinalysis.

Clinical Laboratory Science students will spend five semesters completing their general education core science courses, followed by three semesters of professional courses. Application for admission into the Clinical Laboratory Science program occurs one year prior to the beginning of Winter semester admission. Students with an earned baccalaureate degree that 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 affiliated hospital laboratories. 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 clinical 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 Clinical Laboratory Science program, students will be awarded a Bachelor of Science (B.S.) degree from Grand Valley State University in Clinical Laboratory Science and be eligible to sit for the national certification exam. Granting of the baccalaureate degree is not contingent on passing the national certification exam.

Career Opportunities

Clinical Laboratory scientists are in demand and find employment in a variety of laboratory settings, including hospital, private, and governmental laboratories, physicians' office, public health institutions, and industrial, pharmaceutical, biological, and environmental research laboratories. Advanced training opportunities in specialty areas are also available.

Admission to the Clinical Laboratory Science Program

Admission to the Clinical 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:

- 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.

- Communication and interpersonal skills: On-site interviews are required.
- Recommendations. Three recommendations must be submitted on university forms — one from a chemistry faculty, one from any science faculty, and the third source is the choice of the applicant.
- Additional activities. Additional educational, professional, leadership, scholarly, and volunteer activities are valued and should be documented.

Bachelor of Science in Clinical Laboratory Science

Requirements for a Major in Clinical 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. degree cognate course sequence: STA 215; BMS 301, HPR 301, PSY 200, or SS 300; and BMS 290, 291.

The Clinical Laboratory Science Core Requirement

- HPR 100 - Medical Terminology Credits: 2
- CLS 102 - Introduction to Clinical 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** HPR 301 - Inquiry Into Evidence Based Practice
- BMS 410 - Immunology Credits: 3
- CLS 495 - Issues in Clinical Laboratory Science (Capstone) Credits: 3

Required Science Cognate Courses

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

35 additional semester credits in professional courses:

- CLS 320 - General Laboratory Practice Credits: 2
- CLS 370 - Diagnostic Microbiology 1 Credits: 5
- CLS 372 - Diagnostic Microbiology 2 Credits: 3
- CLS 410 - Clinical Immunoserology Credits: 3
- CLS 416 - Hematology Credits: 2
- CLS 417 - Clinical Hematology Laboratory Credits: 1
- CLS 422 - Clinical Chemistry Credits: 6
- CLS 450 - Clinical Practicum I Credits: 1
- CLS 460 - Advanced Clinical Science Credits: 5
- CLS 461 - Advanced Clinical Laboratory Credits: 2
- CLS 490 - Clinical Practicum II Credits: 3
- HPR 340 - Health Care Management Credits: 2

Communication Studies

For additional information about opportunities your college offers, please refer to the School of Communication website.

Director: Thompson. Professors: Ellis, Morse, Nesterenko, Perrine, Rathbun; Associate Professors: Anton, Beery, Helgert, Libman, Pednekar-Magal, Penning, Peterson, Philbin, Roberts, Roos, Schmit, Sheffield, Thompson, Veenstra, Winegar; Assistant Professors: Bell, J., Hyun, Smith, Swieringa, Velez, Wiese-Leek, Zhang.

Website: 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 multi-disciplinary 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, to articulate nuanced questions, to cultivate aesthetic and ethical sensibilities, to build persuasive appeals, and to 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.

Scholarships

The School of Communications' Scholarships honor upper level School of Communications students who have demonstrated promise in their chosen field of study. Applicants must have declared a major in the School of Communications, be in good academic standing, and have completed a minimum of 30 semester credits. Students can request funding for a variety of needs including (but not limited to) the following: tuition, books and materials, living expenses, projects for class or independent study/senior thesis project, international or domestic travel and/or research (such as to visit museums or attend a conference). Individual scholarships will be in the \$1000 range. Scholarships are not automatically renewable, but students may re-apply. Scholarship recipients are chosen by the School of Communications' Scholarship Committee. Decisions are based on the clarity and completeness of the application essay and the student's grade point. The deadline is the first Monday in February for the following academic year. Please see the School of Communications for details.

Bachelor of Arts or Bachelor of Science in Communication Studies

Requirements for a Major in Communication Studies

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 - Theories of Communication Credits: 3

And one of the following:

- COM 201 - Speech Credits: 3
- 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. Cognates

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. cognate or the B.S. cognate that is intended for a particular undergraduate program.

B.A. Cognate

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

For Communication Studies, the B.S. cognate is:

- COM 375 - Communication Research Credits: 3
- SS 300 - Research Methods in the Social Sciences Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

2. Communication Studies Core

(at least 21 credits)

At least 15 unduplicated credits from the following Communication Studies courses (courses with the COM prefix), at least 9 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 215 - Story Making 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 380 - Special Topics in Communications Credits: 1 to 6
- COM 399 - Independent Study Credits: 1 to 6
- COM 410 - Senior Seminar in Health Communication Credits: 3
- COM 438 - Communication Ethics Credits: 3
- COM 490 - Internship Credits: 1 to 6

Can include more than one COM 380. Can include no more than 3 credits in COM 399, and no more than 3 credits in COM 490.

3. Emphasis Area Credits **

(at least 12 credits)

Any of the following approved courses in the other School of Communications Major Programs:

Advertising and Public Relations:

- CAP 210 - Fundamentals of Advertising CAP Credits: 3
- COM 220 - Media Literacy COM Credits: 3
- CAP 310 - Advertising Management and Cases CAP Credits: 3
- CAP 315 - Advertising Copywriting CAP Credits: 3
- CAP 320 - Public Relations Management and Cases CAP Credits: 3
- CAP 321 - Media Relations Writing CAP Credits: 3

Journalism:

- CJR 256 - News Reporting I CJR Credits: 3
- CJR 270 - News Reporting II CJR Credits: 3
- CJR 290 - Journalism History CJR Credits: 3
- CJR 316 - Editing CJR Credits: 3

Broadcasting:

- CBR 240 - Survey of Electronic Media
- CBR 281 - Audio Production I
- CBR 340 - Life on Television
- CBR 368 - Broadcast News I

Film and Video Production:

- CFV 125 - Media Production I CFV Credits: 4
- CFV 225 - Film Culture CFV Credits: 3
- CFV 348 - Film Theories CFV Credits: 3
- CFV 370 - Film and Television Interpretation CFV Credits: 3

Comprehensive Science and Arts for Teaching

Photography:

- CPH 171 - Photography I CPH Credits: 4
- CPH 172 - Photography II CPH Credits: 4
- CPH 266 - History of Photography I CPH Credits: 3
- CPH 279 - Color Printing CPH Credits: 4

Theatre:

- CTH 151 - Acting Process CTH Credits: 3
- CTH 161 - Theatre Production CTH Credits: 3
- CTH 261 - Stagecraft I CTH Credits: 3
- CTH 371 - Theatre History I CTH Credits: 3
- CTH 372 - Theatre History II CTH Credits: 3
- CTH 373 - Global Arts Performance CTH Credits: 3

Health Communications:

- COM 209 - Health Communication Systems COM Credits: 3
- CAP 220 - Fundamentals of Public Relations CAP Credits: 3
- COM 410 - Senior Seminar in Health Communication COM Credits: 3

** Courses cannot count for both Emphasis Area and COM Studies Core credits (no double-dip). COM prefix courses not otherwise applied to the major may be eligible for substitution as emphasis area course credits, pending advisor approval. Other Emphasis Area courses may qualify for application to the major but may not be listed, see your advisor.

4. Capstone

- COM 495 - Issues in Communication (capstone) Credits: 3

Master of Science in Communication

Director: Thompson

Graduate Program Director: Nesterenko

Website: 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.

Requirements for the M.S. in Communication

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 Telecommunication Technologies Credits: 3
- COM 642 - Communication Law Credits: 3
- COM 660 - Communication Management and Cases Credits: 3
- COM 695 - Master's Thesis/Project Credits: 3

AND EITHER

- BUS 631 - Leadership and Organizational Dynamics Credits: 3
- PA 520 - Foundations of Public Management Credits: 3

Elective Courses

Three elective courses (9 credits) are required, either from the following list or from 600-level courses in business, public administration, or other programs for which students are eligible. See the School of Communications 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

Prerequisites and Entrance Requirements

master's program.

- A baccalaureate degree from an accredited institution of higher education with a minimum GPA of 3.0 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, research methods, and statistics.
- Two letters of endorsement from communication professionals.
- An interview with a representative from the School of Communications.

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 Management 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 Telecommunication Technologies Credits: 3

Winter

- COM 642 - Communication Law Credits: 3
- COM 660 - Communication Management and Cases Credits: 3

Spring/Summer

- COM 695 - Master's Thesis/Project Credits: 3

Comprehensive Science and Arts for Teaching Major

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Coordinator: Coffey.

The Comprehensive Science and Arts for Teaching Major is a wide-ranging examination of how knowledge and understanding is developed across various disciplines. Students taking this major:

- Learn important content associated with various liberal arts and sciences;
- Compare and contrast how people study the world from various disciplinary perspectives; and
- Explore ways that societies pass along important knowledge and skills to the next generation.

Completion of this major enhances the development of critical throughout from the perspective of education within the liberal arts and sciences. The Comprehensive Science and Arts for Teaching Major addresses educational issues, as this is one way that ideas are transmitted. The Comprehensive Science and Arts for Teaching major is a standalone major that can be marketed by the student as one that allows him/her to apply a breadth of knowledge, problem solving, and critical thinking skills in a future career.

Career Opportunities

The Comprehensive Science and Arts for Teaching major provides graduates with further opportunities to apply their breadth of knowledge, problem solving, and critical thinking skills in a future career. Currently, students enrolled in the program typically combine it with the College of Education's Special Education Special Education Program in order to earn elementary teacher certification with special education endorsements (see below).

Michigan elementary teacher certification with special education endorsements allows the holder 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.

Associated Programs

Special Education Program

Students seeking special education teaching certification complete the Comprehensive Science and Arts for Teaching (CSAT) major as well as additional courses for Michigan elementary teacher certification with 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 professional program 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.

The Comprehensive Science and Arts for Teaching Major faculty members collaborate with colleagues in the College of Education to place students who combine the CSAT major and special education professional program in classrooms with qualified and experienced teachers. Our graduates have a unique combination of skills and experiences that are highly valued.

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 & Children's Literature Credits: 3
- ENG 308 - Teaching Reading: The Necessary Skills Credits: 4
- ENG 400 - Language Arts for Teaching Credits: 3

2. 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

3. Social Studies:

- HST 205 - American History to 1877 Credits: 3
- SST 309 - Social Studies for Elementary Teachers 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

6. Fine Arts:

- MAT 300 - Music Art & 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 Ed Credits: 2

8. Foundations:

- PSY 325 - Educational Psychology Credits: 3

9. Capstone:

SAT 495 - Sciences and Arts for Elementary Classrooms Credits: 3

Cognate Requirements:

B.S.

Students seeking a Bachelor of Science must complete the following requirements to satisfy cognate requirements:

- STA 215 - Introductory Applied Statistics Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- STA 495 Science and Arts for Elementary Classrooms Credits: 3

B.A.

Students seeking a Bachelor of Arts must complete a third semester of proficiency in a foreign language.

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: 3
- PED 266 - Move, Dance, Learn Credits: 2
- SCI 225 - Integrated life Science for K-8 Teachers Credits: 4

Second Year:

- MAT 300 - Music, Art & Theatre 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:

- STA 495 - Sciences and Arts for Elementary Classrooms Credits: 3
- ENG 302 - Intro to Language Arts: Teaching Writing & Children's Literature Credits: 3
- ENG 308 - Teaching Reading: The Necessary Skills Credits: 4
- ENG 467 - Language Disorders & English Literacy Credits: 3
- ENG 400 - Language Arts for Teaching Credits: 3
- MTH 222 - Mathematics for Elementary Teachers II Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3
- SST 309 - Social Studies for Elementary Teachers Credits: 3

Computer Information Systems

Special Education Program

The Comprehensive Science and Arts for Teaching Major supports students seeking certification to teach special education. The Comprehensive Science and Arts for Teaching Major is required for the special education endorsement but it is only one part of the requirements for teacher certification.

Computer Information Systems

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.

Director: Leidig. Program Chair: Adams; Professors: Alsabbagh, Ferguson, Grissom, Jorgensen, Leidig, Tao, Tusch; Associate Professors: Adams, Dulimarta, El-Said, Engelsma, Kotman, Kurmas, McGuire, Nandigam, Nezek, Reynolds, Trefftz, Wolfe; Assistant Professors: DeHondt, Kalafut, Scripps; Instructors: Hornik, Lange, Peterman; Affiliate Faculty: Brege, Mansour, Posada.

The website for the Computing & Information Systems Master's Program is: www.cis.gvsu.edu/graduate/cis/.

Degrees offered: M.S. in Computer Information Systems; M.S. in Medical and Bioinformatics; B.S., B.A. in Computer Science, B.S., B.A. 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.

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 and are using computer science and information systems.

School of CIS Mission

The mission of the School of Computing & 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.
- Provide all students, regardless of their major interests, fundamental knowledge of computers and information processing.

Minimum Number of Hours for Graduation

Eleven 3-credit courses (33 credit hours) make up the Master of Science in Computer Information Systems degree.

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 & Information Systems for advising.
- Candidates must have a base of underlying knowledge relevant to graduate study in the computing field. This can be demonstrated by previous academic study or work experience. A consultation with a faculty member may be necessary to verify appropriateness of work

experience as a substitute for academic preparation. Candidates without relevant background experience may satisfy any deficiency with appropriate courses. For comparison, the relevant courses at Grand Valley are CIS 162, 163, 251 or 230, 350 or 330 and 353 or 333. In addition, the material covered in CIS 500 forms a foundation for study in the program. A student not having this knowledge will be required to take this course also.

- 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

Because the Master of Science degree in Computer Information Systems is for the working person, the courses are scheduled in the evenings from 6-9 p.m. at the downtown Grand Rapids PEW Campus in Kennedy Hall.

Master of Science in Computer Information Systems

Director: Leidig; Program Chair: Adams; Professors: Alsabbagh, Ferguson, Grissom, Jorgensen, Leidig, Tao, Tusch; Associate Professors: Adams, Dulimarta, El-Said, Engelsma, Kotman, Kurmas, McGuire, Nandigam, Nezek, Reynolds, Trefftz, Wolfe.

Degrees offered: M.S. in Computer Information Systems; M.S. in Medical and Bioinformatics. B.S., B.A. in Computer Science; B.S., B.A. 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.

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 and are using computer science and information systems.

Minimum number of hours for graduation

Eleven 3-credit courses (33 credit hours) make up the Master of Science in Computer Information Systems degree.

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 & Information Systems for advising.
- Candidates must have a base of underlying knowledge relevant to graduate study in the computing field. This can be demonstrated by previous academic study or work experience. A consultation with a faculty member may be necessary to verify appropriateness of work experience as a substitute for academic preparation. Candidates without relevant background experience may satisfy any deficiency with appropriate courses. For comparison, the relevant courses at Grand Valley are CIS 162, 163, 251 or 230, 350 or 330 and 353 or 333. In addition, the material covered in CIS 500 forms a foundation for study in the program. A student not having this knowledge will be required to take this course also.
- 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

Because the Master of Science degree in Computer Information Systems is for the working person, the courses are scheduled in the evenings from 6-9 p.m. at the downtown Grand Rapids PEW Campus in Kennedy Hall.

The website for the Computer Information Systems Master's Program is: www.cis.gvsu.edu/graduate/cis/.

Requirements for the M.S. in Computer Information Systems

Each candidate must complete either the capstone course, a project course, or the thesis option.

All candidates for the degree must complete a total of 33 credits, as indicated below:

- all courses in two content areas Credits: 18
- three elective courses Credits: 9
- capstone course, project course, or thesis course Credits: 3
- CIS 500 - Fundamentals of Computer Science Credits: 3
(Students not required to take this course must take an additional elective.)

Content Areas

Seven content areas are designed to provide sustained coverage of topics essential to the regional computing community.

Biomedical Informatics

Required course:

- CIS 661 - Introduction to Medical and Bioinformatics Credits: 3

Electives (choose two):

- CIS 635 - Knowledge Discovery and Data Mining 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

Database Management

- CIS 673 - Principles of Database Design Credits: 3
- CIS 676 - Database Management Systems Credits: 3
- CIS 679 - Advances in Database Management Systems 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 - Management of Software Development Credits: 3
- CIS 642 - Software Project Management Credits: 3
- CIS 643 - Information Systems Policy Credits: 3

Object-oriented Technology

- CIS 621 - Object-Oriented Programming Credits: 3
- CIS 622 - Software Design Methodologies Credits: 3
- CIS 623 - Graphical User Interface Design Credits: 3

Software Design and Development

Required courses:

- CIS 611 - Introduction to Software Engineering CIS Credits: 3
- CIS 641 - Management of Software Development CIS Credits: 3

Select one:

- CIS 621 - Object-Oriented Programming CIS Credits: 3
- CIS 673 - Principles of Database Design CIS Credits: 3

Software Engineering

- CIS 611 - Introduction to Software Engineering Credits: 3
- CIS 612 - Requirements Specification Credits: 3
- CIS 613 - Software Testing Credits: 3

Additional Elective Courses

Elective courses may be chosen from the five content areas not selected by the student or from the following list:

- CIS 672 - Computer Systems Architecture Credits: 3
- CIS 674 - Modeling and Decision Systems Credits: 3

- CIS 675 - Compiler Construction Credits: 3
- CIS 680 - Special Topics in Computer Information Systems Credits: 3
- CIS 699 - Directed Readings in Computer Science Credits: 1 to 3

All master's candidates must complete one of the following

This option may only be taken after all courses in the two content areas have been completed.

Capstone Course

The capstone course topic will vary each semester. Contact the School of CIS one semester before beginning CS 692.

- CIS 692 - Master's Capstone Credits: 3

Project

Contact the School of CIS for detailed information one semester before beginning the project course.

- CIS 693 - Master's Project Credits: 3

Thesis

The thesis option includes writing, presenting, and defending a master's thesis. Contact the School of CIS for detailed information one semester before beginning CS 690. The two-course sequence for this option takes the place of either the project or the capstone course and one elective.

- CIS 690 - Master's Thesis Research Credits: 3
- CIS 695 - Master's Thesis Credits: 3

Certificate Program Requirements:

Each of the content areas in the Computer Information Systems' Master of Science Degree Program constitutes a Certificate Program. A certificate in each of the areas of Biomedical Informatics, Database Management, Distributed Systems, Information Systems Management, Object-oriented Technology, Software Design and Development, or Software Engineering is awarded to a student who completes a content area. The last two courses in the content area must be completed at Grand Valley State University.

Admission criteria for a certificate program are identical to admission criteria for the master's degree program. Certificate candidates enroll in the standard master's degree program courses, with grading criteria being identical. Should a certificate candidate decide to change to the master's degree program, all coursework taken toward the certificate will apply to his or her master's degree program. The following certificates each require a 3-course sequence, which totals 9 credit hours:

Biomedical Informatics Certificate:

- CIS 661 - Introduction to Medical and Bioinformatics Credits: 3
- Electives: (choose 2):
CIS 635 - Knowledge Discovery and Data Mining 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

Database Management Certificate:

- CIS 673 - Principles of Database Design Credits: 3
- CIS 676 - Database Management Systems Credits: 3
- CIS 679 - Advances in Database Management Systems Credits: 3

Distributed Computing Certificate:

- CIS 654 - Computer Networking Credits: 3
- CIS 656 - Distributed Systems Credits: 3
- CIS 658 - Web Architectures Credits: 3

Information Systems Management Certificate:

- CIS 641 - Management of Software Development Credits: 3
- CIS 642 - Software Project Management Credits: 3
- CIS 643 - Information Systems Policy Credits: 3

Object-Oriented Technology Certificate:

- CIS 621 - Object-Oriented Programming Credits: 3
- CIS 622 - Software Design Methodologies Credits: 3
- CIS 623 - Graphical User Interface Design Credits: 3

Computer Science

Software Design and Development Certificate:

Required Courses:

- CIS 611 - Introduction to Software Engineering CIS Credits: 3
- CIS 641 - Management of Software Development CIS Credits: 3

Select one:

- CIS 621 - Object-Oriented Programming CIS Credits: 3
- CIS 673 - Principles of Database Design CIS Credits: 3

Software Engineering Certificate:

- CIS 611 - Introduction to Software Engineering Credits: 3
- CIS 612 - Requirements Specification Credits: 3
- CIS 613 - Software Testing Credits: 3

Computer Science

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.

Director: Leidig. Program Chair: Ferguson; Professors: Alsabbagh, Ferguson, Grissom, Jorgensen, Leidig, Tao, Tusch; Associate Professors: Adams, Dulimarta, El-Said, Engelsma, Kotman, Kurmas, McGuire, Nandigam, Nezek, Reynolds, Trefftz, Wolffe; Assistant Professors: DeHondt, Kalafut, Scripps; Instructors: Hornik, Lange, Peterman; Affiliate Faculty: Brege, Mansour, Posada.

The School of CIS website is: www.cis.gvsu.edu/UndergradMajor/CS/.

Degrees offered: M.S. in Computer Information Systems; M.S. in Medical and Bioinformatics; B.S., B.A. in Computer Science; B.S., B.A. 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 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, 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 & 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.
- 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 a recognition of the need for, and ability to engage in, continuing professional development.

The School of Computing & 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

Admission to major standing in computer science or information systems is competitive and requires a secondary application. Applicants must meet the following criteria:

- Overall GPA of 2.5 or above in all Grand Valley State University coursework.
- Completion of each course in the technical core with a grade of C or above (C- is not sufficient).
- GPA of 2.5 or above in the technical core.

Technical core 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 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.

The technical core includes CIS 162 and 163; MTH 225; STA 215, 312 or 318; COM 201 or WRT 350. Completing the core courses requires programming, analytical reasoning, and communication skills. These skills are important to excel in the computing field.

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/.

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/.

Career Opportunities

Is the field of computers for you? You'll need technical knowledge and skills as well as the ability to concentrate on your work and to think logically. You should enjoy working with ideas and solving problems. If you do, you will find that a degree in this field can open the door to a rewarding career in the computer industry.

Job opportunities in the computing and information technology industry are expected to grow rapidly, particularly as computers are used to solve problems in ever-expanding areas. Positions in the computing and information technology field include those in computer programming, systems analysis, systems programming, applications programming, software engineering, telecommunications, computer operations, teaching, and a variety of positions in computer sales, design, manufacturing, health care, and customer service.

The U.S. Department of Labor projects six of the fastest growing occupations for 2004-2014 are in computing: network systems analyst, software engineer, systems software developer, network administrator, database administrator and systems analyst. Money Magazine and Salary.com researched hundreds of jobs, considering their growth, pay, stress-levels, and other factors (2006). Software engineering was ranked number 1 and computer IT analyst was ranked number seven.

In short, the employment prospects indicate high demand for college graduates with majors or minors in the computing fields.

Participating Programs

The School of Computing & Information Systems currently is participating with the following programs/colleges/schools to offer students varying computing programs:

- The Professional Science Masters Program: Master of Science in Medical and Bioinformatics
- The School of Engineering: Computer Engineering Major
- The School of Engineering: Computer Engineering Minor
- The College of Health Professions: Healthcare Information Systems Minor
- The School of Criminal Justice: Information Security Systems Minor

Scholarship Opportunities

Scholarships are available in the following categories:

(1) Freshman Scholarships:

Scholarships are available to a limited number of incoming first-year students who have indicated an interest in majoring in either computer science or information systems. These scholarships are available to a select group of students who meet the minimum requirements. The scholarship is dependent on maintaining certain academic standards while at GVSU.

Eligibility:

A student is eligible to apply for a School of Computing & Information Systems Scholarship if the student satisfies all of the following:

- The student must be admitted to Grand Valley State University and have declared the intent to major in either Computer Science or Information Systems.
- The student must have at least high school GPA of 3.5 and an ACT score of 28 or better.
- The student must be enrolling at GVSU as a full-time student.

To apply for the School of CIS' First-Year Computing Academic Scholarship, a student meeting eligibility requirements listed above must submit to the School of Computing and Information Systems a completed application package containing all of the following:

- The Scholarship Application.
- An essay explaining the student's academic goals. The essay must be typewritten and double-spaced (approximately 2 pages).
- In addition, the student must have their high school grades delivered or sent to the School of Computing and Information Systems.

In the evaluation of candidates for a scholarship, all of the above items will be considered, including the quality of the essay and the candidate's academic performance.

(2) Academic Scholarships:

Academic Scholarships will be awarded to Computer Science and Information Systems majors to honor those students for their outstanding performance and to encourage them to continue in the field of Computer Science or Information Systems at his/her level of excellence. These scholarships are made possible by the generous support of contributors to the School of Computing & Information Systems Endowment Fund. Students who apply in the winter semester by 5:00 p.m. on the Friday before Spring Break and who satisfy the eligibility requirements will be considered for a scholarship. The winners will be announced by the end of the winter semester. The scholarships will be awarded for the following academic year.

Eligibility:

A student is eligible to apply for a School of Computing & Information Systems Scholarship if the student satisfies all of the following:

- The student must be second-admitted into either the Computer Science or Information Systems major.
- The student must have at least 45 credit hours completed at the time of application.
- The student must have completed at least 14 credit hours in the major (excluding cognates) at Grand Valley State University and be enrolled in at least one course in Computer Science or Information Systems at the time of application.
- The student must be returning to GVSU, as a full-time student, the following fall semester and is expected to take at least one Computer Science or Information Systems course that academic year.
- The student must have an overall GPA of 3.2 or better.

Go to www.cis.gvsu.edu/scholarships/Academic for more details and forms for applying.

(3) Study Abroad Scholarships:

Scholarships are available to CS and IS majors who study abroad at an institution of higher learning in another country. The purpose of the scholarship is to provide students with greater opportunities in their study of computer science or information systems. Students who apply in the winter semester by the 5 p.m. Friday before Spring Break and who satisfy the eligibility requirements will be considered for a scholarship. The winners will be announced by the end of the winter semester. The scholarship will be awarded for the following academic year. These scholarships are made possible by the generous support of contributors to the School of Computing & Information Systems Endowment Fund.

Eligibility:

- CS or IS major.
- 45 credit hours completed.
- 14 credit hours in the major completed at GVSU.
- GPA of 3.2 overall or better.

Go to www.cis.gvsu.edu/studyabroad/scholarships for more information and forms needed.

(4) Lt. James Parmelee Memorial Scholarships:

This scholarship is awarded to a rising senior each year through nomination by Padnos College faculty. The scholarship recognizes student accomplishment through diligent pursuit of academic excellence.

Student 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.

Computer Science

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.

(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.

The Computing Club is GVSU's student organization for Computer Science and Information Systems majors and minors, students taking Computer Science classes, or anyone interested in computers and technology.

The Cyber Defense Club, which is sponsored by the School of CIS, prepares students to be security professionals and to be aware of current threats on the Internet. Also, it prepares them for the National Cyber Defense Competition, which is usually held in February.

The CIS Ethics Group, which is sponsored by the School of CIS, is a group of students and faculty interested in exploring the ethical issues that computer professionals face in today's society. The club meets weekly and has multiple guest speakers presenting case studies to the group. The main event the group sponsors is a campus-wide seminar on ethics in the computing field. Visit our website at www.cis.gvsu.edu/~ethics.

Bachelor of Arts or Bachelor of Science in Computer Science

Requirements for a Computer Science Major

1. University degree requirements

As identified in the General Academic Regulations section of the catalog.

2. Computer Science Major

All computer science majors must complete the following 41-44 credits of required computer science classes and nine hours of CS 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 251 - Computer Organization 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 353 - Database Credits: 3
- CIS 451 - Computer Architecture Credits: 4
- 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 361 - System Programming Credits: 3
- CIS 365 - Artificial Intelligence Credits: 3
- CIS 367 - Computer Graphics Credits: 3
- CIS 368 - Usability Design & 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 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

3. Cognate Courses

Completion of MTH 201, MTH 202, and either STA 215 or 312 satisfy the B.S. degree cognate requirement for computer science majors. Students completing a B.A. degree must complete a third-semester proficiency in a foreign language.

Computer science majors must complete all 24 credit hours of the following cognate courses, plus a minimum of 12 credit hours from one of the following four science groups:

- COM 201 - Speech Credits: 3
- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II 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

12 Hours of Science

Select one 3-course science group from the following 4 groups:

- BIO 120 - General Biology I Credits: 4
- BIO 121 - General Biology II Credits: 4
- and a General Education Physical Science Course
- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- and a General Education Life Science Course
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- and a General Education Life Science Course
- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5
- and a General Education Life Science Course

Suggested Order of Coursework for a Major in Computer Science

These options assume the students will complete the technical core and general education courses with the help of their advisor and apply for Secondary 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:

- General Education course
- CIS 162 - Computer Science I Credits: 4
- MTH 122 - College Algebra Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- General Education course
- COM 201 - Speech Credits: 3
- CIS 163 - Computer Science II Credits: 4
- MTH 123 - Trigonometry Credits: 3
- MTH 225 - Discrete Structures: Computer Science Credits: 3

Second Year:

- General Education courses
- CIS 251 - Computer Organization Credits: 3
- MTH 201 - Calculus I Credits: 5
- MTH 325 - Discrete Structures: Computer Science 2 Credits: 3
- General Education courses
- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 353 - Database Credits: 3
- MTH 202 - Calculus II Credits: 4

Third Year:

- General Education Natural Science Course
- General Education courses
- CIS 350 - Introduction to Software Engineering Credits: 3
- CIS 457 - Data Communications Credits: 4

- General Education Natural Science Lab
- CIS 290 - CIS Internship Preparation Credits: 1
- CIS 343 - Structure of Programming Languages Credits: 3
- CIS 451 - Computer Architecture Credits: 4
- WRT 305 - Writing in the Disciplines Credits: 3

Fourth Year:

- Computer Science Electives
- General Education courses
- CIS 452 - Operating Systems Concepts Credits: 4
- WRT 350 - Business Communication Credits: 3
- Computer Science Elective
- General Education courses
- CIS 467 - Computer Science Project Credits: 3
- CIS 490 - Internship Credits: 2 to 5

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 251 - Computer Organization Credits: 3
- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 350 - Introduction to Software Engineering Credits: 3
- 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 361 - System Programming 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 251 - Computer Organization Credits: 3
- CIS 309 - Teaching Computer Science Credits: 3
- MTH 225 - Discrete Structures: Computer Science Credits: 3
OR MTH 227 - Linear Algebra I Credits: 3 (for Math Certification Majors)

Criminal Justice

For additional information about opportunities, please refer to the College of Community and Public Service section in this catalog.

Interim Director: Fisk. Professors: Bailey, Hewitt, Hughes, Johnson, Mullendore; Associate Professors: Crawley, Kierkus, Kingshott, McKenzie, Ross, Steffel, Yalda, Ziembo-Vogl; Assistant Professors: Gerkin, Hilinski, Stevens, Walsh; Director of Criminal Justice Training: Yunker; Affiliate Professors: Burlingame, Edwardson, Fisk.

Website: 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

The mission of Grand Valley's School of Criminal Justice is to teach, prepare, advise, and assist students to make positive contributions in their chosen vocations within the criminal justice or legal system at the local, regional, national, and international level.

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 achieved a 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 Associates degree prior to the start date of the academy. Application packets are available on our website between October 15 and December 15. Applications should be obtained as soon as possible due to the complexity of the application process. MCOLES requirements can be found at www.mcoles.org under the Licensure and Professional Development section.

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 six 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. One to two credits require 150 hours, three credits 200 hours, four credits 266 hours, five credits 332 hours, and six credits require 400 hours. 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.

Career Opportunities

Graduates of the School of Criminal Justice are employed in a variety of human service fields. Typically, they seek employment as: law enforcement officers at the federal, state, and local levels; juvenile caseworkers, counselors, and youth home administrators; correctional case managers and counselors; and parole and probation agents. Many other graduates decide to pursue an advance degree. The School of Criminal Justice seeks to produce graduates who have a broad range of job and career opportunities. Graduates receive degrees that enhance their abilities to obtain employment in many fields. By combining professional preparation with a traditional liberal arts education, our program provides graduates with enhanced employment opportunities and increased job mobility.

Scholarship Opportunities

William Hegarty Scholarship

William Hegarty embraced higher education throughout his police career. Obtaining a degree while on the Oakland Police Department in California, Hegarty moved to Michigan State University for graduate studies. After completing graduate school, he joined the faculty at Michigan State. He left MSU to become the Director of Public Safety in Jackson, Michigan in 1972. In 1974 Chief Hegarty led the New Rochelle Police Department in New York until he came to Grand Rapids. Hegarty was Chief of the Grand Rapids Police Department from 1982 to 1997 and taught as an adjunct instructor in the School of Criminal Justice at Grand Valley State University from 1984 to 1997. Chief Hegarty had a special fondness for GVSU and his teaching legacy lives on. He donated funds to establish the William Hegarty Criminal Justice Scholarship when he retired. The William Hegarty Scholarship is awarded on a yearly basis to a Grand Valley State University Criminal Justice graduate student, working in law enforcement.

Shawn D. Wiersma Criminal Justice Memorial Scholarship

On September 6, 2004, Shawn Wiersma died in a tragic auto crash. Shawn is remembered for his service to the Holland Police Department through the City Attorney's Office, a client of the Cunningham Dalman P.C. law office where he practiced. He developed many friendships within the police department and was highly respected for his ethics and character by clients and colleagues alike. In addition, Shawn is remembered for his service as an adjunct instructor in the Grand Valley State University School of Criminal Justice. He was highly respected by students and colleagues for his vast knowledge on a wide range of subjects. He truly enjoyed and loved his teaching experience which was reflected in his close ties with his students. His commitment to education was unmatched. Shawn is remembered for all the good he did and all the people he touched in his shortened life. To memorialize him in perpetuity, an endowed scholarship in Shawn's name has been established at Grand Valley State University, his alma mater. This scholarship will be given annually to an entering senior student in the School of Criminal Justice who plans to enter the police or law professions.

Mullendore Legal Studies and Criminal Justice Scholarship

Kristine Mullendore graduated from the Boston University School of Law in 1977, with a Juris Doctor degree, and held positions with the Michigan Court of Appeals as well as working as an Assistant Prosecuting Attorney in Kent County. Since 1995, she has been an Associate Professor in the School of Criminal Justice/Legal Studies program at GVSU. James M. Mullendore received his Juris Doctor degree from the University of Virginia School of Law in 1975, and since then has been in private legal practice in Greenville, Michigan. Both James and Kristine are active members of the Michigan Bar. The purpose of the Mullendore Legal Studies and Criminal Justice Scholarship is to recognize and reward students who major in either Legal Studies or Criminal Justice with the intention of entering and contributing to the legal profession, as well as demonstrating financial need. The Mullendores also hope to encourage the students to participate in international educational opportunities.

William McCarthy Criminal Justice Memorial Scholarship

The William McCarthy Memorial Scholarship is in memory of Detective/Lieutenant William McCarthy of the Montcalm County Sheriff's Office who was shot and killed in the line of duty on April 27, 1982. A scholarship in his memory was created for students who live in Montcalm County who wish to pursue a career in law enforcement.

State Bar of Michigan Legal Assistants Section Scholarship

The State Bar of Michigan Legal Assistants Section is offering students enrolled in Michigan paralegal studies programs the opportunity to apply for a scholarship. The total amount of the scholarship will range from \$250 to \$1,000. The deadline for submission of the scholarship application is June 1, 2010. Information on this Scholarship is also available on the State Bar of Michigan website (www.michbar.org/paralegal/scholarship.cmf)

Public Policy Minority Fellowship Program

Public Sector Consultants (PSC) is now in its second year of the minority fellowship program, and is seeking new candidates for the fellowship from Michigan's numerous community colleges and universities. PSC is seeking more than one candidate, from among whom the final selection will be made. The fellowship position will be 40 hours/week and housed at PSC. The salary will include benefits and will be commensurate with the fellow's qualifications, but no less than \$30,000 annually.

Student Organizations (www.gvsu.edu/stuey)

Association of Criminal Justice Students

The Association of Criminal Justice Students provides all students interested in criminal justice an opportunity to unite outside of the classroom to advance their knowledge of the study of criminal justice. Members participate in fundraisers, educational activities rooted in criminal justice, and community service.

Future Police and Educators Association

The Future Police and Educators Association (FPEA) is a non-profit, non-political student organization that is dedicated to the professional development of its members in the Criminal Justice and Education fields. We accomplish this by bringing the two majors together in an environment that allows participation in group activities such as community service, fund raising, participating in events, and networking with other professional organizations. In addition, we provide our members with an environment where we can discuss current events relating to both or individual fields, and provide intellectually stimulating events such as having guest speakers visit and speak about issues that concern their particular field.

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.

Cognate Degree Requirements:

Requirements for B.A. Degree

- The B.A. degree requires third-semester proficiency in a foreign language.

Requirements for B.S. Degree:

- CJ 300 - Research Methods in Criminal Justice Credits: 3
- CJ 465 - Criminal Justice Administration Credits: 3
- STA 215 - Introductory Applied Statistics 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 Cognate 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 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 430 - U.S. Jails Credits: 3
- CJ 442 - Victimology Credits: 3
- CJ 444 - Forensic Behavior and Law Credits: 3
- CJ 464 - Security Administration and Legal Issues Credits: 3
- CJ 465 - Criminal Justice Administration Credits: 3
- CJ 470 - Crime Control and Justice Policy 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

Students enrolled in the GVSU police academy must take the following courses (or 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

Cognate Requirements:

Academy students must have completed:

- CJ 411 - Community Policing Credits: 3
- CJ 465 - Criminal Justice Administration Credits: 3
- CJ 490 - Criminal Justice Internship Credits: 1 to 9

Suggested Order of Coursework for a Major in Criminal Justice (B.A.)**Year 1:**

- WRT 150 (Basic Skills) 4
- CJ 101 (Gen Ed/SS & CJ Core) 3
- Gen Ed Course (ART, P&L, HST, or MTH) 3
- Foreign Language 101 (Cognate) 4 (To ensure proper placement, contact the Modern Languages department for testing)
- MTH 110 (Basic Skills) 4
- Gen Ed Course (ART, P&L, HST, or MTH) 3
- SOC 201 (Gen Ed/SS pre-req) 3
- Foreign Language 102 (Cognate) 4

Year 2:

- Gen Ed Science course (with lab) 4-5
- CJ 201 (CJ Core) 3
- GEN Ed Course (ART, P&L, HST, or MTH) 3
- Foreign Language 201 (Cognate) 4
- Minor or General Elective course 1
- Gen Ed Science course (non-lab) 3
- Gen Ed Course (ART, P&L, HST, or MTH) 3
- CJ 350 (CJ Core) 3
- Minor or General Elective course 3

Year 3:

- CJ 330 (CJ Core) 3
- CJ 305 (CJ Core) 3
- World Perspective course (Gen Ed) 3
- Gen Ed Theme Course 3
- Minor or General Elective course 3
- Minor or General Elective course 1
- Take the Jr. Year Writing Assessment or take WRT 305 as an elective course
- CJ 312 (CJ Core) 3
- CJ Major Elective 3
- Gen Ed Theme Course 3
- CJ 482 (CJ Core) 3
- Minor or General Elective course 3
- Minor or General Elective course 1

Year 4:

- CJ Major Elective 3
- CJ Major Elective 3
- CJ 340 (CJ Core) 3
- Minor or General Elective course 3
- Minor or General Elective course or WRT 305 if necessary 3
- CJ 495 (Capstone - CJ Core) 3
- CJ Major Elective 3
- Minor or General Elective course 3
- Minor or General Elective course 3
- Minor or General Elective course 3

Suggested Order of Coursework for a Major in Criminal Justice (B.S.)**Year 1:**

- WRT 150 (Basic Skills) 4
- CJ 101 (Gen Ed/SS & CJ Core) 3
- Gen Ed Science course (with lab) 4
- Gen Ed Course (ART, P&L, or HST) 3
- MTH 110 (Basic Skills) 4
- Gen Ed Course (ART, P&L, or HST) 3
- SOC 201 (Gen Ed/SS pre-req) 3
- Gen Ed Science course (non-lab) 3
- Minor or General Elective Course 3

Year 2:

- CJ 201 (CJ Core) 3
- STA 215 (Gen Ed/MTH SCI & CJ Cognate) 3
- World Perspective course (Gen Ed) 3
- Minor or General Elective course 3
- Minor or General Elective course 3
- CJ 482 (CJ Core) 3
- CJ 350 (CJ Core) 3
- CJ 330 (CJ Core) 3
- Gen Ed Theme Course 3
- Minor or General Elective course 3

Year 3:

- CJ 300 (CJ Cognate) 3
- CJ 305 (CJ Core) 3
- Gen Ed Theme Course 3
- Minor or General Elective course 3
- Minor or General Elective course 3
- Take the Junior Year Writing Assessment or take WRT 305 as an elective course
- CJ 312 (CJ Core) 3
- CJ Major Elective 3
- CJ 400 (CJ Cognate & SWS) - CJ 300 pre-req 3
- Minor or General Elective course 3
- Minor or General Elective course 3

Criminal Justice

Year 4:

- CJ Major Elective 3
- CJ Major Elective 3
- CJ 340 (CJ Core) 3
- Minor or General Elective course 3
- Minor or General Elective course or WRT 305 if necessary 3
- CJ 495 (Capstone - Major) 3
- CJ Major Elective 3
- Gen Ed Theme Course 3
- Minor or General Elective course 3
- Minor or General Elective course 3

Master of Science in Criminal Justice

Interim Director: Fisk; Professors: Bailey, Hewitt, Houston, Hughes, Johnson, Mullendore; Associate Professors: Crawley, Kierkus, Kingshott, McKenzie, Ross, Steffel, Yalda, Ziembo-Vogl; Assistant Professors: Gerkin, Hilinski, Stevens, Walsh; Affiliate Professors: Burlingame, Edwardson, Fisk.

The 36-credit 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 Mission Statement

The mission of Grand Valley's School of Criminal Justice is to teach, prepare, advise, and assist students to make positive contributions in their chosen vocation within the criminal justice or legal system at the local, regional, national, and international level.

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.

Admission Requirements, Retention and Termination Standards

Application to the program may be made by submitting the following materials to the Admissions office, Grand Valley State University, Allendale, MI 49401-9403: A completed application, A non-refundable application fee (unless the student has previously applied to Grand Valley and paid this fee), an official transcript from each college attended, even if the coursework taken at one institution is noted as transfer credit on another institution's transcript. Ask each institution to send your official copy directly to the Grand Valley State University Admissions Office. The Master of Science in criminal justice program requires the following additional application requirements: baccalaureate degree from an accredited institution of higher education; undergraduate overall

G.P.A. of 3.0 or a 3.0 or higher G.P.A. calculated on the last 60 hours of undergraduate work; three letters of recommendation sent directly to the Graduate Admissions Office by academic or professional references (it is recommended that 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. The committee may also require applicants to appear for an oral interview. The decisions of the Graduate Committee is 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 (applications received by March 1 will be given priority); Winter admission applications should be received by November 1 (applications received by September 1 will be given priority).

Transfer Credit

Up to 9 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 Campus, DeVos Center

Website: www.gvsu.edu/cj

Requirements for the M.S. in Criminal Justice

Students must complete a minimum of 36 graduate courses: 18-hour core courses, 3 hours in emphasis area, a three-credit project or a six-credit thesis, 6 to 9 criminal justice electives and 3 hours of approved external electives.

Core

Core of required courses consists of 18 credit hours as follows:

- CJ 601 - Criminal Justice Leadership Credits: 3
- CJ 602 - Legal and Ethical Issues Credits: 3
- CJ 604 - Criminal Justice Policy & Program Evaluation Credits: 3
- CJ 606 - Research Methodology and Data Analysis Credits: 3
- CJ 607 - Criminology Credits: 3
- CJ 608 - Research Methods II Credits: 3

Emphasis Area

Choice of one of the following courses:

- CJ 620 - Advanced Police Systems Credits: 3
- CJ 621 - Advanced Corrections Systems Credits: 3
- CJ 622 - Advanced Juvenile Justice Systems Credits: 3
- CJ 623 - Advanced Private Security Systems Credits: 3

Electives

Choose from the following courses (9 credits if completing CJ 693 or 6 credits if completing CJ 695):

- CJ 611 - Community Policing Credits: 3
- CJ 640 - Graduate Internship Credits: 3
- CJ 642 - Victimology Credits: 3
- CJ 644 - Forensic Behavior and Law Credits: 3

- CJ 680 - Special Topics in Criminal Justice and Legal Studies Credits: 1 to 4
- CJ 685 - Criminal Justice Workshops Credits: 1
- CJ 699 - Directed Readings Credits: 1 to 3

Outside Elective

Choose 3 credits outside of the criminal justice curricula. These credits must be pre-approved by the MCJ Graduate Program Coordinator.

Project or Thesis

Prerequisites: Admission to CJ graduate program, 18 credits of graduate coursework completed, approved project or thesis committee, approved project or thesis proposal, and permission of MCJ Graduate Program Coordinator (completion of core curriculum may be concurrent).

- CJ 693 - Criminal Justice Project Credits: 3
- OR 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 9 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 then complete an additional 12 credit hours from the following electives:

- 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 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 430 - U.S. Jails Credits: 3
- CJ 442 - Victimology Credits: 3
- CJ 464 - Security Administration and Legal Issues Credits: 3
- CJ 470 - Crime Control and Justice Policy Credits: 3
- CJ 490 - Criminal Justice Internship Credits: 1 to 9
- CJ 499 - Independent Study and Research Credits: 1 to 3

Dance

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Assistant Professors: Shawn T Bible.

In addition to the full-time faculty, two distinguished dance educators with extensive professional experience teach classes on a part-time basis.

Website: www.gvsu.edu/music

The Dance Program (housed administratively in the Department of Music) offers a major in the Bachelor of Arts degree. The B.A. in Dance offers 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 independence. The department encourages collaboration across disciplines and provides opportunities to explore innovative areas in dance history, theory, dance & technology, choreography, pedagogy, anatomy and physiology, and production. We highlight performance opportunities with 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.

Career Opportunities

Dance provides many career opportunities from performing in a major professional dance company to becoming a choreographer, from teaching privately or in a college setting, to performing in musical theater on Broadway; from music videos to film. Dance also provides career opportunities as a dance historian, librarian, dance critic, or in physical fitness, dance therapy, and kinesiology.

Admission

Participation in the dance program is by audition only. An audition schedule and application form can be found at www.gvsu.edu/music. When considerable geographical distance prevents a personal audition, the applicant may, with the permission of the program, submit a VHS videocassette containing ballet center classroom work and one variation with a photo in first arabesque, a head shot, and 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 or jazz technique class, and an interview with the director.

Scholarship Opportunities

In addition to a generous array of academic scholarships and awards based on financial need, the Department of Music annually awards nearly \$200,000 in talent scholarships to students in music and dance who show exceptional talent as performers and composers. Department of Music scholarships are awarded on the basis of achievement and potential in music and dance performance (by audition) and composition (portfolio).

For more information on dance scholarships, prospective students are invited to contact Assistant Professor Shawn Bible at (616) 331-3487, or by email at bibles@gvsu.edu.

Ada Council for the Arts Rebecca Vogelsang Memorial Scholarship

The Rebecca Vogelsang Scholarship is awarded to one entering Freshman Dance Major at Grand Valley State University. The Ada Arts Council sponsors the Rebecca Vogelsang Scholarship in honor of Rebecca Vogelsang. One of the passions Rebecca shared with her friends, family, and community, was her love for dance. In remembrance of Rebecca, this scholarship supports the continued education in dance for one student per year. Rebecca, a dancer herself, understood the imperative nature of keeping dance active in your career as a student.

Qualifications

- Be a prospective first year entering freshman at Grand Valley State University.
- Be a resident of the State of Michigan
- Candidates must be accepted by Grand Valley State University for enrollment and recipients must be of full-time status seeking a degree in Dance, or one of the many visual arts program offered through Art and Design.
- Although not a requirement, preference shall be given to candidates who are residents of Ada Township, Cascade Township, Grand Rapids Township or Vergennes Township.

Demonstration of financial need is not required, although should the top candidates have equal academic qualifications, financial need may be considered the deciding factor. Candidates who wish financial need to be considered must file the Free Application for Federal Student Aid.

Scholarship Funding

This scholarship will be funded annually. The first award for academic year 2008-2009, which shall be divided evenly as specified herein will be \$1,000.00. In subsequent years award amounts may vary. If, in the future, an endowed fund at GVSU is established, beginning one year after the endowment reaches the required threshold for activation; a portion of the endowment will be used for awards each subsequent year if qualified candidates apply. The award portion will be distributed as determined by the endowment spending policy established by the University. Remaining income or growth of the fund will be reinvested in the principal to hedge against inflation and to meet future scholarship needs.

Earth Science

Scholarship Specifications

- Scholarships will be awarded annually provided there are candidates that meet the criteria. A minimum of two scholarships will be awarded annually for one student in each of the two academic areas: 1) Dance, and 2) Art and Design.
- Award amounts and numbers will be determined by annual gifts received or, should this scholarship become endowed, the University's endowment spend-rate in effect from year to year.
- Scholarship awards are not renewable.

Application Procedure

Candidates for this scholarship must complete an application available from the Grand Valley State University Dance Department, or Art and Design Departments. Included as part of the application, the candidates must demonstrate their experience and participation in the arts. For example, Art and Design candidates would present a portfolio of work, outline art camps, classes, exhibitions or awards. Candidates for Dance scholarship would list their experience in performance, classes, and any awards. For either Art and Design or Dance Scholarships, participation in events that are open to public audiences shall be considered. All of these activities demonstrate passion and background for the candidate's chosen area of study.

Selection

The recipients will be chosen by the Dance Department, and the Art and Design Department in collaboration with the Financial Aid Office of Grand Valley State University.

Recognition

Recipients will be recognized at the annual Scholarship Celebration Dinner. Initiating donors will be honored at the annual scholarship recognition events.

Acknowledgements

- Upon accepting the award, each recipient is encouraged to acknowledge his/her appreciation of the scholarship by communicating with president of the Ada Arts Council, their designate or appointed contact person for the scholarship.
- In accepting the award, each recipient, acknowledging the generosity of the donor, is encouraged to make contributions to this scholarship if he/she is financially able after graduation. This commitment will remain in effect during the lifetime of the recipient(s).

Contacts

Shawn T Bible – Assistant Professor of Dance, bibles@gvsu.edu

Due Date:

Application for Scholarship must be submitted by March 31st of the year prior to entering Grand Valley State University as a Dance Major.

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 electives (Hours: 11)
- CTH 261 - Stagecraft I Credits: 3
- DAN 150 - Dance Practicum Credits: 3
- DAN 179 - Dance Ensemble Credits: 1
- DAN 241 - Ballet Technique Credits: 2
- DAN 251 - Modern Dance Credits: 2
- DAN 279 - Music as Dance Accompaniment Credits: 2
- DAN 281 - Jazz Technique Credits: 2
- DAN 311 - Improvisation and Choreography Credits: 3
- DAN 345 - Dance History Credits: 3
- DAN 451 - Advanced Modern Technique Credits: 2
- DAN 495 - Senior Project Credits: 3

Suggested Order of Coursework for a Major in Dance

First Year

- DAN 241 - Ballet Technique Credits: 4
- DAN 251 - Modern Dance Credits: 4
- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4
- Dance Elective - 3 credits
- General Education Courses - 9 credits

Total: 28

Second Year

- DAN 241 - Ballet Technique Credits: 4
- DAN 251 - Modern Dance Credits: 4
- DAN 281 - Jazz Technique Credits: 2
- **OR** DAN 481 - Advanced Jazz Technique Credits: 2
- DAN 345 - Dance History Credits: 3
- DAN 179 - Dance Ensemble Credits: 1
- Dance Electives - 10 credits
- General Education - 6 credits
- Language - 3 credits

Total: 33

Third Year

- DAN 441 - Advanced Ballet Technique Credits: 4
- DAN 451 - Advanced Modern Technique Credits: 4
- DAN 279 - Music as Dance Accompaniment Credits: 2
- DAN 311 - Improvisation and Choreography Credits: 3
- DAN 179 - Dance Ensemble Credits: 1
- Dance Electives - 8 credits
- General Education Course - 3 credits
- Language course - 3 credits
- WRT 305 - Writing in the Disciplines Credits: 3

Total: 31

Fourth Year

- DAN 441 - Advanced Ballet Technique
- DAN 451 - Advanced Modern Technique
- DAN 380 - Special Topics in Dance Credits: 1 to 4
- DAN 179 - Dance Ensemble Credits: 1
- DAN 495 - Senior Project Credits: 3
- Dance Elective - 3 credits
- General Education Courses - 5 credits

Total: 23

Dance Minor

Requirements for a Minor in Dance

A student choosing to minor in dance must complete at least 23 hours in the field, including at least four hours of ballet technique (chosen from DAN 241 or 441), four hours of modern dance (chosen from DAN 251 or 451), 2 hours of jazz technique (DAN 281), dance history (DAN 345), and 10 hours of electives in dance.

- DAN 241 - Ballet Technique Credits: 2
- DAN 251 - Modern Dance Credits: 2
- DAN 281 - Jazz Technique Credits: 2
- DAN 345 - Dance History Credits: 3
- DAN 441 - Advanced Ballet Technique Credits: 2
- DAN 451 - Advanced Modern Technique Credits: 2

Bachelor of Science in Earth Science

For additional information about opportunities your college offers, please refer to your college's section in this catalog.

Requirements for a Major in Earth Science

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 get a biology minor. Students seeking a middle school teaching endorsement should

pursue a biology minor and with an additional 9 credits coursework will be able to pursue an endorsement in science (highly qualified). For further information see your advisor. 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

22 semester credit hours of Geology courses with a minimum GPA of 2.0.

- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 5
- GEO 319 - Earth Science in Secondary Education Credits: 4
- GEO 320 - Geomorphology (Earth Science Capstone) Credits: 4
- GEO 430 - Oceanography Credits: 3
- GEO 485 - Geology Seminar Credits: 1

3. Cognate Science Courses

Twenty-five (25) semester credit hours of Science cognate courses with a minimum GPA of C (2.0).

- CHM 115 - Principles of Chemistry I Credits: 5
- MTH 122 - College Algebra Credits: 3
- NRM 140 - The Climatic Factor Credits: 4
- OR NRM 281 - Principles of Soil Science Credits: 4
- PHY 105 - Descriptive Astronomy Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

4. General Education B.S. Degree Cognate Courses

Twelve semester credit hours of general education B.S. degree cognate courses with a minimum GPA of 2.0.

- GEO 211 - Mineralogy Credits: 4
- GEO 212 - Petrology Credits: 5
- MTH 123 - Trigonometry Credits: 3

Earth Science Minor

Requirements for a Minor in Earth Science

An earth science minor for teacher certification requires a minimum GPA of 2.7 in the minor and a minimum of 24 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: 5
- GEO 319 - Earth Science in Secondary Education Credits: 4
- GEO 320 - Geomorphology (Earth Science Capstone) Credits: 4
- NRM 140 - The Climatic Factor 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: 5
- NRM 140 - The Climatic Factor Credits: 4

Fall II

- GEO 320 - Geomorphology (Earth Science Capstone) Credits: 4

Winter II

- GEO 319 - Earth Science in Secondary Education Credits: 4

East Asian Studies

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

East Asian Studies Program Faculty:

Director: Wu. Professors: Ni, Wu; Associate Professors: Benjamin, Helgert, Lai, Shan, Shang, Smith, Wanxiao Sun, Wangdi, Yu; Assistant Professors: Gu, Liang, Ma, Robinson, Xu, Zhang, Zhao.

Website: 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 five thousand 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, commands 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 Barbara H. 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.

Career Opportunities

The East Asian Studies Minor is designed for students who are interested in Chinese or Japanese culture and who see fluency in the Chinese and Japanese language and knowledge of East Asia as instrumental for their academic or professional careers in education, international business, international relations, governmental and non-governmental organizations, and in other areas of work related to China and Japan.

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.

Student Organizations (www.gvsu.edu/stuey)

The Chinese Language and Culture organization provides interested students of any major a place to learn about the culture and language of China. Students are also encouraged to participate in the activities of local Asian associations, including the Chinese Association of West Michigan, the Asian-American Association, the Japan-American Society of West Michigan, as well as campus student groups such as the Asian Student Union (ASU) and the International Student Organization (ISO). Members of community organizations and businesses are also invited to take courses and participate in program activities.

Economics

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 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 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 of Asia Credits: 3
- HST 210 - Empire, Culture, and Conflict Credits: 3
- HST 333 - Survey of Modern Chinese History Credits: 3
- HST 340 - A History of East Asia to 1800 Credits: 3
- HST 341 - A History of East Asia since 1800 Credits: 3
- HST 342 - History of East Asian Religions Credits: 3
- PHI 306 - Eastern Great Philosophers Credits: 3
- PLS 283 - Chinese Politics and US-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. Below 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 - Introduction to Cultural Anthropology Credits: 3
- ECO 365 - Comparative Economic Systems Credits: 3
- HST 345 - The Ancient Mediterranean and Orient Credits: 3
- SS 351 - Family & 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

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

Chair: Isely. Professors: Reifel, Singh; Associate Professors: Dalmia, Giedeman, Isely, Lowen, Sicilian, Simons; Assistant Professors: Orgura, Smith Kelly, Sun; Affiliate Faculty: Brown.

Website: www.gvsu.edu/business/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 cognate field, such as accounting, mathematics, or political science.

Career Opportunities

Competence in economic analysis is good preparation for work in private enterprise, nonprofit firms, and government. It is recognized as an excellent preparation for M.B.A. and law programs.

Bachelor of Arts or Bachelor of Science in Economics

Requirements for a Major in Economics

Economics majors may earn a B.S., B.A., or 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, the senior-level capstone course. All economics majors are required to take STA 215, Introductory Applied Statistics and PHI 103, Logic, as cognate requirements. In addition, for their third cognate course, students can take either SS 300, Research Methods in Social Sciences, or STA 216, Intermediate Applied Statistics. Economics majors or minors cannot apply ECO 200 for credit to the major or minor.

Because economics is a department in the Seidman College of Business, students must achieve a 2.75 cumulative GPA and 55 semester hours 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. Economics majors are eligible to participate in the business internship program.

Students who plan to enter a graduate program in economics or finance after completion of the B.A. or B.S. degree are highly recommended to take the following courses: MTH 201, MTH 202, MTH 203, and MTH 227. These students should also consider a mathematics minor and consult with their advisors at an early date to explore alternatives and plan their curricula.

Social studies group majors who choose an emphasis area in economics should make their economics course selections with the advice of the economics department.

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

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 Michigan State Board of Education require basic knowledge of geography, history, and political science. Students can qualify for certification by taking the following course work:

Econ Minor with

- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- And
- ECO 349 - Emerging Markets Issues Credits: 3
- OR ECO 369 - International Economic Issues Credits: 3

Additional Requirements

Course Work

In addition students must take the following or equivalent to obtain basic knowledge in political science, history and geography:

- GPY 235 - World Regional Geography Credits: 3
- HST 206 - American History since 1877 Credits: 3
- PLS 102 - American Government and Politics Credits: 3

Michigan Test for Teacher Certification

Besides course work, 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

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

Dean: Collins; Associate Dean: King

Leadership and Learning: Chair: Shinsky; Professors: Armstrong, King, Mack; Associate Professors: Alston, Busman, Chlebo, Cooper, Geisel, Hipp, Margulus, McCrea, Patterson, Reinken, Schiller, Sowa-Wojciakowski; Assistant Professors: Bultsma, DeFrance, Gu, Hakim, Diarrassouba, Smith, Stearns, Stolle, Storey, Worst; Instructors: Clay, Cleveland, Helzer, Hill Gregels, Judge, Kalee, Kaletka, Kamps, Melin, Page, Remenap, Schultz, Shelton, Spencer, Starkweather. Joint Appointment: Coffey.

Special Education, Foundations, and Technology: Chair: P. Lancaster; Professors: Cross, Grant; Associate Professors: Abramson, D.Bair, Carson, Chattulani, Fisher, S. Lancaster, Lubic, Mader, Miller, Topper, S. Williams, Wilson; Assistant Professors: M. Bair, Clark, Hanks, Harris, LaBeau, Schelling, Subramony, O. Williams; Instructors: Barneveld, Helder, Koning, Stockton.

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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, and technology and assessment. Faculty from the Liberal Arts teach content areas.

Advising and Course Planning

Teacher preparation is an upper-division professional program. 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. Students will have two advisors: an advisor in the student's teaching 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.

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 at the Student Information and Services Center. Packets must be complete at the time of application. Students who postpone admission must reapply. Students should apply during the semester before they expect to do their first field placement (Education 330, 331), except for the following:

- Student seeking elementary certification with special education endorsements must apply during the winter semester (February 1) for fall admission.
- Students seeking a major in music education must apply during the winter semester (February 1) for fall admission (i.e. fall Teacher Assisting).
- Students seeking a major in World languages must pass the Oral Proficiency Interview (OPI) prior to their student teaching semester.

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/coe

Minimum Admission Criteria

In keeping with National Council for the Accreditation of Teacher Education (NCATE) 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.

- Academic Achievement.
 - An established 2.7 Grand Valley GPA overall **and** in the teaching major, minor, and Education major/professional program. Some teaching majors may require a higher GPA. Consult the Grand Valley State University catalog. The minimum Grand Valley GPA must be established by the time of application.
 - Most general education requirements completed.
 - Significant progress in the teaching major as determined by advisor.
 - Significant progress in the minor as determined by advisor.
 - Minor prerequisite courses completed.
 - At least one meeting completed with assigned education advisor.
 - All remaining requirements met.

Education

- Secondary Review Process: An established 2.699-2.50 Grand Valley GPA overall **and** in the teaching major, minor and Education major/professional program.
 - Most general education requirements completed.
 - Most requirements in the teaching major completed, as determined by advisor.
 - 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.
- Michigan Basic Skills Test. A passing score in each of the three areas of reading, mathematics, and writing as established by the Michigan Department of Education. Students may take the test during the semester of application.
- 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 GPA of 2.7 or better must be established in these three courses, with no grade lower than C. a.) ED 315 Diverse Perspectives on Education b.) ED 337 - Introduction to Learning and Assessment (elementary and secondary general education students only) c.) PSY 301 - Child Development. Additional required prerequisites for elementary and special education candidates: a.) ENG 308 Teaching Reading: The Necessary Skills b.) MTH 221 or MTH 222 or MTH 223 Mathematics for Elementary Teachers I or II or III.
- Advisor Recommendations. One from the teaching major advisor/department (Elementary and Secondary General Education only) and another from a College of Education advisor.
- Positive Recommendation. One from an individual who can address the candidate's ability as a prospective teacher.
- 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.
- Academic Progress. Completion of at least 60 semester credits and junior status.
- University Basic Skills. Completion of university course requirements or test equivalents in Writing 150 and Mathematics 110.
- Negative TB Test Report. Current at the time of application.
- Felony Conviction Statement. Review procedures for those who have been convicted or pled 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.
- Copies of degree analysis and current course listings of classes being taken at another college or university.
- Three copies of current resume on plain white paper.

All admissions decisions will be rendered by the Dean of the College of Education based on faculty recommendations.

Field Placement Requirements

Teacher Assisting (Education ED 330, ED 331, ED 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 40-mile radius from campus unless further placement is deemed necessary for suitable supervision and effective use of unit resources.

Student Teaching (Education ED 430, ED 431, ED 471, ED 472)

- Submission of completed application packet by September 15 for winter placement, February 1 for fall placement.
- Completion of Teacher Assisting with a grade of B- or better and positive recommendations.
- Completion of ED 310, and ED 320 or ED 321, with a B- or better.
- Completion of ED 370, and ED 378 or ED 379 (elementary and secondary general education students only) with a B- or better.
- Continued 2.7 GPA overall and in the teaching major, minor, and education major/professional sequence.
- 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:

- Completion of degree requirements and teaching major, minor, and education major/professional program requirements.
- GPA of 2.7 overall and in the teaching major, minor, and education major/professional program.
- Grades of B- or better and positive recommendations in professional fieldwork courses, ED 310, ED 320 or ED 321, ED 370, ED 378 or ED 379 (elementary and secondary general education students only), and ED 485.
- 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.
- Completion of CPR (Adult/Child) Instruction and First Aid (Standard or Basic).
- If your criminal background information has changed since you originally applied for admission to the College of Education, contact the Associate Director of the Student Information and Services Center (SISC) to confirm the change(s) are on file in SISC.

General Information

For additional information about opportunities your college offers, please refer to your college's section in this catalog.

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/professional program.

1. Teaching Major — Elementary Certification

In January 2008, the Michigan State Board of Education approved new Elementary Education standards. The new standards will ensure that teachers are prepared with depth and breadth of content knowledge. New students entering Grand Valley, pursuing an elementary provisional teaching certificate, will only be able to 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/professional program for elementary certification. **Students should meet with their advisor before selecting courses for the elementary minor.**

Website: 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 done 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 & Theatre for Elementary Education Credits: 3

d. Language Arts:

- ENG 302 - Introduction to Language Arts: Teaching Writing & 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 Ed Credits: 2

g. Social Studies:

- SST 309 - Social Studies for Elementary Teachers Credits: 3

3. Requirements for the Education Major/Professional Program — Elementary Certification

Candidates must complete the following 39-credit education major. At least one field semester must be done in a multicultural setting.

Prior to admission to Undergraduate Teacher Education:

- ED 315 - Diverse Perspectives on Education Credits: 3
- PSY 301 - Child Development Credits: 1 to 3
- ED 337 - Introduction to Learning and Assessment Credits: 3

Teacher Assisting semester:

- ED 310 - Organizing and Managing Classroom Environments Credits: 3
- ED 320 - Reading: Assessment and Instruction Credits: 3
- ED 330 - Teacher Assisting - Elementary Credits: 5

Physical education majors also attend the ED 330 seminar in the major. The next two courses may be taken during OR after Teacher Assisting, but must be taken prior to Student Teaching:

- ED 370 - Technology in Education Credits: 3
- ED 378 - Universal Design for Learning: Elementary Credits: 3

Student Teaching Semester:

- ED 430 - Student Teaching, Elementary Credits: 10
- ED 485 - The Context of Educational Issues Credits: 3 (may be taken after ED 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/professional program.

1. Teaching Major — Secondary Certification

The 15 areas approved by the State of Michigan at Grand Valley are listed below. 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

2. Requirements for Teaching Minor — Secondary Certification

The 18 areas approved by the State of Michigan are listed below. 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, Latin, Spanish.

Science and Mathematics: Biology, Chemistry, Computer Science, Earth/Space Science, 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 the Grand Valley State University Catalog for details.

3. Requirements for the Education Major/Professional Program — Secondary Education

Candidates must complete the following 39-credit education major. At least one field semester must be done in a multicultural setting.

Prior to admission to Undergraduate Teacher Education:

- ED 315 - Diverse Perspectives on Education Credits: 3
- PSY 301 - Child Development Credits: 1 to 3
- ED 337 - Introduction to Learning and Assessment Credits: 3

Teacher Assisting semester:

- ED 310 - Organizing and Managing Classroom Environments Credits: 3
- ED 321 - Content Area Literacy Credits: 3
- ED 331 - Methods and Strategies of Secondary Teaching Credits: 5

The next two courses may be taken during OR after Teacher Assisting, but must be taken prior to Student Teaching:

- ED 370 - Technology in Education Credits: 3
- ED 379 - Universal Design for Learning: Secondary Credits: 3

Student Teaching semester:

- ED 431 - Student Teaching, Secondary Credits: 10
- ED 485 - The Context of Educational Issues Credits: 3 (may be taken after ED 431, but before certification.)

Education

Elementary Teacher Certification (Special Education Endorsement)

During 2007-2008, the Michigan State Board of Education approved new standards. Prospective elementary candidates who wish to earn a special education endorsement will need to meet with advisors in the Comprehensive Science and Arts for Teaching (CSAT) Major and in the College of Education to plan their course of study.

Michigan elementary teacher certification with special education endorsements allows the holder to teach the special education endorsement areas in kindergarten through twelfth grade (cognitive impairment to age 26). It also permits teaching any subject in kindergarten through fifth grade or any subject in kindergarten through eighth grade in self-contained classrooms.

In addition to degree requirements, special education candidates must complete the CSAT Major, Special Education Major/professional program, special education core curriculum, and requirements for two endorsements. Prior to beginning in the College of Education, students are expected to complete all courses in general education and the CSAT major. In addition, they must complete ED 315, PSY 301, PSY 310, and PSY 326.

Website: www.gvsu.edu/coe

1. Requirements for the Comprehensive Science and Arts for Teaching (CSAT) Major

The 44-46-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 & Children's Literature Credits: 3
- ENG 400 - Language Arts for Teaching Credits: 3
- ENG 308 - Teaching Reading: The Necessary Skills Credits: 4

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 - Social Studies for Elementary Teachers Credits: 3
- HST 205 - American History to 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

Fine Arts

- MAT 300 - Music Art & 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 Ed Credits: 2

Foundations

- PSY 325 - Educational Psychology Credits: 3

Capstone

- SAT 495 - Sciences and Arts for Elementary Classrooms Credits: 3

2. Requirements for Special Education Major/Elementary Professional Program (33 credits)

- ED 315 - Diverse Perspectives on Education Credits: 3
- PSY 301 - Child Development Credits: 1 to 3
- ED 310 - Organizing and Managing Classroom Environments Credits: 3

- ED 320 - Reading: Assessment and Instruction Credits: 3
- ED 332 - Methods and Strategies of Special Education Teaching Credits: 6
- ED 370 - Technology in Education Credits: 3
- ED 430 - Student Teaching, Elementary Credits: 10
- ED 485 - The Context of Educational Issues Credits: 3

Note: The Special Education Major cannot be granted until completion of at least one of the two special education endorsements. Special Education certification cannot be granted until completion of both.

3. Requirements for the Core Curriculum in Special Education (12 credits):

- PSY 304 - The Psychology and Education of the Exceptional Child Credits: 3
- ED 360 - Language and Reading Development Credits: 3
- ED 361 - Principles, Processes, and Methods in Special Education Credits: 3
- ED 495 - Diagnostic and Interpretive Procedures Credits: 3

4. Requirements for Special Education Endorsements

Cognitive Impairment (CI)

Early Childhood/Early Childhood Developmental Delay (ZA/ECDD)

Emotional Impairment (EI)

Learning Disabilities (LD)

The following combinations are possible:

CI/EI

CI/ZA/ECDD

CI/LD

EI/ZA/ECDD

EI/LD

Special Education Courses

Cognitive Impairment (CI) (21 credits):

- ED 441 - Curriculum for CI Credits: 3
- ED 463 - Educational Practices and Procedures: Cognitive Impairment Credits: 3
- ED 471 - Directed Teaching in Cognitive Impairment Credits: 9
- ED 497 - Educational Interventions: Cognitive Impairment Credits: 3
- PSY 326 - Mental Retardation Credits: 3

Emotional Impairment (EI) (21 credits):

- ED 442 - Curriculum for EI Credits: 3
- ED 464 - Educational Practices and Procedures: Emotional Impairment Credits: 3
- ED 472 - Directed Teaching in Emotional Impairment Credits: 9
- ED 498 - Educational Interventions: Emotional Impairment Credits: 3
- PSY 310 - Behavior Modification Credits: 3

Provisional Certificate

The following are taken in the graduate special education program as part of the initial Provisional Certificate:

Early Childhood (ZA)/Early Childhood Developmental Delay (ECDD):

(Student receives approval in ECDD and the Early Childhood ZA endorsement).

Students planning to complete the Master's Degree in Early Childhood/Early Childhood Developmental delay should meet with their graduate advisor for a planned program.

- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3

- EDS 647 - Preschool Special Needs Child Credits: 3
- EDS 685 - Practicum/Graduate Field Experience Credits: 3 or 6

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 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 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 of this catalog.

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Website: www.gvsu.edu/coe_grad

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Graduate Studies in Education

The College of Education offers the Master of Education degree (M.Ed.), Michigan Provisional Certification, Michigan Professional 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:

- All students seeking degree, endorsement, approval, license or certificate change at the graduate level must be formally admitted to graduate study.
- 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 of the 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.

The Director of the Student Information and Services Center, based on faculty recommendations, will make 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 a least half the credits be earned at Grand Valley. Individuals who have been convicted of or pled no contest to a felony or certain misdemeanors may be denied admission, field placement, or final certification. Students should familiarize themselves with all policies contained in the university catalog and in College of Education Policies and Procedures Manual, available in the Student Information Services Center.

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 area under a degree program (General Education, Higher Education, Instruction and Curriculum, Educational Leadership, Literacy Studies, School Counseling, and Special Education). The M.Ed. degree in Educational Technology does not have an emphasis area.

Emphasis area for the **M.Ed. in Higher Education** is Adult and Higher Education with concentrations in seven different areas (Biology, English, History, Mathematics, Physics, College Student Affairs Leadership and a general concentration).

Emphasis areas for the **M.Ed. in Instruction and Curriculum** include Advanced Content Specialization (Advanced Content Specialization also offers subject matter concentrations in Biology, Chemistry, English, History, Mathematics, Music or Physics), 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.

Emphasis areas for the **M.Ed. in Literacy Studies** include Reading/Language Arts, School Library Media Services, and Teaching English to Speakers of Other Languages (TESOL).

Education

Emphasis area for the **M.Ed. in School Counseling** is School Counseling.

Emphasis areas for the **M.Ed. in Special Education** include Cognitive Impairment, Early Childhood Developmental Delay, Emotional Impairment, and Learning Disabilities.

Certification, Endorsement, Approval, and Emphasis Programs.

Programs are also available in the following areas:

- Michigan Provisional Certification
- Michigan Professional Certification
- Early Childhood, Elementary, and Secondary Endorsement
- Reading Endorsement: Elementary K-8, Secondary 6-12, Reading Specialist K-12
- English as a Second Language: Elementary K-8, Secondary 6-12, and K-12
- Special Education Endorsement K-12: Learning Disabilities, Emotional Impairment, and Cognitive Impairment
- School Counseling: License and endorsement
- Subject area majors and minors, usually at the undergraduate level
- Special Education Approval: Directors and Supervisors

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 (ED 660); and social foundations of education (ED 671 or 672).

Note: Foundations requirements were revised in 2005. These courses fulfill both the new requirements and the former requirements.

Internships

Students graduation 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 numbers 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 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

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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: 33

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: 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):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis Area Courses:

- EDG 665 - Educational Leadership Credits: 3
- EDG 666 - Curriculum Leadership Credits: 3
- EDG 668 - Personnel Administration Credits: 3
- EDG 670 - School Law Credits: 3
- EDG 677 - School and Community Relationships Credits: 3

Select one:

- EDG 667 - Elementary Supervision and Evaluation Credits: 3
- EDG 671 - Secondary Supervision and Evaluation Credits: 3

Practicum - Select one course from the following:

- EDG 685 - Administrative Practicum

Administrative Internship (Prerequisite: EDG 685)

- EDG 687 - Administrative Internship Credits: 3

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

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 of this catalog.

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In this program, students develop a theoretical and practical knowledge base in the areas of special education leadership, finance, law, curriculum, and overall program management. The program is helpful for aspiring administrators of special education who want to expand their skills to provide leadership in the K-12 setting.

Accreditation

Nationally Recognized by Specialty Program Association: Council for Exceptional Children (CEC).

Minimum Number of Hours in Program

M.Ed. degree requires a minimum of 38 semester hours.

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/eduleadership**Requirements for M.Ed in Special Education Administration:**

Candidates seeking a Master's in Special Education Administration complete the following:

One Social Foundation Course:

- ED 672 - Social/Cultural Foundations of Education Credits: 3
- ED 671 - Educational Policy and Practice Credits: 3

One Research and Evaluation Course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis Area Courses:

- ED 670 - Critical Issues in Special Education Credits: 3
- EDS 665 - Foundations of Special Education Administration Credits: 3
- EDS 666 - Curriculum Development in Special Education Administration Credits: 3
- EDS 667 - Administration of Special Education Credits: 3
- EDG 668 - Personnel Administration Credits: 3
- EDS 669 - Special Education Law Credits: 1 to 3
- EDS 672 - Special Education Finance Credits: 1 to 3

Supplemental Courses:

- EDS 668 - Budget and Accounting Credits: 1
- EDS 670 - Computers in Instruction Credits: 1
- EDS 671 - Computers in Management Credits: 1
- EDS 673 - School and Community Relations Credits: 1 to 3

Practicum/Graduate Field Experience:

- EDS 685A - Special Education Supervisor Credits: 3 or 6

Capstone (Choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Supervisory Proficiency Capstone:

- EDS 678 - Spec. Ed. Supervisor Proficiency Capstone Credits: 1

Supervisor/Director Approval Programs:

Students seeking special education approval as supervisor or director must complete an additional application for admission to the approval program. The Special Education Supervisor approval program requires the successful completion of:

- ED 670 - Critical Issues in Special Education Credits: 3
- EDG 668 - Personnel Administration Credits: 3
- EDS 665 - Foundations of Special Education Administration Credits: 3
- EDS 666 - Curriculum Development in Special Education Administration Credits: 3
- EDS 667 - Administration of Special Education Credits: 3
- EDS 668 - Budget and Accounting Credits: 1
- EDS 669 - Special Education Law Credits: 1 to 3
- EDS 670 - Computers in Instruction Credits: 1
- EDS 671 - Computers in Management Credits: 1
- EDS 672 - Special Education Finance Credits: 1 to 3
- EDS 673 - School and Community Relations Credits: 1 to 3
- EDS 685A - Special Education Supervisor Credits: 3 or 6

A passing of the supervisor's proficiency capstone:

- EDS 678 - Spec. Ed. Supervisor Proficiency Capstone Credits: 1

The Special Education Director approval program includes all courses in the special education supervisor's program. In addition, candidates complete:

- EDS 685B - Special Education Director Credits: 6

A passing of the director's proficiency capstone:

- EDS 679 - Special Education Director Proficiency Capstone Credits: 1

A minimum 3.0 GPA is required for both the Supervisor and Director approval programs.

Master of Education in Educational Technology

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

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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 Web-site 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.

Minimum Number of Hours in Program

The M.Ed in Educational Technology requires a minimum of 33 semester hours.

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Web Site: www.gvsu.edu/coe_grad**Requirements for the M.Ed in Educational Technology**

Each candidate for the M.Ed degree must complete the following:

One Social Foundation Course:

- ED 672 - Social/Cultural Foundations of Education Credits: 3
- **OR** ED 671 - Educational Policy and Practice Credits: 3

One Research and Evaluation Course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis Area Courses:

- 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 Ed. Technology Credits: 3
- EDT 634 - Planning/Managing Educational Technology Credits: 3

Choose One:

- EDT 629 - Online Instructional Design/Development Credits: 3
- EDT 628 - Digital Video for Instruction Credits: 3
- Six credits of advisor-approved electives:
- Elective Credits: 3
- Elective Credits: 3

Education

Capstone (Choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis 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.

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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 emphasis in Adult and Higher Education general program and content concentrations requires a minimum of 33 semester hours. The M.Ed emphasis in College Student Affairs Leadership program requires a minimum of 42 semester hours.

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/coe_grad

Requirements for M.Ed in Adult and Higher Education - General Program

Social Foundations of Education (Choose one):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis area requirements for Adult and Higher Education. Select two courses from:

- EDG 648 - The Adult Learner Credits: 3
- EDG 649 - Career Guidance Credits: 3
- EDG 650 - Materials and Methods for Adult and Continuing Education Credits: 3

Supplemental Courses (choose two):

- ED 630 - Curriculum Development Credits: 3
- ED 631 - English as a Second Language Methodologies Credits: 3
- ED 633 - Race, Class, and Language Credits: 3
- ED 635 - Survey of Urban Education Credits: 3
- EDT 618 - Introduction to Computers in Education Credits: 3
- EDG 651 - Higher Education and Student Affairs Functions Credits: 3
- EDG 652 - The American College Student Credits: 3
- EDG 685L - Adult and Higher Education Credits: 3 or 6
- EDR 629 - Teaching Reading to Adults Credits: 3

Nine Hours Electives (Advisor approval required):

- Elective Credits: 3
- Elective Credits: 3
- Elective Credits: 3

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Adult and Higher Education Concentration Areas in Biology, English, History, Mathematics, and Physics

Candidates who do not choose the general program may choose from one of the six concentration areas, **Biology, English, History, Mathematics, Physics, or College Student Affairs Leadership**, within the Adult and Higher Education emphasis.

Each candidate for the M.Ed degree must complete six semester hours in foundation courses in the following areas:

Social Foundations of Education (Choose one):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis area courses (choose three for 9 credits):

- ED 630 - Curriculum Development Credits: 3
- EDG 648 - The Adult Learner Credits: 3
- EDG 649 - Career Guidance Credits: 3
- EDG 650 - Materials and Methods for Adult and Continuing Education Credits: 3

At least 15 approved credits in one of the subject matters listed below (see content department for additional coursework):

- Biology
- English
- History
- Mathematics
- Physics

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Concentration in College Student Affairs Leadership:

Each candidate for the M.Ed degree with CSAL concentration, complete the following:

Social Foundations of Education (Choose one):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis area courses:

- EDG 648 - The Adult Learner Credits: 3
- EDG 649 - Career Guidance Credits: 3

Supplemental Area Courses:

- EDG 647 - Theories of College Student Development Credits: 3
- EDG 651 - Higher Education and Student Affairs Functions Credits: 3
- EDG 652 - The American College Student Credits: 3
- EDG 653 - Administration of Student Affairs Programs Credits: 3
- EDG 654 - Student Affairs Administrators and the Law Credits: 3
- EDG 655 - Intervention Strategies for Student Development Credits: 3
- EDG 685 L - Adult and Higher Education Credits: 3

Six semester hours of electives:

- Elective Credits: 3
- Elective Credits: 3

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Master of Education in Instruction and Curriculum: Advanced Content Specialization Emphasis

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This program is designed for teachers who wish to further develop their knowledge and competencies in their specialized content area and also in teaching at the middle or high school levels. **Biology, Chemistry, English, History, Mathematics, Music, or Physics** are all concentrations that can be completed with this emphasis program.
Minimum Number of Hours in Program: 33

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/instruction

Requirements for M.Ed Advanced Specialization Content:

Each candidate for the M.Ed in Advanced Content Specialization must complete the following areas:

Social Foundations of Education (Choose one):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis area requirements for Advanced Content Specialization include:

- ED 630 - Curriculum Development Credits: 3
- EDG 637 - Assessment: K-12 Models and Practices Credits: 3
- EDG 638 - Facilitating School Environments Credits: 3

At least 15 approved credits in one of the subject matters listed below (see content department for additional coursework):

- Biology
- Chemistry
- English
- History
- Mathematics
- Music
- Physics

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

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.

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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: 33

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/coe_grad

Requirements for M.Ed in Early Childhood Education:

Social Foundations of Education (Choose one):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Emphasis Area Courses:

- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3

One course from either:

- EDS 647 - Preschool Special Needs Child Credits: 3
- ED 634 - Teaching the At-Risk Student Credits: 3

Two electives:

- Elective Credits: 3
- Elective Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Requirements for Endorsement in Early Childhood Education

Students desiring only the Early Childhood Endorsement (ZA), must complete the following program requirements for a total of 24 semester hours:

- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3

One course from either:

- EDS 647 - Preschool Special Needs Child Credits: 3
- ED 634 - Teaching the At-Risk Student Credits: 3

Education

Practicum/Graduate Field Experience:

- EDG 685 - Practicum/Graduate Field Experience Credits: 3 or 6

Notes:

- Early Childhood standards have changed. One additional course will be required. See program advisor for course selection.
- Candidate adding new endorsement must pass the Michigan Subject Area Test, and maintain a 3.0 GPA.

Master of Education in Instruction and Curriculum: Educational Differentiation Emphasis

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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: 33

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/coe_grad

Requirements for M.Ed in Educational Differentiation

Social Foundations of Education (Choose one):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Core Courses:

- ED 630 - Curriculum Development Credits: 3
- EDG 638 - Facilitating School Environments Credits: 3
- EDG 637 - Assessment: K-12 Models and Practices Credits: 3

Emphasis Area Courses:

- ED 652 - Foundations of Special Education Credits: 3
- EDG 640 - Fundamentals of Talent Development Credits: 3
- EDG 641 - Teaching for Talent Development Credits: 3
- EDS 625 - Inclusive Practices Credits: 3

One Elective/Workshop:

- Elective Credits: 3

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

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.

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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: 33

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: 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):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Core Courses (9 Credits):

- ED 630 - Curriculum Development Credits: 3
- EDG 637 - Assessment: K-12 Models and Practices Credits: 3
- EDG 638 - Facilitating School Environments Credits: 3

Emphasis area courses (12 credits):

- EDG 630 - Teaching Mathematics: K-8 Credits: 3
- EDG 631 - Teaching Science: K-8 Credits: 3
- EDG 633 - Teaching Social Studies and Diversity Credits: 3
- EDR 622 - Developmental Literacy for Children Credits: 3

One elective, or approved substitution (3 credits):

- Elective Credits: 3

Capstone (choose one):

1. ED 693 - Master's Project Credits: 3
2. ED 695 - Master's Thesis Credits: 3

Requirements for Initial Elementary Certification

This program is for post-baccalaureate 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:

- ED 652 - Foundations of Special Education Credits: 3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 630 - Teaching Mathematics: K-8 Credits: 3
- EDG 631 - Teaching Science: K-8 Credits: 3
- EDG 632 - Teaching Creative and Performing Arts Credits: 3
- EDG 633 - Teaching Social Studies and Diversity Credits: 3
- EDG 638 - Facilitating School Environments Credits: 3

- EDR 622 - Developmental Literacy for Children Credits: 3
- EDR 627 - Literacy Strategies for Content Areas Credits: 3
- EDG 685A - Practicum/Graduate Field Experience Credits: 3 or 6
- EDG 685A - Practicum/Graduate Field Experience Credits: 3 or 6

Maintain a 3.0 GPA, and pass the Michigan Elementary Test prior to certification. Completion of 15 additional credits will fulfill M.Ed. degree requirements and two foundations courses, ED 630, EDG 637, and either ED 693 or 695.

Elementary Endorsement for Students Already Certified:

Students already certified and seeking an additional Michigan Elementary Endorsement must have Michigan secondary certification; then complete:

- EDG 630 - Teaching Mathematics: K-8 Credits: 3
- EDG 631 - Teaching Science: K-8 Credits: 3
- EDG 632 - Teaching Creative and Performing Arts Credits: 3
- EDG 633 - Teaching Social Studies and Diversity Credits: 3
- EDR 622 - Developmental Literacy for Children Credits: 3
- EDR 627 - Literacy Strategies for Content Areas Credits: 3
- EDG 685A - Practicum/Graduate Field Experience Credits: 3 or 6

Select One:

- EDT 618 - Introduction to Computers in Education Credits: 3 or EDG 619 - Curricular Integration of Ed. Technology Credits: 3
- or EDT 619 - Curricular Integration of Ed. Technology Credits: 3

Select One:

- EDR 624 - Literature for Children Credits: 3 Credits: 3
- EDR 628 - Curriculum and Materials for Language Arts Credits: 3
- EDR 631 - Teaching Writing Credits: 3
- ENG 631 - Teaching Writing Credits: 3

Candidates must receive a positive recommendation; maintain a 3.0 GPA; 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.

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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: 33

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: 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):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Core Courses (9 credits):

- ED 630 - Curriculum Development Credits: 3
- EDG 637 - Assessment: K-12 Models and Practices Credits: 3
- EDG 638 - Facilitating School Environments Credits: 3

Secondary Level emphasis courses (9 credits):

- EDG 635 - Development and Needs of Adolescents Credits: 3
- EDG 636 - Instruction in Middle and High Schools Credits: 3

Choose One:

- EDR 623 - Developmental Literacy for Adolescents Credits: 3
- or EDR 625 - Literature for Adolescents Credits: 3

Two electives, or approved substitution (6 credits):

- Elective Credits: 3
- Elective Credits: 3

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Requirements for Initial Secondary Certification:

This program is for post-baccalaureate 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:

- ED 652 - Foundations of Special Education Credits: 3
- EDT 627 - Technology Integration for Secondary Teachers Credits: 3
- EDG 635 - Development and Needs of Adolescents Credits: 3
- EDG 636 - Instruction in Middle and High Schools Credits: 3
- EDG 638 - Facilitating School Environments Credits: 3
- EDR 623 - Developmental Literacy for Adolescents Credits: 3
- EDG 685B - Practicum/Graduate Field Experience Credits: 3
- EDG 685B - Practicum/Graduate Field Experience Credits: 6

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, ED 630, EDG 637 and either Ed 693 or ED 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:

- ED 630 - Curriculum Development Credits: 3
- EDG 635 - Development and Needs of Adolescents Credits: 3
- EDG 636 - Instruction in Middle and High Schools Credits: 3
- EDG 685B - Practicum/Graduate Field Experience Credits: 3 or 6
- EDR 623 - Developmental Literacy for Adolescents Credits: 3

Choose one:

- EDT 618 - Introduction to Computers in Education Credits: 3
- or EDT 619 - Curricular Integration of Ed. Technology 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.

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

Education

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 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

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/literacy

Requirements for the M.Ed Reading/Language Arts:

Each candidate for the M.Ed degree must complete the following:

One Social Foundation Course:

- ED 672 - Social/Cultural Foundations of Education Credits: 3
- or ED 671 - Educational Policy and Practice Credits: 3

One Research and Evaluation Course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

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
- **OR** ENG 631 - Teaching Writing Credits: 3

Two Supplemental Courses selected from:

- ED 631 - English as a Second Language Methodologies Credits: 3
- ED 633 - Race, Class, and Language Credits: 3
- ED 634 - Teaching the At-Risk Student Credits: 3
- EDG 641 - Teaching for Talent Development Credits: 3
- EDR 627 - Literacy Strategies for Content Areas Credits: 3
- EDR 685 - Practicum for Reading Teachers Credits: 3
- EDS 625 - Inclusive Practices Credits: 3
- May choose one approved elective Credits: 3

Capstone (Choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

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
- **OR** ENG 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 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:

- ED 631 - English as a Second Language Methodologies Credits: 3
- **OR** EDG 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
- **OR** ENG 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 include:

One Social Foundation Course (choose one):

- ED 671 - Educational Policy and Practice Credits: 3
- ED 672 - Social/Cultural Foundations of Education Credits: 3

One Research and Evaluation Course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

One Capstone Course selected from:

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Reading Courses Required for Specialist endorsement include:

- 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
- **OR** ENG 631 - Teaching Writing Credits: 3
- EDR 687 - Practicum for Reading Specialists Credits: 3
- EDR 696 - Program Development and Administration Credits: 3

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:
School Library Media Services Emphasis**

For additional information about opportunities your college offers, please refer to the College of Education section in this catalog.

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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 candidates to be school library media specialists in elementary and secondary school settings. Program content promotes incorporation of information literacy and technology standards through collaboration with all members of the learning community. Courses cover a wide range of school library media issues on the use of information and ideas, teaching and learning, collaboration and leadership, and program administration.

Accreditation

Nationally Recognized by Specialty Program Association: American Library Association (ALA)/American Association of School Librarians.

Minimum Number of Hours in Program

The M.Ed degree in School Library Media Services requires a minimum of 39-42 credits. The K-12 Library Media endorsement requires 30-33 hours.

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/literacy

Requirements for M.Ed in School Library Media Services with School Media Endorsement:

Take the listed sequence of courses. Each candidate for the M.Ed degree must complete the following:

One Social Foundation Course:

- ED 672 - Social/Cultural Foundations of Education Credits: 3
- or ED 671 - Educational Policy and Practice Credits: 3

One Research and Evaluation Course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis Area Courses (18 Credits):

- EDG 617 - School Library Media Information Inquiry Credits: 3
- EDG 622 - Information Resources: Selection and Management Credits: 3
- EDG 623 - Reference Credits: 3
- EDG 624 - Cataloging and Processing Credits: 3
- EDG 625 - Media Center Administration Credits: 3

Choose One:

- EDR 624 - Literature for Children Credits: 3
- or EDR 625 - Literature for Adolescents Credits: 3

Supplemental Courses:

- ED 630 - Curriculum Development Credits: 3
- EDT 619 - Curricular Integration of Ed. Technology Credits: 3
- EDT 621 - Topics in Educational Technologies Credits: 3

Practicum:

- EDG 685J - Practicum/Graduate Field Experience Credits: 3 or 6

Capstone (Choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Requirements for Endorsement Only:

Students seeking the endorsement only, complete the following:

- ED 630 - Curriculum Development Credits: 3
- EDT 619 Curricular Integration of Ed. Technology Credits: 3
- EDT 621 Topics in Educational Technologies Credits: 3

Choose One:

- EDR 624 - Literature for Children Credits: 3
- or EDR 625 - Literature for Adolescents Credits: 3

In addition:

- EDG 617 - School Library Media Information Inquiry Credits: 3
- EDG 622 - Information Resources: Selection and Management Credits: 3
- EDG 623 - Reference Credits: 3
- EDG 624 - Cataloging and Processing Credits: 3
- EDG 625 - Media Center Administration Credits: 3
- EDG 685J - Practicum/Graduate Field Experience Credits: 3 or 6

All candidates must also pass the Michigan Test for Teacher Certification and maintain a 3.0 GPA.

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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candidates, our development of faculty, and our relationships with the larger community we serve.

The program provides teachers with the theoretical, practical knowledge and skills necessary to teach non-native 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 prior to ENG 660. Students are also encouraged to take ED 601 (ESL in the Content Areas), 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 21 semester hours.

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: 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):

- ED 672 - Social/Cultural Foundations of Education Credits: 3
- ED 671 - Educational Policy and Practice Credits: 3

One Research and Evaluation Course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis Courses (18 credits):

- ED 631 - English as a Second Language Methodologies Credits: 3
- ED 633 - Race, Class, and Language Credits: 3

The following courses from the English department (take ENG 660 first in the English sequence):

- ENG 660 - Principles of Educational Linguistics Credits: 3
- ENG 664 - Sociolinguistics and Language Teaching Credits: 3
- ENG 665 - Second Language Acquisition Credits: 3
- ENG 668 - Second Language Assessment Credits: 3

One approved elective:

- Elective Credits: 3

Practicum/Graduate Field Experience (Prerequisite ED 631):

- EDG 685K TESOL Practicum Credits: 3

Capstone (Choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

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:

- ED 631 - English as a Second Language Methodologies Credits: 3
- ED 633 - Race, Class, and Language Credits: 3
- ENG 660 - Principles of Educational Linguistics Credits: 3
- ENG 664 - Sociolinguistics and Language Teaching Credits: 3
- ENG 665 - Second Language Acquisition Credits: 3
- ENG 668 - Second Language Assessment Credits: 3
- EDG 685K - TESOL Practicum Credits: 3

Pass the Michigan Subject Area Test, and maintain a 3.0 GPA.

Master of Education in School Counseling: School Counseling Emphasis

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

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/counseling

Requirements for M.Ed in School Counseling:

No endorsement or school counseling license will be approved without completion of the Master of Education in School Counseling degree.

Each candidate for the M. Ed. degree in School Counseling must complete the following:

Social Foundations of Education (Choose one):

- ED 671 - Educational Policy and Practice Credits: 3
- ED 672 - Social/Cultural Foundations of Education Credits: 3

One research and evaluation course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis area courses:

- ED 651 - Counseling and Guidance for the Classroom Teacher Credits: 3
- ED 661 - Educational Testing and Measurement Credits: 3
- EDC 621 - The Profession of School Counseling Credits: 3
- EDC 623 - Personal/Social Development of Children in Schools Credits: 3
- EDC 625 - Academic Counseling and Classroom Guidance Credits: 3
- EDC 685 - Practicum/Internship in School Counseling Credits: 3 to 6
- EDG 649 - Career Guidance Credits: 3
- SW 600 - Cultural Competency for Social Work Credits: 3 (or its equivalent)

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

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 foundation, emphasis courses and capstone.

Admission Requirements, Retention, and Termination Standards

Teachers applying for entrance into the graduate special education program must hold at least one endorsement in special education or elect a dual-endorsement program leading to the completion or two endorsements in special education. 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

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/specialed

Requirements for M.Ed. in Special Education:

Cognitive Impairment:

Social Foundation Courses (take one):

- ED 671 - Educational Policy and Practice Credits: 3
- ED 672 - Social/Cultural Foundations of Education Credits: 3

Research Foundation Course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Emphasis Area Courses:

- 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 & Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 629 - Transition Practices Credits: 3

Elective:

- Elective Credits: 3

Capstone Course (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Requirements for Cognitive Impairment K-12 (single endorsement):

Cognitive Impairment Emphasis Area Courses:

- 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 & Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 629 - Transition Practices Credits: 3
- EDS 685E - Practicum/Graduate Field Experience Credits: 3 or 6

Elective (One of the following courses are recommended):

- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3

Cognitive Impairment/Learning Disabilities K-12 Endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Cognitive Impairment Emphasis Area Courses:

- 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 & Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 685E - Practicum/Graduate Field Experience Credits: 3 or 6

Learning Disabilities Emphasis Area Courses (take in order listed):

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- EDS 685H - Practicum/Graduate Field Experience Credits: 3 or 6

Additional Required Courses (take anytime):

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Cognitive Impairment/Early Childhood Developmental Delay K-12 Endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Cognitive Impairment Emphasis Area Courses:

- 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 & Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 629 - Transition Practices Credits: 3
- EDS 685E - Practicum/Graduate Field Experience Credits: 3 or 6

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Early Childhood Developmental Delay Emphasis Area Courses:

- EDG 601 - Content/Curriculum Workshops - Infant/Toddler Development Credits: 3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3 EDS 647 - Preschool Special Needs Child Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3
- EDG 685J - Early Childhood Developmental Delay Credits: 3 or 6

Cognitive Impairment/Emotional Impairment K-12 Endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Emotional Impairment Emphasis Area Courses (take in order listed):

- ED 650 - Classroom Management (K-12) Credits: 3
- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 685C - Practicum/Graduate Field Experience Credits: 3 or 6

Cognitive Impairment Emphasis Area Courses:

- 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 & Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 685E- Practicum/Graduate Field Experience Credits: 3 or 6

Additional Required Courses (take anytime):

- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Master of Education in Special Education: Early Childhood Developmental Delay Emphasis

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The Early Childhood Developmental Delay Program (ECDD) prepares teachers and supervisors in the processes of screening, diagnosing, and

designing individualized instructional programs for young children with developmental and handicapping problems.

Accreditation

Nationally Recognized by Specialty Program Association: Council for Exceptional Children (CEC)

Michigan Department of Education Approval

Admission Requirements, Retention, and Termination Standards

Teachers applying for entrance into the graduate special education program must hold at least one endorsement in special education or elect a dual-endorsement program leading to the completion of two endorsements in special education. 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

All degree-seeking students are required to take a minimum of 33 semester hours, including foundation, emphasis courses and capstone.

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/specialed

Requirements for M.Ed. in Early Childhood Developmental Delay

Social Foundations of Education (Choose one):

- ED 671 Educational Policy and Practice Credits: 3
- ED 672 Social/Cultural Foundations of Education Credits: 3

Emphasis Area Courses:

- EDG 601A Content/Curriculum Workshop - Infant/Toddler Development Credits: 3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3

Elective (if not seeking ZA endorsement), take anytime (advisor approval required):

- Elective Credits: 3

Practicum (take if seeking ZA endorsement):

- EDS 685J - Early Childhood Developmental Delay Credits: 3 or 6

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Requirements for Early Childhood Developmental Delay (ZA-ECDD) (single endorsement):

Students must hold one endorsement in Special Education. Candidates adding a new endorsement must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

- EDG 601A Content/Curriculum Workshop - Infant/Toddler Development Credits: 3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3

- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3
- EDS 685J Early Childhood Developmental Delay Credits: 3 or 6

Requirements for an Early Childhood Developmental Delay/Learning Disabilities (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Learning Disabilities Emphasis Area Courses (take in order give):

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- EDS 685H - Practicum/Graduate Field Experience: 3 or 6

Early Childhood Developmental Delay Emphasis Area Courses:

- EDG 601A Content/Curriculum Workshop - Infant/Toddler Development Credits:3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3
- EDS 685J Early Childhood Developmental Delay Credits: 6

Additional Required Courses (take anytime):

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Requirements for Early Childhood Developmental Delay/Emotional Impairment (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Emotional Impairment Emphasis Area Courses (take in order listed):

- ED 650 - Classroom Management (K-12) Credits: 3
- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 685C - Practicum/Graduate Field Experience Credits: 3 or 6

Take anytime (choose one):

- ED 660 - Educational Inquiry and Evaluation Credits: 3
- ED 661 - Educational Testing and Measurement Credits: 3

Early Childhood Developmental Delay Emphasis Area Courses:

- EDG 601A Content/Curriculum Workshop - Infant/Toddler Development Credits: 3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3

- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3
- EDS 685J Early Childhood Developmental Delay Credits: 6

Additional Required Courses (take anytime):

- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Requirements for Early Childhood Developmental Delay/Cognitive Impairment (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Early Childhood Developmental Delay Courses:

- EDG 601A Content/Curriculum Workshop - Infant/Toddler Development Credits:3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3
- EDS 685J Early Childhood Developmental Delay Credits: 3 or 6

Cognitive Impairment Emphasis Area Courses:

- 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 & Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 629 - Transition Practices Credits: 3
- EDS 685E - Practicum/Graduate Field Experience: 6

Applicants who wish to be admitted to the graduate special education program must possess a valid Michigan teaching certificate.

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.

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.

Education

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 foundation, emphasis courses and capstone.

Admission Requirements, Retention, and Termination Standards

Teachers applying for entrance into the graduate special education program must hold at least one endorsement in special education or elect a dual-endorsement program leading to the completion of two endorsements in special education. 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

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/special

Requirements for M.Ed in Special Education:

Emotional Impairment:

Social Foundation Courses (take one):

- ED 671 - Educational Policy and Practice Credits: 3
- ED 672 - Social/Cultural Foundations of Education Credits: 3

Emphasis Area Courses (take in order):

- ED 650 - Classroom Management (K-12) Credits: 3
- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3

Take anytime:

- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Research Foundation Course:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Capstone Course (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Applicants who wish to be admitted to the graduate special education program must possess a valid Michigan teaching certificate.

Requirements for Emotional Impairment K-12 Endorsement (single endorsement):

Single Endorsement. Students must hold one endorsement in Special Education. Candidates adding a new endorsement must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take in order):

- ED 650 - Classroom Management (K-12) Credits: 3
- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 685C - Practicum/Graduate Field Experience Credits: 3 or 6

Take anytime:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Emotional Impairment/Early Childhood Developmental Delay K-12 Endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Emotional Impairment Emphasis Area Courses (take in order listed):

- ED 650 - Classroom Management (K-12) Credits: 3
- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 685C - Practicum/Graduate Field Experience Credits 3 or 6

Take anytime (choose one):

- ED 660 - Educational Inquiry and Evaluation Credits: 3
- ED 661 - Educational Testing and Measurement Credits: 3

Early Childhood Developmental Delay Emphasis Area Courses:

- EDG 601 - Content/Curriculum Workshops - Infant/Toddler Development Credits: 3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3
- EDG 685J - Early Childhood Developmental Delay Credits: 3 or 6

Additional Required Courses (take anytime):

- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Emotional Impairment/Learning Disabilities K-12 Endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Emotional Impairment Emphasis Area Courses (take in order listed):

- ED 650 - Classroom Management (K-12) Credits: 3
- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 685C - Practicum/Graduate Field Experience Credits: 3 or 6

Take anytime (choose one):

- ED 660 - Educational Inquiry and Evaluation Credits: 3
- ED 661 - Educational Testing and Measurement Credits: 3

Learning Disabilities Emphasis Area Courses (take in order listed):

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- EDS 685H - Practicum/Graduate Field Experience Credits: 6

Additional Required Courses (take anytime):

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Emotional Impairment/Cognitive Impairment K-12 endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Emotional Impairment Emphasis Area Courses (take in order listed):

- ED 650 - Classroom Management (K-12) Credits: 3
- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 685C - Practicum/Graduate Field Experience Credits: 3 or 6

Cognitive Impairment Emphasis Area Courses:

- 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 & Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 685E- Practicum/Graduate Field Experience Credits: 6

Additional Required Courses (take anytime):

- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

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 of 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.

Accreditation

Nationally Recognized by Specialty Program Association: Council for Exceptional Children
Michigan Department of Education Approval

Admission Requirements, Retention, and Termination Standards

Teachers applying for entrance into the graduate special education program must hold at least one endorsement in special education or elect a dual-endorsement program leading to the completion of two endorsements in special education. 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 requires a minimum of 33 semester hours.

Program Location

Eberhard Center, Pew Campus downtown Grand Rapids, MI

Website: www.gvsu.edu/grad/specialed

Requirements for M.Ed in Learning Disabilities:

Social Foundations of Education (Choose one):

- ED 671 - Educational Policy and Practice Credits: 3
- ED 672 - Social/Cultural Foundations of Education Credits: 3

Emphasis Area Courses (take in order given):

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- 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

Elective, take anytime (advisor approval required):

- Elective Credits: 3

Research and Evaluation:

- ED 660 - Educational Inquiry and Evaluation Credits: 3

Capstone (choose one):

- ED 693 - Master's Project Credits: 3
- ED 695 - Master's Thesis Credits: 3

Requirement for Learning Disabilities K-12 Endorsement (single endorsement):

Students must hold one endorsement in Special Education. Candidates adding a new endorsement must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take in order):

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- EDS 685H - Practicum/Graduate Field Experience: 3 or 6

Take anytime:

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Elective:

- Elective Credits:3

Requirements for a Learning Disabilities/Early Childhood Developmental Delay K-12 Endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Learning Disabilities Emphasis Area Courses (take in order give):

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3

Education

- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- EDS 685H - Practicum/Graduate Field Experience: 3 or 6

Early Childhood Developmental Delay Emphasis Area Courses:

- EDG 601A Content/Curriculum Workshop - Infant/Toddler Development Credits:3
- EDG 610 - Advanced Studies in Child Development Credits: 3
- EDG 611 - Assessment of the Young School Child Credits: 3
- EDG 612 - Curriculum Development for Early Childhood Education Credits: 3
- EDG 613 - Administration and Supervision of Early Childhood Education Credits: 3
- EDS 646 - Counseling Parents Credits: 3
- EDS 647 - Preschool Special Needs Child Credits: 3
- EDS 685J Early Childhood Developmental Delay Credits:6

Additional Required Courses (take anytime):

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Requirements for a Learning Disabilities/Emotional Impairment K-12 Endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Learning Disabilities Emphasis Area Courses (take in order given):

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- EDS 685H - Practicum/Graduate Field Experience: 3 or 6

Emotional Impairment Emphasis Area Courses (take in order listed):

- ED 650 - Classroom Management (K-12) Credits: 3
- EDS 609 - Emotional Impairments Credits: 3
- EDS 610 - Studies in Emotional Impairment Credits: 3
- EDS 611 - Instructional Practices: Emotional Impairment Credits: 3
- EDS 685C - Practicum/Graduate Field Experience Credits: 6

Take anytime (choose one):

- ED 660 - Educational Inquiry and Evaluation Credits: 3
- ED 661 - Educational Testing and Measurement Credits: 3

Additional Required Courses (take anytime):

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Requirements for a Learning Disabilities/Cognitive Impairment K-12 Endorsement (dual endorsement):

Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA and complete the following courses:

Special Education Courses (take before emphasis area):

- ED 652 - Foundations of Special Education Credits: 3
- EDS 550 - Preteaching and Methods of Teaching Special Education Credits: 6

Learning Disabilities Emphasis Area Courses (take in order given):

- EDS 636 - Diagnostic and Interpretative Procedures Credits: 3
- EDS 637 - Instructional Practices: Learning Disabilities 1 Credits: 3
- EDS 638 - Instructional Practices: Learning Disabilities 2 Credits: 3
- EDS 640 - Diagnostic-Teaching Clinic Credits: 3
- EDS 685H - Practicum/Graduate Field Experience: 3 or 6

Cognitive Impairment Emphasis Area Courses:

- 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 & Program: CI Credits: 3
- EDS 623 - Collaboration in Special Education Credits: 3
- EDS 685E - Practicum/Graduate Field Experience: 6

Additional Required Courses (take anytime):

- EDS 625 - Inclusive Practices Credits: 3
- EDS 627 - Instructional Practices: Technology Credits: 3
- EDS 629 - Transition Practices Credits: 3

Educational Specialist Degree in Leadership

Administration: Dean: Collins; Associate Professor: Shinsky.

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 selected from Administration or Curriculum and Instruction, 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

Admission Requirements, Retention, and Termination Standards:

Candidates applying for this program must have a master's degree with at least a 3.0 GPA.

Website: 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):

18 Semester hours are required.

- EDG 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

Select One Cognate Area from the Following:

Educational Administration Cognate

Nine credit hours:

- EDL 740 - The Superintendency Credits: 3
- EDL 742 - School Board Relations Credits: 3
- EDL 744 - Educational Finance and Economic Issues Credits: 3

Curriculum and Instruction Cognate

Nine credit hours:

- EDG 750 - Curriculum Design: Policy and Process Credits: 3
- EDG 752 - Assessment and Accountability Credits: 3
- EDG 754 - Effective Professional Development Credits: 3

Educational Specialist in Leadership Culminating Experience

This 3 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

Post Baccalaureate Teacher Certification

Website: www.gvsu.edu/coe

Requirements for a Certificate:

Initial Certification for Post-Degree 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

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.

Minimum admission requirements for the graduate certification program include:

- Completion of the baccalaureate degree from a regionally accredited institution at least three years prior to application with a GPA of 3.0 or higher for the final 60 semester credits.
- 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.
- Successful completion of Michigan Basic Skills Test.
- Successful completion of Michigan Subject Area Test in teachable major.

- Documentation of 25 hours age-appropriate experience with children or youth.
- Current TB test report.
- Signed statement regarding criminal activity.
- Completion of EDT 619 Curricular Integration of Ed Technology (for elementary teachers only). Secondary take EDT 627 Technology Integration for Secondary Teachers.
- Admission to graduate studies.
- Completion of application materials for graduate teacher certification program.

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:

- Successful completion of all coursework.
- GPA of 3.0 in the major, minor and professional requirements.
- 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.
- Completion of CPR (Adult/Child) Instruction and First Aid (Standard or Basic).
- If your criminal background information has changed since you originally applied 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

Program Requirements for Graduate Teacher Certification:

Summer

- EDG 635 Development and Needs of Adolescents Credits: 3
- ED 652 Foundations of Special Education Credits: 3

Fall

- EDG 638 Facilitating School Environments Credits: 3
- EDG 685 Practicum/Graduate Field Experience Credits: 3 or 6
- EDR 623 Developmental Literacy for Adolescents Credits: 3
- EDG 636 Instruction in Middle and High Schools Credits: 3

Winter

- EDG 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

- EDG 631 - Teaching Science: K-8
- EDG 632 - Teaching Creative and Performing Arts
- ED 652 Foundations of Special Education Credits: 3
- EDG 610 Advanced Studies in Child Development Credits: 3
- EDG 633 - Teaching Social Studies and Diversity

Fall

- EDG 638 Facilitating School Environments Credits: 3
- EDG 685 Practicum/Graduate Field Experience Credits: 3 or 6
- EDG 630 Teaching Mathematics: K-8 Credits: 3
- EDR 622 Developmental Literacy for Children Credits: 3

Winter

- EDG 685 Practicum/Graduate Field Experience Credits: 3 or 6
- EDR 627 Literacy Strategies for Content Areas Credits: 3

Michigan Professional Certification

Candidates for Michigan Professional Certification must fulfill the following requirements:

- Hold a Michigan Provisional Certificate.

Engineering

- Teach successfully for three years after the issuance of the provisional certificate and according to its validity.
- Show evidence of coursework in reading methods: six semester credits for elementary, three for secondary.
- Earn 18 semester credits after the issuance of the provisional certificate in a planned course of study. (Applicants with an approved earned master's degree or higher are not required to complete the 18-credit planned program.)
- Complete an approved state required course in the diagnosis and remediation of reading disabilities and differentiated instruction, including field experiences, as part of the 18 credits required for the Professional Certificate.

If necessary, the Provisional Certificate may be renewed for a three-year period upon completion of nine credits from the 18-credit planned program. A second three-year renewal is available upon completion of all 18 credits.

Renewal of Professional Certificate

The Michigan Professional Certificate (earned after June 30, 1992) must be renewed every five years upon completion of six semester credits or the equivalent in state board approved continuing education units, or any combination thereof. (Three continuing education units are the equivalent of one semester credit.) Courses used for renewal of the Professional Certificate need not be in a planned program but must be taken at an approved education institution and must be taken within the five-year period.

Students applying for professional certificate renewal, must contact the Michigan Department of Education (MDE) (517) 373-3310. Students may obtain the application from the MDE website: www.Michigan.gov/mde/.

Applying for Certification and Endorsements

Candidates should make application with the College of Education Student Information Services Center 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 Records Office.

Planned Program Options for Professional Certification

The following options for completing the required 18-semester-hour planned program beyond the bachelor's degree for the professional certificate have been approved by the College of Education. Note: Students returning to teaching after an absence should also consult with Career Services to discuss credentials and the College of Education Student Information and Services Center for educational offerings that will prepare them to meet employment needs.

Option 1. Master's Degree

If the 18 semester hours are part of a master's degree program in an approved teacher education institution, the applicant for a professional certificate must submit a list of courses to be approved by a Grand Valley College of Education advisor. If the candidate has an approved planned program that includes an approved reading course and is admitted into the M.Ed. program at Grand Valley, no further documentation is necessary. If your planned program does not include a reading course, please consult with your College of Education advisor for an appropriate course (See Reading Requirements below).

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. Program advisors must approve all additional endorsements. Applicants adding additional subject area endorsements must also pass Michigan Subject Area tests.

Option 3. Additional Certificate Level

Applicants may earn endorsements allowing them to teach at a new level. See the following areas in the graduate degree section of this catalog for endorsements of 18 credits or more that will expand the certification level.

- Early Childhood Endorsement.
- Elementary Endorsement.
- Secondary Endorsement.

Option 4. Professional Development

Candidates choosing an 18-credit professional development program should contact the Student Information and Services Center. Courses may be chosen from professional education or from the candidate's major or minor. No more than one elective course may be applied without advisor approval. All professional development course work must be approved by a College of Education advisor.

Reading Requirement

All candidates for provisional or professional certification must show evidence of coursework in reading methods, six credits for elementary, three for secondary. Also, effective July 1, 2009 an approved course in the diagnosis and remediation of reading disabilities and differentiated instruction, including field experiences, is required as part of the professional certificate. 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. If a Michigan Provisional Certificate was granted after July 1983 from a Michigan accredited teacher preparation institution, the candidate would have fulfilled the reading requirement for the elementary, secondary reading methods courses, but still may require the diagnosis and remediation of reading disabilities and differentiated instruction course.

Engineering

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.

Director: Standridge. Professors: Anyalebechi, Fleischmann, Garrett, Jack, Johnson, Standridge Sterian; Associate Professors: Adamczyk, Barakat, Choudhuri, Dunne, Farris, Jiao, Mohammadzadeh, Rahman, Sozen; Assistant Professors: Ashby, Chaphalkar, Jiao, Joo, Lu, Mokhtar, Ngalamou, Parikh, Pawloski, Plouff, Pung, Rhodes.

Mission and Values Statements

Mission: Our mission is to prepare students to assume engineering positions in industry with the potential to advance to leadership positions. It is the mission of the faculty to provide a curriculum, which is relevant to current engineering practice and strongly applied in nature. The faculty provides an environment in which students develop the knowledge and skills necessary to meet the engineering design challenges of the future with flexibility and creativity. Students develop technical competency through classroom/laboratory work and through the supervised on-site work experience provided in the student's industry experience. Our mission is fulfilled by commitment to continual improvement and refinement through critical review. Such review requires both close contact with current engineering practice and a commitment to those elements of a general education program required for a well-balanced education. For this reason faculty involvement with the student industry experience and with consulting practice is strongly encouraged. At the same time close communication with the academic community at large ensures that the students' technical education is embedded in a strongly supportive general education program.

Values: Our values reflect our educational mission. We are an academic community in a nation for which the intrinsic value of each individual is taken as fundamental. Thus we strive to provide an environment in which each member of our academic community — student, staff member, and faculty — can reach his or her fullest potential.

Just as we value each individual in our community, we value the environment in which we live. The engineering community strongly influences the environment through the practice of its profession. For that reason we strive to build into our curriculum an awareness of, and sensitivity to, those areas in which engineering practice affects the environment. Such awareness extends beyond technical knowledge to include ethical responsibility in the practice of our profession.

Website: www.gvsu.edu/engineering

Undergraduate Engineering Degree Programs

The School of Engineering offers a four-year program 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 courses fundamental to 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 allows students to tailor their engineering education to their specific educational interests. All engineering emphasis programs are capped by a multidisciplinary two-semester senior design project requiring initiative, planning, and design.

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 emphasize 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 (1) have the technical knowledge and capabilities expected of a practicing engineer appropriate to the discipline; (2) be able to function effectively in an industrial environment. He or she must have the ability to communicate effectively, engage in critical thinking, and have highly developed skills in problem solving in both individual and team situations; (3) have the ability to apply engineering knowledge and be able to create physical realizations of his or her theoretical concepts and models; (4) have the ability to engage in engineering design; (5) have an awareness of the need for continued professional growth; and (6) have an awareness of, and sensitivity to, those areas in which engineering practice affects society and the environment. Such awareness, extending beyond technical knowledge to include ethical and social responsibility, must frame the continued professional and scholarly growth of the graduate.

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 the use of activities such as design projects, materials selection exercises, and quality assurance methods. Building upon the engineering science and design developed in the first two years and the experience gained in the integrated cooperative education program, substantially more mature design experiences begin 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. Individuals and industries in Michigan have supported the program financially as well as by providing opportunities for cooperative engineering education. The programs are served by an Industrial Advisory board composed of engineering leaders and others in the field. Additionally, Grand Valley's Career Services Office also provides liaison between the engineering program and industry.

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 School of Engineering. Students who have declared engineering as their major are assigned an academic advisor from the faculty of the School of Engineering.

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 and Analytic Geometry 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.

Admission

Students with no previous college credit, or those who have not completed the 64-semester-hour engineering foundations course sequence, are admitted to the School of Engineering as pre-majors. The engineering foundations course sequence spans the freshman and sophomore years and develops the fundamental knowledge on which an engineering emphasis is built.

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 will be reclassified as pre-majors and need to apply to the School of Engineering via the normal admission process.

Students who intend to pursue the B.S.E. degree are urged to declare engineering as their major as soon as possible, preferably before they first register for courses at Grand Valley. Students must formally declare engineering as their 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.

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, 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.

Engineering

Admission is based upon no more than one repeat per required course in the premajor engineering foundations course sequence. 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 issued no later than the second week of the winter semester.

Accreditation

The **Engineering Major with Electrical Engineering Emphasis** is accredited under the General Criteria and Electrical Engineering Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org/.

The **Engineering Major with Computer Engineering or Interdisciplinary Engineering Emphasis** is accredited under the General Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050 Baltimore, MD 21202-4012 - telephone: (410) 337-7700, www.abet.org/.

The **Engineering Major with Mechanical Engineering Emphasis** is accredited under the General Criteria and Mechanical Engineering Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org/.

The **Engineering Major with Product Design & Manufacturing Engineering Emphasis** is accredited under the General Criteria and Manufacturing Engineering Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org/.

The Engineering Profession and Career Opportunities

Engineers apply science, mathematics, and professional judgment to solve technical problems in industry and society. They design and develop products, processes, services and systems. Engineers test, produce, operate, maintain, sell, install and manage products and systems. Many work in public health, transportation and environmental protection.

In today's world, engineers are expected to contribute more than technical competence. As professionals, engineers are concerned with the impact of their work on society and the changing values and priorities of society. The current emphasis on science and technology has increased public interest in engineering education as a general preparation for living as well as earning a living. To deal effectively with rapid changes in technology, engineers must have a broad undergraduate education firmly based upon the basic sciences and embedded within a supportive liberal education program. Engineers must have the ability to visualize a problem in its total context.

The need for broadly educated engineering graduates is very high and is expected to grow rapidly during the next decade. Demand varies depending on location, type of local industry, and the economy. West Michigan is one of the largest technical, manufacturing, and industrial regions of the state.

Graduate School Opportunities

The Bachelor of Science in Engineering program prepares students for engineering practice as well as graduate studies. Many of our graduates continue their education on a part time basis while holding full time employment. Some of our graduating seniors enroll in full time graduate programs and have enjoyed success at universities such as George Washington and Notre Dame.

Participating Programs

Cooperative Education

Cooperative engineering education in industry typically begins during the spring/summer semester following admission to major standing in the B.S.E. degree. Students then alternate periods of cooperative education with periods of academic study for the next 20 months. The cooperative education cycle provides the student with 1,500 to 2,000 hours of work experience. A typical schedule of cooperative education and academic study is shown below in the sample curriculum for the B.S.E. degree.

Placement of students in cooperative education is made through the Career Services office. Students must enroll in EGR 289 during the fall semester for placement in the following spring/summer semester. Grand Valley will make a strong 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 are not acceptable for employment through the prescribed cooperative education placement process, do not obtain positive evaluations during their cooperative educational 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. degree. Such students do have numerous other options to complete a bachelor's degree in one of Grand Valley's other programs.

Student Organizations (www.gvsu.edu/stuey)

American Society of Mechanical Engineering (ASME)
Institute of Electrical and Electronics Engineers, Inc (IEEE)
National Society of Black Engineers (NSBE)
Society of Automotive Engineer (SAE) Mini Baja Team
Society Manufacturing Engineering (SME)
Society of Women in Engineering (SWE)

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/.

- 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

To complete the requirements for graduation with a B.S.E. degree, the following course requirements, for a minimum of 138-142 credit hours depending on the engineering program, must be met: general education and basic skills; engineering foundations courses; cooperative engineering education, engineering design capstone; and engineering electives. 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:

- BIO 105 - Environmental Science Credits: 3
OR BIO 120 - General Biology I Credits: 4
OR BMS 202 - Anatomy and Physiology Credits: 4 (Life Sciences)
- ECO 210 - Introductory Macroeconomics Credits: 3 (Social Sciences) OR ECO 211 - Introductory Microeconomics Credits: 3
OR EGR 304 - Innovation Credits: 3 (Creativity Theme)
- PHI 102 - Ethics Credits: 3 (Philosophy and Literature)
OR Once course from the Ethics theme

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: 5
- EGR 101 - Computer Aided Design and Manufacturing Credits: 3
- EGR 103 - Engineering Measurement and Analysis Credits: 3
- EGR 209 - Mechanics and Machines Credits: 4 (Electrical, Mechanical or Product Design & Manufacturing Engineering Program) OR CIS 162 - Computer Science I (Computer Engineering Program)
- EGR 214 - Circuit Analysis I Credits: 4
- EGR 226 - Introduction to Digital Systems Credits: 4
- EGR 250 - Materials Science and Engineering Credits: 4 (Mechanical or Product Design & Manufacturing Engineering Program) OR EGR 257 - Electronic Materials & Devices (Electrical Engineering Program), OR CIS 163 - Computer Science II (Computer Engineering Program)
- EGR 257 - Electronic Materials & Devices Credits: 4
- EGR 261 - Structured Programming in C Credits: 3
- MTH 201 - Calculus I Credits: 5
- 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
- PHY 234 - Engineering Physics Credits: 4
- STA 313 - Probability and Stochastic Processes Credits: 3 (Computer Engineering Program and Electrical Engineering Program)
OR STA 314 - Statistical Quality Methods (Mechanical Engineering Program and Product Design & Manufacturing Engineering Program)
- WRT 150 - Strategies in Writing Credits: 4

Admission to Major Standing

Admission to major standing in the B.S.E. degree requires an 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, and
- 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

Cooperative Education Requirements

The cooperative education program required of all students 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 hours of co-op work, comprised 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.

Following are the alternative options for students to satisfy the School of Engineering's program requirements for co-operative education, based on the need or desire of the student to seek an alternative option to the expected path described above. The options described below will only be considered after the student submits a petition to the faculty detailing his/her proposed study plan. Students who pursue these alternative options without prior faculty approval will not meet the requirements for graduation and must complete the three-semester expected path for co-operative education described above.

Option 1 — Study Abroad

The student must complete two semesters of co-op work (typically EGR 290 and EGR 390) and 1 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 1 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 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 (1) 300 level, or above, engineering technical elective course in the student's program area that is in addition to existing program requirements for technical electives.

Option 4 — Engineering Minor/Dual Emphases

The student must complete two semesters of co-op (typically EGR 290 and EGR390) and successfully complete either a) 1 or more engineering minors at GVSU or b) 2 or more engineering emphases at GVSU. Both options (a) and (b) must include the completion of **at least 3 additional** courses in the program than are needed for the completion of any one program.

The following engineering cooperative education courses are required:

- EGR 289 - Engineering Co-op Preparation Credits: 1

At least two of the following courses are required depending on whether the student follows the expected path (three co-op semesters) or one of the three options:

- EGR 290 - Engineering Co-op 1 Credits: 3
- EGR 390 - Engineering Co-op 2 Credits: 3
- EGR 490 - Engineering Co-op 3 Credits: 3

Senior Engineering Design Capstone

Completion of 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

Engineering

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 below. A sample curriculum for the junior and senior years in each program is presented in the section addressing that program.

Suggested Order of 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: 5
- EGR 101 - Computer Aided Design and Manufacturing Credits: 3
- MTH 201 - Calculus I Credits: 5
- WRT 150 - Strategies in Writing Credits: 4

Second Semester: Winter

- STA 220 - Statistical Modeling for Engineers Credits: 2
- EGR 220 - Engineering Measurement and Data Analysis Credits: 1
- EGR 261 - Structured Programming in C Credits: 3
OR CIS 261 - Structured Programming in C Credits: 3
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5

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 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
- PHI 102 - Ethics Credits: 3 (Philosophy and Literature)
- STA 313 - Probability and Stochastic Processes Credits: 3
OR EGR 309 Machine Design I Credits: 4
- CIS 163 - Computer Science II Credits: 4
OR EGR 257 - Electronic Materials & Devices Credits: 4
OR EGR 250 - Materials Science and Engineering Credits: 4

Computer Engineering

Students who elect the computer engineering program may prepare themselves for a variety of careers related to computer engineering and fulfill the educational requirements for taking the Fundamentals of Engineering professional examination before graduation.

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 algorithms and data structures, electronic circuits, computer systems architecture, embedded systems and control, and software engineering.

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 **Engineering Major with Computer Engineering Emphasis** is accredited under the General Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org/.

Program Educational Objectives

- The graduate will have the technical knowledge and capabilities expected of a practicing engineer appropriate to computer engineering, specifically in the areas of:
 - Algorithms and data structures
 - Electronic circuits
 - Computer systems architecture
 - Embedded systems and control
 - Software engineering
- The graduate will be able to function effectively in an industrial environment. He or she must have the ability to communicate effectively, engage in critical thinking, and have highly developed skill in problem solving (in both individual and team situations).
- The graduate will have the ability to apply engineering knowledge and be able to create physical realizations of their theoretical concepts and models.
- The graduate will have the demonstrated ability to engage in engineering design.
- The graduate will have an awareness of the need for continued professional growth.
- The graduate will have an awareness of, and sensitivity to, those areas in which engineering practice affects society and the environment. Such awareness, extending beyond technical knowledge to include ethical and social responsibility, must frame the continued professional and scholarly growth of the graduate.

Program 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,
- knowledge of probability and statistics,
- analysis & design of complex systems, and
- 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 361 - System Programming 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 selected from the following:

- CIS 451 - Computer Architecture Credits: 4
- 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

Sample Curriculum for the Junior and Senior years of the Computer Engineering Program

First Co-op Semester: Spring/Summer

- General Education (World Perspectives)
- 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 Science)

Second Co-op Semester: Winter

- General Education (Theme)
- EGR 390 - Engineering Co-op 2 Credits: 3

Sixth Academic Semester: Spring/Summer

- Computer Engineering elective
- General Education (Arts)
- CIS 350 - Introduction to Software Engineering Credits: 3
- CIS 361 - System Programming Credits: 3
- ECO 210 - Introductory Macroeconomics Credits: 3 **OR** ECO 211 - Introductory Microeconomics Credits: 3

Third Co-op Semester: Fall

- General Education (Theme)
- EGR 490 - Engineering Co-op 3 Credits: 3

Seventh Academic Semester: Winter

- Computer Engineering elective
- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 452 - Operating Systems Concepts Credits: 4
- EGR 485 - Senior Engineering Project I (Capstone) Credits: 1

Eighth Academic Semester: Spring/Summer

- Computer Engineering elective
- General Education (Historical Perspectives) BIO 105 - Environmental Science Credits: 3
- General Education (Life Sciences)
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2

Electrical Engineering

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 foundation 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, electromagnetics, power systems, and systems science.

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 **Engineering Major with Electrical Engineering Emphasis** is accredited under the General Criteria and Electrical Engineering Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org.

Program Educational Objectives

- The graduate will have the technical knowledge and capabilities expected of a practicing engineer appropriate to electrical engineering. Specifically in the areas of:
 - Electrical and electronic circuits
 - Digital and embedded systems
 - Electromagnetics
 - Power systems
 - Systems science
- The graduate will be able to function effectively in an industrial environment. He or she must have the ability to communicate effectively, engage in critical thinking, and have highly developed skill in problem solving (in both individual and team situations).
- The graduate will have the ability to apply engineering knowledge and be able to create physical realizations of his or her theoretical concepts and models.
- The graduate will have the demonstrated ability to engage in engineering design.
- The graduate will have an awareness of the need for continued professional growth.
- The graduate will have an awareness of, and sensitivity to, those areas in which engineering practice affects society and the environment. Such awareness, extending beyond technical knowledge to include ethical and social responsibility, must frame the continued professional and scholarly growth of the graduate.

Program 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,
- knowledge of probability and statistics,
- analysis & design of complex systems, and
- knowledge of advanced mathematics, including differential equations, linear algebra, and complex variables.

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

Engineering

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 selected from the following:

- EGR 360 - Thermodynamics Credits: 4
- EGR 370 - Engineering Acoustics Credits: 4
- EGR 415 - Communication 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 436 - Analog Circuit Design Credits: 4
- EGR 455 - Automatic Control Credits: 4
- EGR 458 - Introduction to Fiber Optics Credits: 3
- EGR 474 - Systems Integration Credits: 4

Sample Curriculum for the Junior and Senior years of the Electrical Engineering Program

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 Science)

Second Co-op Semester: Winter

- General Education (Theme)
- EGR 390 - Engineering Co-op 2 Credits: 3

Sixth Academic Semester: Spring/Summer

- General Education (Arts)
- Interdisciplinary Electives
- ECO 210 - Introductory Macroeconomics Credits: 3
- OR ECO 211 - Introductory Macroeconomics 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 (Theme)
- 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

Eighth Academic Semester: Spring/Summer

- Electrical Engineering Elective
- General Education (Historical Perspectives) BIO 105 - Environmental Science Credits: 3
- General Education (Life Sciences)
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2

Interdisciplinary Engineering

The educational philosophy of the B.S.E. degree programs at Grand Valley is 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 engineering program allows the student to focus his/her studies in a disciplinary area that may not match cleanly with existing programs. These are often in areas of emerging technologies. Plans of study for such students often include coursework outside of engineering.

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 providing preparation in each of the following areas:

- Energy
- Engineering design
- Systems and Control

This core is then complemented by a custom program of seven courses selected by the student and appropriate program chair to provide focus and a cohesive experience. The proposed electives must ensure the program includes:

- 32 credits of engineering science content
- 16 credits of engineering design content

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 School of Engineering faculty.

Accreditation

The **Engineering Major with Interdisciplinary Engineering Emphasis** is accredited under the General Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org/.

Program Educational Objectives

- The graduate will have the technical knowledge and capabilities expected of a practicing engineer appropriate to general engineering, specifically in the areas of:
 - Systems and Control
 - Energy
 - Engineering Design
 - An interdisciplinary field of study defined by the student in consultation with the engineering faculty.
- The graduate will be able to function effectively in an industrial environment. He or she must have the ability to communicate effectively, engage in critical thinking, and have highly developed skill in problem solving (in both individual and team situations).
- The graduate will have the ability to apply engineering knowledge and be able to create physical realizations of his or her theoretical concepts and models.
- The graduate will have the demonstrated ability to engage in engineering design.
- The graduate will have an awareness of the need for continued professional growth.
- The graduate will have an awareness of, and sensitivity to, those areas in which engineering practice affects society and the environment. Such awareness, extending beyond technical knowledge to include ethical and social responsibility, must frame the continued professional and scholarly growth of the graduate.

Program 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, 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 faculty of the School of Engineering.
- Ensure that the program includes not less than 16 credits of engineering design.
- Ensure that the program includes not less than 32 credits of engineering science.

Sample Curriculum for the Junior and Senior Years of the Interdisciplinary Engineering Program**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 280 - Special Topics in Sociology Credits: 3
SOC 280 - Special Topics in Sociology Credits: 3
- General Education (Social Science)

Second Co-op Semester: Winter

- General Education (Theme)
- 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 (Theme)
- EGR 490 - Engineering Co-op 3 Credits: 3

Seventh Academic Semester: Winter

- Interdisciplinary Engineering Elective
- Interdisciplinary Engineering Elective
- EGR 455 - Automatic Control Credits: 4
OR EGR 450 - Manufacturing Control Systems Credits: 4
- EGR 485 - Senior Engineering Project I (Capstone) Credits: 1

Eighth Academic Semester: Spring/Summer

- Interdisciplinary Elective
- General Education (Historical Perspectives)
BIO 105 - Environmental Science Credits: 3
- General Education (Life Science)
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2

Product Design and Manufacturing Engineering

Students who elect the product design and manufacturing engineering program may 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 program 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 **Engineering Major with Product Design & Manufacturing Engineering Emphasis** is accredited under the General Criteria and Manufacturing Engineering Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700, www.abet.org/.

Program Educational Objectives

- The graduate will have the technical knowledge and capabilities expected of a practicing engineer appropriate to product design and manufacturing engineering, specifically in the areas of:
 - Manufacturing competitiveness
 - Manufacturing systems design
 - Materials and manufacturing processes
 - Process and assembly engineering
 - Product design
- The graduate will be able to function effectively in an industrial environment. He or she must have the ability to communicate effectively, engage in critical thinking, and have highly developed skill in problem solving (in both individual and team situations).
- The graduate will have the ability to apply engineering knowledge and be able to create physical realizations of his or her theoretical concepts and models.
- The graduate will have the demonstrated ability to engage in engineering design.

Engineering

- The graduate will have an awareness of the need for continued professional growth.
- The graduate will have an awareness of, and sensitivity to, those areas in which engineering practice affects society and the environment. Such awareness, extending beyond technical knowledge to include ethical and social responsibility, must frame the continued professional and scholarly growth of the graduate.

Program 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,
- materials and manufacturing processes,
- process, assembly & product engineering
- manufacturing competitiveness,
- manufacturing systems design, and
- manufacturing laboratory experience.

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:

Required Courses:

- EGR 301 - Analytical Tools for Product Design Credits: 4
- EGR 309 - Machine Design I Credits: 4
- EGR 345 - Dynamic System Modeling and Control Credits: 4
- EGR 360 - Thermodynamics 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 — 8 credits (two courses) selected from the following:

- EGR 409 - Machine Design II Credits: 4
- EGR 473 - Strategic Manufacturing Engineering Considerations Credits: 4
- EGR 474 - Systems Integration Credits: 4

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 Science)

Second Co-op Semester: Winter

- General Education (Theme)
- 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 440 - Production Models Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- EGR 450 - Manufacturing Control Systems Credits: 4

Third Co-op Semester: Fall

- General Education (Theme)
- EGR 490 - Engineering Co-op 3 Engineering Co-op 3 Credits: 3

Seventh Academic Semester: Winter

- Product Design and Manufacturing Engineering Elective
- EGR 360 - Thermodynamics Credits: 4
- EGR 401 - Advanced Product Design Credits: 4
- EGR 485 - Senior Engineering Project I (Capstone) Credits: 1

Eighth Academic Semester: Spring/Summer

- Product Design and Manufacturing Elective
- General Education (Historical Perspectives) BIO 105 - Environmental Science Credits: 3
- General Education (Life Sciences)
- EGR 486 - Senior Engineering Project II (Capstone) Credits: 2

Mechanical Engineering

Students who elect the mechanical engineering program may prepare themselves for a variety of mechanical engineering careers and fulfill the educational requirements for taking the Fundamentals of Engineering professional examination before graduation.

The junior and senior years of the mechanical engineering program build upon the foundation courses to provide greater depth in engineering science, engineering design, and the program areas of mechanical engineering. Students complete required and elective courses distributed in thermal systems, mechanical design and manufacturing, and mechanical systems and control.

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/productivity of the designs, laboratory and product safety, and product reliability.

Accreditation

The Engineering Major with Mechanical Engineering Emphasis is accredited under the General Criteria and Mechanical Engineering Criteria by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700.

Program Educational Objectives

- The graduate will have the technical knowledge and capabilities expected of a practicing engineer appropriate to mechanical engineering, specifically in the areas of:
 - Mechanical design and manufacturability
 - Mechanical systems and control
 - Thermal-fluid systems
- The graduate will be able to function effectively in an industrial environment. He or she must have the ability to communicate effectively, engage in critical thinking, and have highly developed skill in problem solving (in both individual and team situations).
- The graduate will have the ability to apply engineering knowledge and be able to create physical realizations of his or her theoretical concepts and models.

- The graduate will have the demonstrated ability to engage in engineering design.
- The graduate will have an awareness of the need for continued professional growth.
- The graduate will have an awareness of, and sensitivity to, those areas in which engineering practice affects society and the environment. Such awareness, extending beyond technical knowledge to include ethical and social responsibility, must frame the continued professional and scholarly growth of the graduate.

Program 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,
- design & realize physical systems
- work in thermal-fluid systems, and
- work 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 312 - Dynamics Credits: 3
- EGR 329 - Introduction to Finite Element Analysis Credits: 3
- EGR 345 - Dynamic System Modeling 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) selected from the following:

- EGR 301 - Analytical Tools for Product Design Credits: 4
- EGR 350 - Vibration Credits: 4
- EGR 352 - Kinematics and Dynamics of Machinery Credits: 4
- EGR 366 - Combustion Applications Credits: 4
- EGR 367 - Manufacturing Processes Credits: 4
- EGR 370 - Engineering Acoustics Credits: 4
- EGR 450 - Manufacturing Control Systems Credits: 4
- EGR 475 - Design of HVAC Systems Credits: 4

Sample Curriculum for the Junior and Senior Years of the Mechanical Engineering Emphasis

First Co-op Semester: Spring/Summer

- General Education (World Perspectives)
- EGR 309 - Machine Design I Credits: 4

Fifth Academic Semester: Fall

- General Education (Social Science)

- EGR 380 - Special Topics in Engineering Credits: 1 to 4 (Finite Element Analysis Credits: 3)
- EGR 345 - Dynamic System Modeling and Control Credits: 4
- EGR 360 - Thermodynamics Credits: 4

Second Co-op Semester: Winter

- General Education (Theme)
- EGR 390 Engineering Co-op 2 Credits: 3

Sixth Academic Semester: Spring/Summer

- EGR 312 Dynamics Credits: 3
- ECO 210 - Introductory Macroeconomics Credits: 3
OR ECO 211 - Introductory Microeconomics Credits: 3
- General Education (Arts)
- EGR 409 Machine Design II Credits: 4
- EGR 365 Fluid Mechanics Credits: 4

Third Co-op Semester: Fall

- General Education (Theme)
- EGR 490 Engineering Co-op 3 Credits: 3

Seventh Academic Semester: Winter

- Mechanical Engineering Elective
- Mechanical Engineering Elective
- EGR 468 Heat Transfer Credits: 4
- 485 Senior Engineering Project I (Capstone) Credits: 1

Eighth Academic Semester: Spring/Summer

- Mechanical Engineering Elective
- General Education (Historical Perspectives)
BIO 105 Environmental Science Credits: 3
- General Education (Life Sciences)
- EGR 486 Senior Engineering Project II (Capstone) Credits: 2

Master of Science in Engineering

For additional information about opportunities your college offers, please refer to the Seymour and Esther Padnos College of Engineering and Computing in this catalog.

Graduate Programs Master of Science in Engineering (M.S.E.)

The School of Engineering offers the Master of Science in Engineering (M.S.E.) degree program with four emphases: (1) electrical and computer engineering, (2) product design and manufacturing engineering, (3) manufacturing operations, and (4) mechanical engineering.

In addition, the School of Engineering offers post-baccalaureate engineering certificate programs in each program area as well as in professional practice. All credits earned in a certificate program can be applied toward the M.S.E. degree.

The program leading to the M.S.E. degree is designed to meet the technical and professional development needs of practicing engineers as well as of students interested in applied research and in preparing for advanced study. The program focuses on engineering design, development, manufacture, and production. The program capitalizes on the industrial experiences of the students. Plans of study as well as course and capstone projects can be tailored to the needs of each student to provide a richer, personalized educational experience.

Most 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. A certificate program may be completed in one year.

Website: www.gvsu.edu/engineering

M.S.E. Location

Pew Campus, John C. Kennedy Hall of Engineering

Engineering

Admission

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.

To be admitted candidates must have graduated from an accredited four-year undergraduate program in engineering. Applicants with other degrees would need to complete significant amount of academic work prior to admission.

An undergraduate grade point average of at least 3.0 in all undergraduate coursework is required. Applicants with GPA below 3.0 will be considered for a conditional admission. Consultation with the Graduate Program Chair is recommended.

Acceptable recommendations from at least two individuals attesting to the likelihood of the candidate's successful completion of the program, if requested by the School of Engineering Graduate Admissions Committee, must be submitted.

At least one year of relevant industrial experience in an engineering-related position is required.

Candidates must have a base of underlying knowledge relevant to graduate study in the chosen program. This can be demonstrated by previous academic study or work experience. Consultation with the graduate program chair may be necessary to verify appropriateness of work experience as a substitute for academic preparation. In particular, the material covered in relevant undergraduate courses forms a background for study in the program. A student not having the appropriate background knowledge will be required to take one or more appropriate background courses.

All students registering for 600-level engineering courses must be degree-seeking in the M.S.E. program, or have permission of the graduate program chair

Once admitted to the M.S.E. program, students are expected to demonstrate initiative and 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 chair 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.

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. In the case of required courses, a grade lower than a C will result in the candidate having to repeat the course until an acceptable grade is achieved. Elective courses may either be repeated or other courses may be substituted to meet the minimum overall grade point average requirement.

Graduate 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 on the basis of aptitude, interest, and background.

Requirements for a Certificate

Completing the requirements for an program area as well as the professional practice area completes the requirement for a certificate program. The last two courses used to complete a certificate program must be taken at Grand Valley State University. Each of the program areas requires at least three courses that provide sustained coverage of an engineering topic. An engineering course may not be used to meet the course requirements of more than one certificate.

Admission criteria for a certificate program are identical to admission criteria for the M.S.E. degree program. Should a certificate candidate decide to change to the M.S.E. degree program, all coursework taken toward the certificate will apply to the corresponding engineering program area in his or her M.S.E. degree program.

Requirements for the M.S.E. Master of Science in Engineering

The M.S.E. program requires 33 semester hours of graduate coursework. This coursework is distributed as follows:

1. Professional Practice (9 credit hours)

- EGR 600 - Advanced Engineering Analysis Credits: 3
- EGR 602 - Professional Aspects of Engineering Credits: 3
- EGR 604 - Implementation and Measurement Credits: 3

2. Program

The student must pursue an electrical and computer engineering, product design and manufacturing engineering, manufacturing operations, or mechanical engineering program.

A. Electrical and Computer Engineering Program:

a. Complete one of the following content areas (10-11 credit hours).

No more than two courses in a content area may be at the 400 level. Select any three courses, presented below by interest area.

Communications, Signal Processing and Control Systems

- EGR 415 - Communication Systems Credits: 4
- EGR 423 - Digital Signal Processing Systems Credits: 4
- EGR 455 - Automatic Control Credits: 4
- EGR 653 - Digital and Adaptive Systems Credits: 3

Electrical Energy Systems

- EGR 430 - Electromechanics Credits: 4
- EGR 655 - Power Electronics Credits: 3
- EGR 656 - Electrical Drive Systems Credits: 3

Digital and Computer Systems

- CIS 459 - Embedded Computer Systems Credits: 3
- CIS 654 - Computer Networking Credits: 3
- EGR 424 - Design of Microcontroller Applications Credits: 4
- EGR 426 - Integrated Circuit Systems Design Credits: 4

b. Complete approved graduate elective courses, including independent studies

- 7 or 8 elective credit hours for those taking the EGR 692/693 or EGR 696/697 Capstone
- 10 or 11 elective credit hours for those taking the EGR 690 Capstone

c. Complete the capstone experience (3 or 6 credit hours).

- EGR 690 - Capstone Design Project Credits: 3
- OR EGR 696 - Masters Thesis Research Credits: 3
- AND EGR 697 - Masters Thesis (MSE capstone) Credits: 3
- OR EGR 693 - Masters Project (MSE capstone) Credits: 3
- AND EGR 692 - Masters Project Planning Credits: 3

B. Product Design and Manufacturing Program:

a. Complete the following content area (3 courses for 9 credit hours).

- EGR 610 - Engineering Design Credits: 3
- EGR 612 - Design for Manufacturability Credits: 3
- EGR 620 - Material and Process Selection Credits: 3
- EGR 630 - Contemporary Manufacturing Controls Credits: 3

b. Complete approved graduate elective courses, including independent studies.

- 9 elective credit hours for those taking the EGR 692/693 or EGR 696/697 Capstone
- 12 elective credit hours for those taking the EGR 690 Capstone

c. Complete the capstone experience (3 or 6 credit hours).

- EGR 690 - Capstone Design Project Credits: 3
- **OR** EGR 692 - Masters Project Planning Credits: 3
- **AND** EGR 693 - Masters Project (MSE capstone) Credits: 3
- **OR** EGR 696 - Masters Thesis Research Credits: 3
- **AND** EGR 697 - Masters Thesis (MSE capstone) Credits: 3

C. Manufacturing Operations Program:**a. Complete the following content area (4 courses for 12 credit hours).**

- EGR 640 - Production Operation Models Credits: 3
- EGR 641 - Applied Optimization Credits: 3
- EGR 642 - Materials Handling and Plant Layout Credits: 3
- EGR 644 - Manufacturing Work Environments Credits: 3

b. Complete two approved graduate elective courses (6 credit hours).**c. Complete the capstone experience (6 credit hours).**

- EGR 692 - Masters Project Planning Credits: 3
- **AND** EGR 693 - Masters Project (MSE capstone) Credits: 3
- **OR** EGR 696 - Masters Thesis Research Credits: 3
- **AND** EGR 697 - Masters Thesis (MSE capstone) Credits: 3

D. Mechanical Engineering Program:**a. Complete the following content area (three courses for 9 credit hours).**

- EGR 611 - Computer-Aided Design and Engineering Credits: 3
- EGR 615 - Applied Finite Element Analysis Credits: 3
- EGR 616 - Experimental Stress Analysis Credits: 3

b. Complete approved graduate elective courses, including independent studies

- 9 elective credit hours for those taking the EGR 692/693 or EGR 696/697 Capstone
- 12 elective credit hours for those taking the EGR 690 Capstone

c. Complete the capstone experience (3 or 6 credit hours).

- EGR 690 - Capstone Design Project Credits: 3
- **OR** EGR 693 - Masters Project (MSE capstone) Credits: 3
- **AND** EGR 697 - Masters Thesis (MSE capstone) Credits: 3
- **OR** EGR 692 - Masters Project Planning Credits: 3
- **AND** EGR 696 - Masters Thesis Research Credits: 3

Engineering Science Minor**Requirements for a Minor in Engineering Science**

The minor in engineering science requires a minimum GPA of 2.0 in six courses (21 credit hours) as follows:

Required Courses:

- EGR 101 - Computer Aided Design and Manufacturing Credits: 3
- EGR 103 - Engineering Measurement and Analysis Credits: 3
- EGR 209 - Mechanics and Machines Credits: 4
- EGR 214 - Circuit Analysis I Credits: 4
- EGR 226 - Introduction to Digital Systems Credits: 4

Elective Courses (choose one of the following):

- EGR 250 - Materials Science and Engineering Credits: 4
- EGR 257 - Electronic Materials & Devices Credits: 4
- STA 313 - Probability and Stochastic Processes Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3

Computer Engineering Minor**Requirements for a Minor in Computer Engineering**

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 251 - Computer Organization Credits: 3
- EGR 214 - Circuit Analysis I Credits: 4
- EGR 226 - Introduction to Digital Systems Credits: 4
- EGR 326 - Embedded System Design Credits: 4
- EGR 424 - Design of Microcontroller Applications Credits: 4

Select one:

- CIS 263 - Data Structures and Algorithms Credits: 3
- CIS 452 - Operating Systems Concepts Credits: 4
- CIS 457 - Data Communications Credits: 4

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 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: 5
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- EGR 335 - Mathematical Modeling of Physiologic Systems Credits: 3

Elective Courses:

Choose any two of the following:

- EGR 403 - Medical Device Design Credits: 4
- EGR 432 - Biomedical Imaging and Image Processing Credits: 3
- EGR 434 - Bioelectric Potentials Credits: 3
- EGR 447 - Engineering Mechanics of Human Motion Credits: 3
- EGR 453 - Biomedical Materials Credits: 3

Combined Bachelor of Science and Master of Science in Engineering

Students interested in the joint B.S.E. / M.S.E. program are encouraged to contact the Director of the School of Engineering for information.

English

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences in this catalog.

Chair: Osborn. Professors: Antczak, Blumreich, Franciosi, Lockerd, Osborn, Persoon, Remlinger, Smith, Soljan, Tyson, Wenner, White, Wu; Associate Professors: Alvarez, Anderson, Bloem, Brice, Bullock, Hewitt, Ihrman, Jellema, Lai, Masko, McLeod, Miller, Pearson, Rozema, Schneider, Tucker, VanAntwerp, Vander Broek, Webster, Westra; Assistant Professors: Ellis, Evans, Johnson, Shannon; Affiliate Faculty: Navarro, Wahi, Warren; Visiting

Faculty: Deyo, Landrum.

Website: 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 goes beyond the classroom, however. Among other extra-curricular 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 as well as in creative writing. The Department also organizes an annual writing contest and holds an awards ceremony at which students obtain prizes for excellent writing and for other academic accomplishments. In addition, the Department grants scholarships to English majors who demonstrate scholastic achievement and excellence in writing.

Literature and Language

Students in the Literature and Language emphasis area study American, British, and international literature originally written in English as well as literature in translation. They also 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 (grades K-8) schools. 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.

Secondary English Education

The Secondary English Education emphasis area, in conjunction with the College of Education, certifies students to teach English in Michigan secondary (grades 6-12) schools. 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 Elementary Language Arts Education or in Secondary English Education must have a 3.0 minimum GPA in English in order to be eligible for entrance into the College of Education for teacher assisting and student teaching.

Lake Michigan Writing Project

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. Interested adults should apply online at www.lmwritingproject.org. Those accepted will receive fellowships to cover the cost of tuition for ENG 632 and ENG 633.

Student Organizations (www.gvsu.edu/stuey)

Sigma Tau Delta. Grand Valley's Chapter of the National English Honor Society honors excellence in English studies and fosters interest in literature and language scholarship, as well as creative writing. English majors who have achieved a GPA of 3.0 or better in English courses and rank in the top third of their class may apply.

The English Society. Department organization open to all majors and minors for the purpose of activities like charity readathons, movie screenings, book discussions, etc.

Oldenburg Writing Contest. A departmental writing contest, carrying cash prizes for essays and creative writing, is conducted annually.

Other Activities. In addition, a great variety of campus-wide opportunities is available to students interested in language and literature: films, poetry readings, lectures, production of plays; and work on the student newspaper, *The Lanthorn*, and on the campus radio and television stations.

Bachelor of Arts in English

Requirements for a Major in English

All English majors will earn the B.A. degree, which requires third-semester proficiency in a foreign language. All English majors must also complete the English foundation courses and capstone, ENG 495, and choose an emphasis within the major.

Foundation Courses: 200 level (required of all majors) 15 hours:

- ENG 220 - British Literature I Credits: 3
- ENG 221 - British Literature II Credits: 3
- ENG 225 - American Literature I: to 1860 Credits: 3
- ENG 226 - American Literature II: from 1860 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, language arts, or secondary education. Each emphasis requires different options from the following categories:

Course Categories

A. Studies in World Literatures

The courses in this category focus on global literatures from Classical times to the present. These courses seek to explore, define, and broaden our understanding of these literatures in themselves, and in their relationship to their historical context.

- CLA 345 - Tradition and Reception Credits: 3
- CLA 461 - Studies in the Classical Tradition Credits: 3
- ENG 303 - Studies in World Literature Credits: 3
- ENG 304 - International Literature for Children and Young Adults Credits: 3

B. Studies in British Literary History

The courses in this category address important periods in British literary history and seek to define, explore, and broaden our understanding of the literature in the context of the historical moment. These courses focus on specific topics offered on a rotating bases: see department listings for specific course content each semester. Shakespeare is offered each semester; the other four courses are offered on a rotating basis (one each semester).

- 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. Studies in American Literary History

The courses in this category focus on important periods in American literary history and seek to define, explore, and broaden our understanding of the literature in the context of the historical moment. Courses in this category will focus on specific topics offered on a rotating basis: see department listings for specific course content each semester. One course is offered each semester on a rotating basis.

- 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

D. Studies in Reading and Authorship

The courses in this category focus on the pragmatics of literature.

- ENG 335 - Literature of American Minorities 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. Studies in Literary Genres

The courses in this category focus on the conventions, history, and important practitioners of the major genres.

- 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

F. Linguistics and Language

The courses in this category focus on major topics in linguistics: language structure, language history, language and pedagogy, and language in social context. The courses introduce fundamental principles in linguistic theory and research. ENG 261 serves as a prerequisite for other linguistics 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 461 - Language and Gender Credits: 3
- ENG 467 - Language Disorders and English Literacy Credits: 3

G. Writing

The courses in this category focus on the theory and practice of writing. Close reading of the professional samples and generalizing about those samples will figure significantly in these courses. Most of the courses are workshops in which students propose and share their work before submitting finished versions suitable for publication.

- WRT 200 - Introduction to Professional Writing Credits: 3
- WRT 219 - Introduction to Creative Writing Credits: 3

H. Pedagogy

The courses in this category focus on the teaching of English and the Language Arts in elementary and secondary schools.

- ENG 307 - Teaching Writing: Elementary Credits: 3
- ENG 308 - Teaching Reading: The Necessary Skills Credits: 4

- ENG 309 - Teaching Literature to Children Credits: 3
- ENG 310 - Teaching Writing: Secondary Credits: 3
- ENG 400 - Language Arts for Teaching Credits: 3

Language and Literature Emphasis Requirements**Foundation Courses: 15 credits**

- See above.

Elective Requirements: 21 credits

- Two courses from category B, one of which must be ENG 313 - British Literature: Shakespeare
- One course from each of these categories: A, C, D, and E.
- One additional ENG course numbered 300 or above
OR one course from category G.

Capstone: 3 credits**Total Hours: 39****Language Arts (Elementary) Emphasis Requirements****Foundation Courses: 15 credits**

- See above.

Track Requirements: 9 credits

Students who decide not to pursue teacher certification must substitute an upper literature or linguistics course for ENG 400.

- ENG 307 - Teaching Writing: Elementary Credits: 3
- ENG 309 - Teaching Literature to Children Credits: 3
- ENG 400 - Language Arts for Teaching Credits: 3

Elective Requirement: 9 credits

- The course below or one course from category A
- One course from category F
- One additional ENG course numbered 300 or above
OR one course from category G

Capstone: 3 credits**Total Hours: 36****Secondary Education Emphasis****Foundation courses: 15 credits**

- See above.

Track Requirements: 9 credits

- ENG 310 - Teaching Writing: Secondary Credits: 3
- ENG 311 - Teaching Literature to Adolescents Credits: 3
- ENG 313 - British Literature: Shakespeare Credits: 3

Capstone: 3 credits

- One course from Category F
- One course from Category G
- One additional ENG course numbered 300 or above.

Total Hours: 36**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 Foundation 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 Foundation Courses
- ENG 221 - British Literature II Credits: 3
- ENG 225 - American Literature I: to 1860 Credits: 3
- ENG 226 - American Literature II: from 1860 Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3

English

Third Year

- ENG Elective (Category B)
- ENG Elective (Category C)
- ENG 313 - British Literature: Shakespeare Credits: 3

Fourth Year

- ENG Elective (Category D)
- ENG Elective (Category E)
- ENG Elective (One additional ENG course numbered 300 or above)
- Two General Education Cultural Designation Courses
- Three General Education Theme Courses
- ENG 495 - Language and Literature (capstone). 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

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 (with occasional supplementary literature in translation). Thus, the program concentrates on the range of literature produced in the English language, regardless of nationality or dialect. British, American, and Anglophone literature are studied with emphases upon 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 6-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

In addition to the items already required from applicants to all Grand Valley graduate programs (see “Graduate Admission”), scores from the Graduate Records Exam (general exam only — advanced exam not required), a writing sample, and a brief statement of purpose must be submitted to the Admissions Office. The writing sample should be an original essay that demonstrates the writer’s potential for graduate work in this field. (It may be a paper written for a previous course.) The statement of purpose should be approximately 250 to 500 words explaining the applicant’s academic preparation, interest in this program, and professional goals. Applications should be submitted by January 15. Decisions on applications received by that date will be made by mid-February. Applications received later will be considered, space permitting. A maximum of 9 graduate credits earned prior to graduate admission to the English M.A. Program may apply to degree requirements.

Program Requirements

- Track 1: 33 credit hours of coursework plus qualifying examinations.
- Track 2: 27 credit hours of coursework plus a 6-credit-hour thesis.

Core Requirements (Credit Hours: 12)

Degree-seeking students must take ENG 600, Graduate Literary Studies Seminar, before completion of more than 9 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 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. (More detailed guidelines for thesis preparation are available on the M.A. Program 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 program coordinator. After the prospectus is approved, the student enrolls in ENG 695, Master’s Thesis. A student must enroll for 1–6 credits of ENG 695 per

semester (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 applies for copyright and publishes the thesis. Information is available from the library, which oversees the publication process.

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

Master of Education Advanced Content Specialization in English

The English department offers graduate courses that may be used in cooperation with the Grand Valley College of Education to fulfill the requirements for an English Concentration in M.Ed. degree in Advanced Content Specialization.

Admission

Students apply to the College of Education for admission to the M.Ed. program. Students who elect an English concentration in that degree are assigned an advisor in the College of Education and in the English department to direct the English segment of their study within the M.Ed. program (see the section on the College of Education, The Graduate Program). Students applying for the English concentration should have an undergraduate major or minor in English or the equivalent.

Course Requirements for the English Concentration

Students must complete 15 semester credits in English approved by the English department. Those courses must be taken from the following groups of courses as indicated.

Literary periods, authors, or topics — two courses from the following:

- ENG 603 - Seminar in British Literature Credits: 3
- ENG 605 - Seminar in American Literature Credits: 3
- ENG 651 - Literary Period Seminar Credits: 3

- ENG 661 - Author or Topic Seminar Credits: 3
- ENG 663 - Shakespeare Credits: 3

Literature focusing outside the traditional canon — one course from the following:

- ENG 612 - Women Writers Credits: 3
- ENG 614 - Literature of American Ethnic Minorities Credits: 3
- ENG 616 - World Literature in English Credits: 3

Literary theory or genre — one course from the following:

- ENG 624 - Genre Studies Credits: 3

Writing or language theory — one course from the following:

- ENG 631 - Teaching Writing Credits: 3
- ENG 633 - Advanced Writing Credits: 3
- ENG 641 - History of the English Language Credits: 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 Credits: 21

Required courses (9 credits)

- ENG 215 - Foundations of Literary Study: Genre Credits: 3
- ENG 216 - Foundations of Literary Study: Critical Analysis 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 Analysis 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 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

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

Environmental Studies

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 322 - Cost Systems and Control Techniques Credits: 3
- ACC 340 - Accounting Systems Credits: 3
- ECO 341 - Economics of Business Strategy Credits: 3
- ECO 436 - Real Estate Economics 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
- MGT 451 - Introduction to E-Commerce Applications 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

Entrepreneurship 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 entrepreneurship minor program is open to both business and non-business majors. This 18-credit hour minor equips students with the skills necessary to identify and create a sustainable business opportunity. Students will learn to prepare and execute a full business plan that integrates the necessary human, financial, physical, and technological resources, and to manage the entity on an ongoing basis in periods of rapid growth and competitive uncertainty.

Requirements for a Minor in Entrepreneurship

Students must achieve a cumulative 2.5 GPA in these courses to receive the entrepreneurship minor designation. Courses cannot be taken on a credit/no credit basis. The courses below must be taken in the sequence listed.

- ENT 150 - Entrepreneurial Quest Credits: 3
- ENT 151 - New Venture Feasibility Credits: 3
- ENT 250 - Entrepreneurial Finance and Accounting Credits: 3
- ENT 251 - Entrepreneurial Management and Marketing Credits: 3
- ENT 350 - Entrepreneurial Business Plan Credits: 3
- ENT 351 - Entrepreneurial Project Credits: 3

Environmental Studies

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

Program Director: Lioubimtseva. Associate Professor: Joseph, Lioubimtseva.

Website: 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 post-graduate opportunities in the natural sciences.

Career Opportunities

- Human and environmental health and safety
- Air quality
- Water quality
- Land quality
- Environmental protection management
- Waste management
- Restoration and reclamation
- Fisheries and wildlife
- Parks and natural reserves
- Forestry
- Agriculture
- Mining

Environmental Studies Minor

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Students enrolled in an Environmental Studies major will explore multiple dimensions on human-environmental interactions: socio-cultural, 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:

A. ENS 201 (3 Credits):

- ENS 201 - Introduction to Environmental Studies and Sustainability Credits: 3

B. One course from each of the following categories (9 Credits):

Socio-Cultural Perspectives on Environment:

- ANT 340 - Culture and Environment Credits: 3
- BIO 338 - Environmental Ethics Credits: 3
- ENG 382 - Nature Writing Credits: 3
- GPY 220 - Cultural Geography Credits: 3
- GPY 410 - Landscape Analysis Credits: 3
- HST 320 - American Indians Credits: 3
- HST 323 - Michigan History Credits: 3
- HST 327 - History of American Urban History Credits: 3
- LIB 330 - The Idea of Nature Credits: 3
- PSY 362 - Environmental Psychology Credits: 3
- SW 150 - Human Needs in Complex Societies Credits: 3
- SOC 288 - Sociology of Food Credits: 3

- SOC 351 - Urban Sociology Credits: 3
- WGS 335 - Women, Health & 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 - General Ecology Credits: 4
- BIO 310 - Biological Diversity of the Americas Credits: 3
- BIO 470 - Conservation Biology Credits: 3
- CHM 311 - Green Chemistry and Industrial Processes Credits: 3
- CHM 321 - Environmental Chemistry Credits: 3
- CHM 322 - Environmental Chemical Analysis 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 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
- ECO 435 - Urban Economics Credits: 3
- GPY 335 - Geographic Patterns-Global Development Credits: 3
- GPY 345 - Geography of Michigan/Great Lakes Region Credits: 3
- GPY 353 - Geography of the United States and Canada. 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: 4
- PA 307 - Local Politics and Administration Credits: 3
- PA 360 - Voluntarism and the Nonprofit Sector Credits: 3
- PLS 314 - International Law Credits: 3
- SS 324 - Urbanization 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 above.

D. ENS 401 (3 Credits):

- ENS 401 - Environmental Problem Solving Credits: 3

Exercise Science

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

Exercise Science is the study of movement and the associated functional responses and 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 & 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.

Career Opportunities

Students graduating with an exercise science degree can be employed across a wide variety of health, medical, wellness and physical activity related fields. Examples of employment are:

- Cardiac Rehabilitation
- Community Fitness
- Community Health
- Corporate Health
- Fitness/wellness
- Nutrition
- Personal Training
- Physical Therapy
- Physician's Assistant
- Pulmonary Rehabilitation

Graduate School Opportunities

Students are well-prepared to enter graduate school. Examples of graduate programs are:

- Physical Therapy
- Exercise Science
- Biomechanics
- Physician's Assistant
- Occupational Therapy
- Medical School
- Sport Psychology
- Nutrition

Student Organizations (www.gvsu.edu/stuey)

- Exercise Science Club

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.

Exercise Science Major B.S. Degree Cognates

- BMS 202 - Anatomy and Physiology Credits: 4
- OR BMS 208 - Human Anatomy Credits: 3
- MOV 304 - Physiology of Activity Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Exercise Science Major Courses (Credit Hours 36-42)

- BMS 105 - Basic Nutrition Credits: 3
- MOV 101 - Foundations of Physical Education and Sport Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2
- 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

Film and Video Production

- MOV 475 - Fieldwork in Exercise Science Credits: 2
- MOV 490 - Internship in Exercise Science Credits: 6 to 12
- MOV 495 - Professionalism in Exercise Science Credits: 3 (SWS)
- PED 217 - Modern Principles of Athletic Training Credits: 3

Note: MOV 475 and 490 will have separate experiences for Health-Fitness Instruction and Clinical Science emphasis areas by advisement.

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 - Public Health Concepts Credits: 3
- CIS 150 - Introduction to Computing Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- MOV 201 - Psycho-social 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 356 - Sociology of Health Care Credits: 3
- SOC 384 - 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 Physical Education and Sport Credits: 3
- BMS 208 - Human Anatomy Credits: 3
- CHM 231 - Introductory Organic Chemistry Credits: 4
- MOV 102 - First Aid, CPR and AED Credits: 2
- WRT 150 - Strategies in Writing Credits: 4

Year 2:

- CHM 232 - Biological Chemistry Credits: 4
- PED 217 - Modern Principles of Athletic Training Credits: 3
- PHY 200 - Physics for the Life Sciences Credits: 4
- PSY 101 - Introductory Psychology Credits: 3
- BMS 105 - Basic Nutrition Credits: 3
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- MOV 304 - Physiology of Activity Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Year 3:

- BMS 306 - Advanced Human Nutrition Credits: 3
- 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
- BMS 415 - Nutrition and Physical Performance Credits: 3
- MOV 420 - Laboratory Practicum in Exercise Science Credits: 2
- PSY 310 - Behavior Modification Credits: 3
- WRT 305 - Writing in the Disciplines Credits: 3

Year 4:

- MOV 309 - Measurement and Evaluation Credits: 2
- 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 to 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 Physical Education and Sport Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2
- 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 - Psycho-social Aspects of Physical Education and Sport Credits: 3
- PED 217 - Modern Principles of Athletic Training Credits: 3
- BMS 223 - Public Health Concepts Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- MOV 304 - Physiology of Activity 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
- PSY 310 - Behavior Modification Credits: 3
- MOV 420 - Laboratory Practicum in Exercise Science Credits: 2
- PSY 364 - Life Span Developmental Psychology Credits: 3
- SOC 384 - Sociology of Drug Use and Abuse Credits: 3
- WRT 305 - Writing in the Disciplines Credits: 3

Year 4:

- MOV 309 - Measurement and Evaluation Credits: 2
- 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 to 12

Film and Video Production

For additional information about opportunities your college offers, please refer to the School of Communications or the College of Liberal Arts and Sciences sections in this catalog.

School of Communications Director: Thompson; Professors Morse, Perrine; Associate Professors Philbin, Roberts, Roos, Schmit.

Website: www.gvsu.edu/filmvideo

A strong hands-on emphasis characterizes the Film and Video Production major. Emphasis areas include animation and new media, cinema studies, documentary and nonfiction, fiction filmmaking, and sound design. The curriculum integrates production experience with the insights offered by media history, theory, and criticism.

Digital video facilities include nonlinear editing suites, a full complement of field gear, television studio classroom, and a digital audio studio. The 16mm film equipment includes single and double camera packages. 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.

The Film and Video Production program 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 and all 300- and 400-level film/video courses.

Students are required to have an overall GPA above 2.5 and complete the three film and video pre-admission courses (with a minimum of 3.0 GPA) in order to apply for admission to CFV 226 and to 300- and 400-level film and video courses. Achievement of these minimum criteria does not guarantee admission (see below).

Having met these requirements, students will submit an admission application. Guidelines for the application are available on request from the School of Communications office, 290 Lake Superior Hall, and on the Film and Video Production website at www.gvsu.edu/filmvideo/. All prospective majors must submit an admission application. 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 three 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 faculty will determine what Grand Valley coursework, if any, is required of the petitioner. Students may not take 200-level or higher CFV courses until they are admitted to the major.

Career Opportunities

Graduates find a wide range of professional employment, both in West Michigan and nationally, including positions in the feature film industry, animation and multimedia, at radio and network and television stations, advertising agencies, community media access stations, production and post-production houses, school systems, and corporations. Other students have chosen to continue their education in graduate school.

Bachelor of Arts or Bachelor of Science in Film and Video Production

Requirements for a Major in Film and Video Production

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 - Theories of Communication Credits: 3

And one of the following:

- COM 201 - Speech Credits: 3
- 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. Cognates

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. cognate or the B.S. cognate that is intended for a particular undergraduate program.

B.A. Cognate

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

2. Pre-admission courses (can be taken in any order):

- CFV 123 - Survey of Media Production Modes Credits: 3
- CFV 124 - Image and Sound Credits: 3
- CFV 125 - Media Production I Credits: 4

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.

3. Film/Video Production Foundation Credits: 26

Take the following plus one additional CFV History/Theory/Criticism course

- CBR 281 - Audio Production I Credits: 3
- CFV 123 - Survey of Media Production Modes Credits: 3
- CFV 124 - Image and Sound Credits: 3
- CFV 125 - Media Production I Credits: 4
- CFV 226 - Media Production II Credits: 4
- CFV 261 - Scriptwriting I Credits: 3
- CFV 370 - Film and Television Interpretation Credits: 3

4. Emphasis Areas Credits: 15

Complete one of the 6 Emphasis Areas for the Film and Video Production Major.

- A. Animation/New Media - five courses
- B. Cinema Studies - five courses
- C. Documentary/Nonfiction Production - five courses
- D. Fiction Filmmaking - five courses
- E. Sound Design - five courses
- F. Individual Study Plan - five courses

A. Animation/New Media

Choose one course from either CFV Intermediate/Advanced Production or History/Theory/Criticism courses.

And take both of the following courses.

- CFV 325 - Animation I Credits: 3
- CFV 326 - Computer Image Making Credits: 3

Animation/New Media Focused Group

Choose two courses, one of the two must be a 400-level course.

- CFV 323 - Media Technologies Credits: 3
- CFV 324 - 3D Computer Animation Credits: 3
- CFV 327 - Film and Video Art Credits: 3
- CFV 330 - Digital Post Production Credits: 3
- CFV 425 - Animation II Credits: 3
- CFV 426 - Cinematic Multimedia Credits: 3

B. Cinema Studies

Choose one course from any of the 300-level or 400-level CFV Production courses.

And take both of the following courses.

- CFV 375 - World Cinema Credits: 3
- CFV 348 - Film Theories Credits: 3

Cinema Studies Focused Group

Choose two courses.

- CFV 370 - Film and Television Interpretation Credits: 3
- COM 371 - Media and Society Credits: 3
- COM 372 - Global Communications Credits: 3
- COM 373 - Women and Minorities in Film and Television Credits: 3

C. Documentary/Nonfiction Production

Choose one course from either CFV Intermediate/Advanced Production or History/Theory/Criticism courses.

And take both of the following courses.

- CFV 322 - Documentary Production I Credits: 3
- CFV 422 - Documentary Production II Credits: 3

Finance

Documentary/Nonfiction Production Focused Group

Choose two courses.

- CBR 382 - Audio Production II Credits: 3
- CFV 327 - Film and Video Art Credits: 3
- CFV 368 - Lighting for Film and Video Productions Credits: 3
- CFV 470 - Nonfiction Film/Video Practicum Credits: 3
- COM 371 - Media and Society Credits: 3

D. Fiction Filmmaking

Choose one course from either CFV Intermediate/Advanced Production or History/Theory/Criticism courses.

And take both of the following courses.

- CFV 321 - 16mm Film Production I Credits: 3
- CFV 424 - 16mm Film Production II Credits: 3

Fiction Filmmaking Focused Group

Choose two courses.

- CBR 382 - Audio Production II Credits: 3
- CFV 328 - Intermediate Film Practicum Credits: 3 or 6
- CFV 362 - Scriptwriting II Credits: 3
- CFV 368 - Lighting for Film and Video Productions Credits: 3
- CFV 428 - Advanced Film Practicum Credits: 3 or 6
- CFV 429 - Post Production Practicum Credits: 3

E. Sound Design

Choose one course from either CFV Intermediate/Advanced Production or History/Theory/Criticism courses.

And take both of the following courses.

- CBR 382 - Audio Production II Credits: 3
- CFV 482 - Sound Design for Film and Video Credits: 3

Sound Design Focused Group

Choose two courses.

- CFV 322 - Documentary Production I Credits: 3
- CFV 323 - Media Technologies Credits: 3
- CFV 325 - Animation I Credits: 3
- CFV 330 - Digital Post Production Credits: 3
- CFV 429 - Post Production Practicum Credits: 3
- CFV 470 - Nonfiction Film/Video Practicum Credits: 3

F. Individual Study Plan (ISP) Option

Working with an advisor, a student can design an individualized study plan (ISP) rather than selecting one of the published emphasis areas. An ISP, supported by a milestone statement, lists courses and the semester in which they will be taken, and its structure parallels that of the other emphasis areas.

The Milestone Statement outlines the student's goals and explains how the individualized study plan supports them. If an ISP is modified, the student's milestone statement must be modified as well.

5. Internship or Thesis Credits: 1-6

- CFV 490 - Internship Credits: 1 to 6
- CFV 498 - Senior Thesis/Project Credits: 1 to 6

6. Capstone Credits: 3

- COM 495 - Issues in Communication (capstone) Credits: 3

Intermediate Production:

- CBR 382 - Audio Production II Credits: 3
- CFV 321 - 16mm Film Production 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 - Computer Image Making 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 & Video Credits: 3

Advanced Production:

- CBR 485 - Audio Production III Credits: 3
- CFV 422 - Documentary Production II Credits: 3
- CFV 424 - 16mm Film Production II Credits: 3
- CFV 425 - Animation II Credits: 3
- CFV 426 - Cinematic Multimedia Credits: 3
- CFV 428 - Advanced Film Practicum Credits: 3 or 6
- CFV 429 - Post Production Practicum Credits: 3
- CFV 470 - Nonfiction Film/Video Practicum Credits: 3
- CFV 482 - Sound Design for Film and Video Credits: 3

History/Theory/Criticism:

- CFV 370 - Film and Television Interpretation Credits: 3
- CFV 375 - World Cinema Credits: 3
- CFV 348 - Film Theories Credits: 3
- COM 371 - Media and Society Credits: 3
- COM 372 - Global Communications Credits: 3
- COM 373 - Women and Minorities in Film and Television Credits: 3

B.S. Cognate

- CIS 150 - Introduction to Computing Credits: 3
- **OR** PHI 103 - Logic Credits: 3
- SS 300 - Research Methods in the Social Sciences
- STA 215 - Introductory Applied Statistics Credits: 3

Finance

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

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 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 \$30,000 stock portfolio.

Bachelor of Business Administration in Finance

Requirements for the B.B.A.

Cognate Degree Requirements

- CIS 150 - Introduction to Computing 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
- 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: 5
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates 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 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 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. However, at least 60 hours of the total program must be in nonbusiness courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as nonbusiness credit.

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

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
- ACC 322 - Cost Systems and Control Techniques Credits: 3
- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3
- ECO 414 - Money and Banking Credits: 3
- ECO 480 - Special Topics in Economics Credits: 3
- FIN 331 - Risk and Insurance Credits: 3
- FIN 350 - Real Estate Principles Credits: 3
- FIN 380 - Special Topics in Finance 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 490 - Finance Internship Credits: 1 to 6
- FIN 499 - Independent Research Credits: 1 to 3

Note that the economics courses selected for the business cognate 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

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Caillaud. Professor: Cata; Associate Professors: Caillaud, Eick, Golembeski, Guikema; Affiliate: Wilson.

Website: 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 or more 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, 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 program and College of Education.

Career Opportunities

The major in French Language and Literature prepares students for multicultural careers in both the United States and abroad. Career opportunities exist in many areas, including foreign service, translation and interpreting, teaching, consulting, sales and marketing, international business and international relations, to name a few. The French Section organizes workshops on career opportunities in French each year.

Graduate School Opportunities

The major in French prepares students for graduate study in French Literature, Civilization or Linguistics. Students seeking admission to graduate school should complete a study abroad program as part of their undergraduate education and should begin study of at least one other language. Workshops on graduate school opportunities are conducted each year. Students interested should seek the counsel of their major advisor. Many graduate schools offer teaching assistantships.

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 6 credits in French Language and French Culture (FRE 380). 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

Geography and Planning

through EUSA. Students are placed in positions related to their career focus.

Student Organizations (www.gvsu.edu/stuey)

Students are encouraged to be involved in the French Club, which organizes conversation groups, film nights, and a variety of cultural activities and excursions. Grand Valley is home to the Mu Epsilon Chapter of Pi Delta Phi, the National French Honor Society. Induction into the Society takes place in April of each year for qualified candidates.

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 core curriculum courses (FRE 301, 304, 306, 307), and FRE 495. A student must have completed the core or be completing it the semester he or she enrolls in advanced courses. FRE 495 must be taken in the last year preceding graduation.

Upon successful completion of the core curriculum, students must elect one of three emphases: literature, linguistics, or civilization.

Literature Emphasis

For the literature emphasis, students must complete:

- FRE 300 - Survey of French Literature I Credits: 3
- FRE 302 - Survey of French Literature II Credits: 3
- FRE 303 - Survey of French Literature III Credits: 3

Linguistics Emphasis

For the linguistics emphasis, students must complete:

- FRE 305 - French Phonetics Credits: 3
- FRE 355 - Introduction to French Linguistics Credits: 3

AND EITHER

- FRE 308 - French History and Civilization Credits: 3
- OR FRE 310 - Contemporary France Credits: 3

Additional Courses

Students are strongly encouraged to take at least one of the following:

- ENG 261 - Foundations of Language Study Credits: 3
- ENG 363 - Applied Linguistics Credits: 3
- ENG 364 - Sociolinguistics Credits: 3

Civilization Emphasis

For the civilization emphasis, students must complete:

- FRE 308 - French History and Civilization Credits: 3
- FRE 310 - Contemporary France Credits: 3
- FRE 312 - Francophone Civilization Credits: 3

Additional Courses

Students are encouraged to take at least one of the following:

- HST 365 - Early Modern Europe Credits: 3
- HST 385 - Europe 1900-1945 Credits: 3
- HST 386 - Europe since World War II Credits: 3
- HST 643 - The French Revolution Credits: 3

Electives

In addition to the above, all students must complete four elective courses at the 300 and 400 level, at least two of which have a focus on literature. Students should take careful note of the prerequisites for their chosen courses. Elective courses should be pre-approved by a faculty advisor.

Students seeking to pursue a graduate degree are advised to complete a minor or major in a second language. All majors (and minors seeking teaching certification) should complete a study abroad program.

Suggested Order of Coursework for a Major in French

Suggested order of coursework for students without prior language background:

- FRE 101 - Elementary French I followed by FRE 102 - Elementary French II
- FRE 201 - Intermediate French I followed by FRE 202 - Intermediate French II

- The Core Curriculum in the following order if possible:
FRE 307 - Advanced French Grammar, FRE 304 - French Conversation, FRE 306 - French Composition, and then FRE 301 - Introduction to Literature
- Emphasis Courses and electives
- FRE 495 - Advanced Topics in French (capstone)

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 a member of the Modern Languages and Literature department.

Requirements for a Certificate in Secondary Education

Students seeking teaching certification with a major or minor in French must also take ENG 261 - Foundations of Language Study Credits: 3. We will provide information sessions on preparing for the Oral Proficiency Interview each year.

French Minor

Requirements for a Minor in French

Students choosing French, as a minor program must complete 22 hours of French beyond the FRE 201 course, including 202 or its equivalent and the French core curriculum (FRE 307, FRE 306, FRE 304, and FRE 301). 6 credits of electives beyond the core must be completed at the 300 or 400 level.

Geography and Planning

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Wagendorp. Professors: Cole; Associate Professors: Joseph, Lioubimtseva, Penn, Sun, Wagendorp; Assistant Professors: Gang, Ma.

Website: www.gvsu.edu/geography

This program includes the geography major, geographic techniques (GIS and remote sensing) minor, the city and regional planning minor, and the geography education at the secondary level minor (teachable minor).

Geography is one of the most ancient fields of study - and one of the most contemporary. Geography is the study of the spatial variation of physical and cultural phenomena on the Earth. Geography addresses the questions of where, when, as well as why phenomena occur in particular locations. Geography is the "spatial" science - concerned with place, space, and pattern - and change in pattern over space and time. At the same time, geographers study processes of change at different scales from global to local. Geography draws upon and contributes to numerous other disciplines taught at GVSU making it among the richest and most connective fields of study in the College of Liberal Arts and Sciences and the university at large.

Our department specializes in a number of areas of study including globalization and development, geographic information systems (GIS), remote sensing, cartography, city and regional planning, the environment, land use and natural resource conservation, and regional and global studies.

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 for student "success stories."

Degrees Offered

B.S. and B.A. in Geography. Minors: city and regional planning, geographical techniques, geography education at the secondary level (teachable minor). A teachable major with elementary and secondary education is also offered in social studies with a geography emphasis.

Students seeking teacher certification geography should note that besides geography, the new Michigan State Board of Education standards require

basic knowledge of economics, history and political science. Students should take ECO 211, PLS 102, and HST 206 or the equivalent to obtain basic knowledge in economics, political science and history.

Career Opportunities

Career opportunities in geography and planning are many and extensive in the public, private, local, state, national, and international levels. Areas of employment include teaching, urban and regional planning, computer cartography, spatial analysis using geographic information systems and remote sensing, community analysis and development, and resource and environmental management and conservation. Both geography and planning majors have the conceptual principles, analytical skills, and technical skills to be competitive for a wide range of jobs, much too extensive to enumerate here. Students interested in exploring career options should consult with an advisor from the department. In addition, the prospective student should consult the departmental website (<http://www.gvsu.edu/geography>) under "Careers" and the Association of American Geographers highly detailed listing of geography, planning and related careers at the following Internet address: <http://communicateagg.org/eseries/scriptcontent/custom/giwis/cguide/> or go to www.agg.org and search under "Careers."

Representative Occupational Titles of Geographers (Source Association of American Geographers)

Geographic Methods

- Aerial Photo Interpreter
- Cartographer
- Cartographer-Geographer
- Cartographer-Illustrator
- Geographic Analyst
- GIS Analyst
- GIS Specialist
- GIS Technician
- Imagery Analyst
- Intelligence Analyst
- Map Analyst
- Remote Sensing and Image Analyst
- Research Analyst
- Research Coordinator
- Research Geographer
- Research Technician

Urban and Regional Planning

- Community Development Specialist
- Community Planner
- Economic Development Analyst
- Economic Development Planner
- Environmental Planner
- Industrial Developer
- Planner
- Land Economist
- Land Use Planner
- Regional Planner
- Transportation Planner
- Urban Geographer
- Urban Planner

Environmental Geography

- Agricultural Geographer
- Climatologist
- Ecologist
- Environmental Analyst/Planner
- Recreation Geographer
- Recreation Resources Planner
- Resource Analyst/Economist/Geographer
- Site Analyst
- Site Researcher

- Soil Geographer
- Soil Conservationist
- Surveyor

Global/Regional Studies

- Teacher
- Travel Agent
- Tour Director

Other

- Agricultural Geographer
- Business Geographer
- Demographer
- Development Planner
- Economic Geographer
- Editorial Assistant
- Geographic Engineer
- Health Planner
- Humanitarian Assistance Analyst
- Marketing Analyst
- Material Procurement Agent
- Map Curator
- Map Editor
- Map Librarian
- Medical Geographer
- Political Analyst
- Population Geographer
- Recreation Geographer
- Research Analyst
- Research Officer
- Research Coordinator
- Research Geographer
- Research Technician
- State Department Analyst
- Trade Analyst

Graduate School Opportunities

Consult with an advisor from the department. See the website (www.gvsu.edu/geography) under "Careers."

Participating Programs

The Department of Geography and 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.

Student Organizations (www.gvsu.edu/stuey)

Association of Student Geographers

The purpose of this organization shall be to:

1. Further professional and personal interests in Geography by affording a common organization for those interested in the field.
2. Strengthen student and professional training through academic experiences other than those of the classroom.
3. Advance the status of Geography as a cultural and practical discipline for study and investigation.
4. Provide fellowship and guidance for those with an interest in the field of Geography.

Bi-weekly meetings. Questions, contact: Jeff Sweeney, President, or Ashley DuRocher, Vice-President, or Professor Kin Ma, faculty Advisor at 616-331-3351 or makin@gvsu.edu.

Geography and Planning

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.

GTU's goals are:

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

Bachelor of Arts or Bachelor of Science in Geography

Requirements for a Major in Geography

Students majoring in geography are required to complete a minimum of 36 credits. Majors are required to complete four core courses:

- GPY 100 - Physical Geography
- GPY 220 - Cultural Geography
- GPY 400 - Geographic Inquiry
- GPY 495 - Senior Thesis

The remainder of the requirements (24 credit hours) is comprised of electives that students select in close consultation with their academic advisor. Of the remaining 24 credit hours students must complete a minimum of 15 credit hours offered through the Department of Geography and Planning. The remaining 9 hours may be selected from cognate courses from other departments listed below.

Students generally focus their electives beyond the core courses in certain areas of academic interest (for example, geographic methods (GIS remote sensing and image processing and cartography), city and regional planning, environmental geography, or regional/global studies). However, it is suggested that a certain breadth across these areas is desirable to provide flexibility and marketability in the search for employment and/or acceptance in graduate school. No more than six hours of 399 and 499 combines may count toward the major.

Degree Cognates

The B.A. degree requires third semester proficiency in a foreign language.

The B.S. degree cognate sequence requirement consists of three courses:

- STA 215 - Introductory Applied Statistics
- SS 300 - Research Methods in the Social Sciences
- **AND** one course from the following: GPY 407, GPY 410, GPY 420, GPY 412, GPY 470 or PA 495.

City and Regional Planning Courses:

- GPY 309 - Introduction to City and Regional Planning
- GPY 310 - Land Use Planning
- GPY 335 - Geographic Patterns-Global Development
- GPY 364 - GIS for Economic & Business Geography
- GPY 385 - Economic Geography of the United States
- SS 324 - Urbanization

Courses from other departments that count as electives toward city and regional planning:

- ECO 345 - Environmental and Resource Economics
- ECO 436 - Real Estate Economics
- ECO 435 - Urban Economics
- PA 307 - Local Politics and Administration
- PA 495 Community Analysis (capstone)

Environmental Geography Courses:

- GPY 361 - Historical Geography of the Amazon
- GPY 410 - Landscape Analysis
- GPY 412 Global Environmental Change

Courses from other departments that count as electives toward environmental geography:

- ECO 345 - Environmental and Resource Economics
- GEO 320 - Geomorphology (Earth Science Capstone)
- NRM 240 - Principles of Climatology

Geographic Techniques Courses:

- GPY 200 - Computer Cartography
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems
- GPY 364 - GIS for Economic & Business Geography
- GPY 370 - Introduction to Remote Sensing
- GPY 385 - Economic Geography of the United States
- GPY 407 - Advanced GIS
- GPY 470 - Digital Image Processing

Courses from other departments that count as electives toward geographic techniques:

- CIS 160 - Programming with Visual Basic
- CIS 162 - Computer Science I
- CIS 260 - Application Development in Visual Basic
- CIS 230 - Hardware and Software
- NRM 350 - Aerial Photography and Remote Sensing of the Environment
- NRM 250 - Resource Measurement and Maps
- NRM 395 - GIS Applications in Resource Management

Regional Studies and Global Study Courses:

- GPY 235 - World Regional Geography
- GPY 335 - Geographic Patterns-Global Development
- GPY 351 - Geography of Africa
- GPY 345 - Geography of Michigan/Great Lakes Region
- GPY 352 - Geography of Latin America
- GPY 353 - Geography of the United States and Canada.
- GPY 354 - Geography of Asia
- GPY 355 - Geography of Southwest Asia (The Middle East).
- GPY 356 - Geography of Europe

Courses from other departments that count as electives toward regional and global studies:

- ANT 215 - Origins of Civilization

Suggested Order of Coursework for a Major in Geography

First Year, Fall Semester

- CIS 150 - Introduction to Computing
- GPY 100 - Physical Geography
- GPY 220 - Cultural Geography
- MTH 110 - Algebra
- General Education Course

First Year, Winter Semester

- GPY 200 - Computer Cartography
- GPY 235 - World Regional Geography
- General Education Course
- General Education Course
- WRT 150 - Strategies in Writing

Second Year, Fall Semester

- General Education Course
- STA 215 - Introductory Applied Statistics
- Minor Course
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems
- General Education Course

Second Year, Winter Semester

- General Education Course
- General Education Course
- Minor Course
- Elective Course
- General Education Course

Third Year, Fall Semester

- Geography focus area course
- SS 300 - Research Methods in the Social Sciences
- Geography focus area course
- General Education course
- General Education Theme course

Third Year, Winter Semester

- General Education Theme course
- Minor course
- Geography focus area course
- Minor course

Fourth Year, Fall Semester

- GPY 495 - Senior Thesis
- Geography focus area course
- Elective course
- Minor course
- Minor course

Fourth Year, Winter Semester

- Geography focus area course
- Geography focus area course
- Minor course
- Minor course
- General Education Theme course

Geographic Techniques Minor

Completion of this minor will provide a student with an important skill set that will serve them well in the job market or in graduate school. Literacy in geospatial techniques will be a strong adjunct to students who, for example, major in public administration, natural resource management, geology, sociology, anthropology, computer science, engineering, business and economics, public health, criminal justice and many more fields of study. Geographic techniques allow for the visualization of complex spatial (geographic) relationships that are essential to understanding underlying processes (for example, social, political, environmental) that help the geographer/analyst understand change over space and time. Literacy in geospatial techniques is also an important enhancement for future employment. Many agencies and employers use geospatial techniques as part of their core business.

Requirements for a Minor in Geographic Techniques

Students are required to complete four required core courses, and at least 13 credit hours from the list of electives below.

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 Computer Mapping/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: 4
- NRM 350 - Aerial Photography and Remote Sensing of the Environment Credits: 4
- NRM 395 - GIS Applications in Resource Management Credits: 3

City and Regional Planning Minor

Coordinator: Wagendorp.

For additional information about opportunities your college offers, please refer to the College of Liberal Arts section in this catalog.

City and Regional planning in Michigan and the nation is a dynamic and growing area of employment that is concerned with optimal and sustainable land use. Professionally trained planners strive to create better living environments for all by planning and designing smart and integrated land use systems. This process is sometimes undertaken with the assistance of public, academic, private, and community organizations.

Career Opportunities:

A minor in City and Regional Planning provides career opportunities in public, private, and nonprofit planning organizations and agencies. A minor in city and regional planning can also amplify or be a strong adjunct to a major in public administration, civil engineering, finance, business, urban sociology, and social work. Agencies such as public (village, city, township, and county) planning offices, district planning federal office, private architecture and planning establishments, utility companies, and many other types of organizations employ graduates with formal training and planning.

Requirements for a Minor in City and Regional Planning

Students who minor in City and Regional Planning are required to complete a minimum of 24 credits from the courses below. The required core consists of 12 hours, the remaining 12 hours can be selected from ten elective courses.

Required Courses:

- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- GPY 309 - Introduction to City and Regional Planning Credits: 3
- GPY 310 - Land Use Planning Credits: 3
- PA 307 - Local Politics and Administration Credits: 3

Electives:

- ECO 345 - Environmental and Resource Economics Credits: 3
- ECO 435 - Urban Economics Credits: 3
- ECO 436 - Real Estate Economics Credits: 3
- GPY 370 - Introduction to Remote Sensing Credits: 3
- GPY 410 - Landscape Analysis Credits: 3
- GPY 470 - Digital Image Processing Credits: 3
- GPY 490 - Internship Credits: 1 to 9
- PA 307 - Local Politics and Administration Credits: 3
- PA 495 - Community Analysis (capstone) Credits: 3
- SOC 351 - Urban Sociology Credits: 3
- SS 324 - Urbanization 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.

Geology

Requirements for a Minor in Geography - Teacher Certification

Students seeking certification to teach geography at the secondary level are required to complete

- Two core courses
- Four regional studies courses
- One methods course from the list of electives

Core Courses:

- GPY 100 - Physical Geography Credits: 3
- GPY 220 - Cultural Geography Credits: 3

Required Regional Studies courses:

- GPY 235 - World Regional Geography
- GPY 353 - Geography of the United States and Canada.
- GPY 345 - Geography of Michigan/Great Lakes Region

AND one course from the following:

- GPY 351 - Geography of Africa
- GPY 352 - Geography of Latin America
- GPY 354 - Geography of Asia
- GPY 355 - Geography of Southwest Asia (The Middle East).
- GPY 356 - Geography of Europe

Methods Courses:

Choose one:

- GPY 200 - Computer Cartography Credits: 3
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- GPY 309 - Introduction to City and Regional Planning Credits: 3
- GPY 370 - Introduction to Remote Sensing Credits: 3
- NRM 250 - Resource Measurement and Maps Credits: 4
- NRM 350 - Aerial Photography and Remote Sensing of the Environment Credits: 4

Geographic Information Systems Technology - Certificate

The GIS Certificate Program is designed for working professionals who are seeking technical skills in GIS. The course focuses on practical applications of GIS technology, and provides students with the knowledge and skills required to plan and undertake GIS projects. Students applying for admission into the certificate as a non-degree seeking student should have graduated from high school at application time. Degree seeking students must either be currently enrolled at a college or university, or hold at least an associate's degree from a recognized institution. Students may enroll part-time to complete the program.

Requirements for a Certificate in GIS

Students are required to complete a minimum of 24 credit hours. A maximum of six credits can be transferred from an outside institution subject to course content approval. Completion of courses in the student's plan of study will result in award of the certificate in GIS. This shall be noted on the student's official university transcript. In addition, the student will receive a "certificate" from the university.

Required Courses

- CIS 150 - Introduction to Computing Credits: 3
- GPY 200 - Computer Cartography Credits: 3
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- GPY 407 - Advanced GIS Credits: 4
- GPY 499 - Independent Research Credits: 1 to 3

Electives

- CIS 233 - Concepts of Database Systems Credits: 3
- GEO 315 - Geological Field Methods Credits: 2
- GPY 370 - Introduction to Remote Sensing Credits: 3
- GPY 470 - Digital Image Processing Credits: 3
- NRM 250 - Resource Measurement and Maps Credits: 4

- NRM 350 - Aerial Photography and Remote Sensing of the Environment Credits: 4
- NRM 395 - GIS Applications in Resource Management Credits: 3
- PA 644 - GIS in the Public Service Credits: 3

Geology

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Peterson. Professor: Videtich; Associate Professors: Cole, Colgan, Mattox, Mekik, Miller, Peterson, Riemersma, Weber; Assistant Professors: Llerandi-Román, Wampler; Affiliate Faculty: Fegel.

Website: 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, folds, faults, fossils, and the processes that have shaped the Earth and that affect its inhabitants. A relatively young Science, geology is still on the threshold of new discovery as geoscientists explore the last frontiers of the continents and oceans and push on to study planetary geology.

Degrees offered: B.S. in Geology; B.S. in Geology-Chemistry; B.S. in Earth Science; minor in Geology and Earth Science. Teaching certification (secondary) in Earth Science major and minor. Students seeking elementary teaching certification should review the integrated science major in the Grand Valley State University Graduate and Undergraduate Catalog. The B.S. in geology and dual geology-chemistry are intended primarily to prepare students for graduate study in the geological sciences. As terminal degrees, they are also useful in 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 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 such majors as anthropology, other science areas, and business. 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.

Career Opportunities

The geosciences offer challenging career opportunities and are among the higher paid professions. The need for geoscientists reflects the shortages of fossil fuels, metals, industrial minerals, and adequate fresh water supplies. Some of these resources are not renewable, so the demand for geologists, geophysicists, and geochemists is likely to continue. Geoscientists will apply their knowledge and skills to exploring and developing the Earth's resources. The search will cover the continents and extend into the seas as marine geologists and oceanographers search the limits of our planet. At the same time, engineering geologists, geohydrologists, and environmental geologists will seek solutions to problems involving building sites, water supply, waste disposal, and other environmental impacts of human activity. Thus, new cross-disciplinary and interdisciplinary needs for geoscientists may be expected both in industry and in the areas of federal and state geological surveys.

Earth Science teachers will continue to participate in education programs to increase the nation's awareness of the capabilities and limitations of the physical environment. Such primary and secondary school programs will need people familiar with the workings of the Earth's atmospheric, hydrologic, and tectonic systems.

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 Graduate and Undergraduate Catalog.

2. Geology Courses

45–50 semester hours of Geology courses with a minimum GPA of C (2.0):

- An approved Summer Field Camp in Geology (taught by another college or university) Credits: 5-8
- GEO electives - Two courses at the 300 or 400 level (geology theme courses cannot count toward the geology major) Credits: 6-8
- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 5
- GEO 211 - Mineralogy Credits: 4
- GEO 212 - Petrology Credits: 5
- GEO 311 - Structural Geology Credits: 3
- GEO 312 - Sedimentation-Stratigraphy Credits: 4
- GEO 320 - Geomorphology (Earth Science Capstone) Credits: 4
- GEO 485 - Geology Seminar Credits: 1
- GEO 495 - Global Tectonics (Geology Capstone) Credits: 3

3. Cognate Science Courses

32–35 semester hours of cognate Science courses in chemistry, physics, and mathematics, statistics, and computer science as outlined below:

a. Two Chemistry courses:

- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5

b. Two Physics courses

(one of the following pairs)

EITHER

- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

OR

- PHY 230 - Principles of Physics I Credits: 5
- PHY 231 - Principles of Physics II Credits: 5

c. Two basic Mathematics courses:

- MTH 122 - College Algebra Credits: 3
- MTH 123 - Trigonometry Credits: 3

d. Two additional Mathematics, Statistics, or Computer Science courses

(one of the following pairs)

EITHER

- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4

OR

- STA 215 - Introductory Applied Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3

OR

- CIS 150 - Introduction to Computing Credits: 3
- CIS 162 - Computer Science I Credits: 4

Suggested Order of Coursework for a Major in Geology

First Year

Fall Semester Credits: 15

- CHM 115 - Principles of Chemistry I Credits: 5
- GEO 111 - Exploring the Earth Credits: 4
- MTH 122 - College Algebra Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

Winter Semester Credits: 16

- General education courses Credits: 6
- CHM 116 - Principles of Chemistry II Credits: 5
- GEO 112 - Earth History Credits: 5

Second Year

Fall Semester Credits: 16

- General education courses Credits: 6
- Geology elective Credits: 3
- GEO 211 - Mineralogy Credits: 4
- MTH 123 - Trigonometry Credits: 3

Winter Semester Credits: 14

- General education courses Credits: 9
- GEO 212 - Petrology Credits: 5

Third Year

Fall Semester Credits: 15

- General education course Credits: 3
- GEO 311 - Structural Geology Credits: 3
- GEO 320 - Geomorphology (Earth Science Capstone) Credits: 4
- MTH 201 - Calculus I Credits: 5

Winter Semester Credits: 16

- General education course Credits: 3
- GEO 312 - Sedimentation-Stratigraphy Credits: 4
- MTH 202 - Calculus II Credits: 4
- PHY 230 - Principles of Physics I Credits: 5

Summer Field Course Credits: 5-8

Fourth Year

Fall Semester Credits: 12-14

- Geology elective Credits: 3-5
- General education course Credits: 3
- GEO 485 - Geology Seminar Credits: 1
- PHY 231 - Principles of Physics II Credits: 5

Winter Semester Credits: 16

- General education course Credits: 3
- Geology elective Credits: 3
- Electives Credits: 6
- GEO 485 - Geology Seminar Credits: 1
- GEO 495 - Global Tectonics (Geology Capstone) Credits: 3

Geology Minor

Requirements for a Minor in Geology

Completion of a minor in Geology requires 25-27 credits including the following:

- GEO Elective (one course at the 300 or 400 level) (3 to 5 credits), geology theme courses (300-level) cannot count toward the geology minor.
- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 5
- GEO 211 - Mineralogy Credits: 4
- GEO 212 - Petrology Credits: 5
- GEO 311 - Structural Geology Credits: 3
- GEO 485 - Geology Seminar Credits: 1

Bachelor of Science in Geology-Chemistry

For additional information about opportunities your college offers, please refer to your college's section in this catalog.

Requirements for a Dual Major in Geology-Chemistry

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

Thirty (30) semester credit hours of Geology courses with a minimum GPA of C (2.0).

- GEO 111 - Exploring the Earth Credits: 4
- GEO 112 - Earth History Credits: 5
- GEO 211 - Mineralogy Credits: 4
- GEO 212 - Petrology Credits: 5

Modern Languages and Literatures

- GEO 311 - Structural Geology Credits: 3
- GEO 312 - Sedimentation-Stratigraphy Credits: 4
- GEO 445 - Introduction to Geochemistry Credits: 4
- GEO 485 - Geology Seminar Credits: 1

3. Chemistry Courses

Twenty-one (21) semester credit hours of Chemistry courses with a minimum GPA of C (2.0).

- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- CHM 222 - Quantitative Analysis Credits: 3
- CHM 225 - Instrumental Analysis I Credits: 3
- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 491 - Chemistry Seminar II Credits: 1

4. Mathematics Course

Five (5) semester credit hours of Mathematics.

- MTH 201 - Calculus I Credits: 5

5. Physics Course

Five (5) semester credit hours.

- PHY 230 - Principles of Physics I Credits: 5

6. Capstone Course

Three (3) semester credit hours.

- GEO 495 - Global Tectonics (Geology Capstone) Credits: 3

Modern Languages and Literatures

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Caillaud. Professors: Cata, Rydel, Wright; Associate Professors: Al-Mallah, Anderson, Caillaud, Cata, Eick, Fidalgo-Eick, Golembeski, Gomez, Moret, Pettes Guikema, Pozzi, C. Smith, Vrooman, Watts; Assistant Professors: Fortes, Fox, Liang, Maisel, Menke, Robinson, Serrata, R. Smith, Yancey.

Website: www.gvsu.edu/ml

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.

Career Opportunities

A bachelor of arts degree in a modern foreign language is a true liberal arts degree, with all the breadth of cultural understanding and communication skills that have always characterized liberal arts study. The demand for teachers of foreign languages is increasing both in schools and in business and industry. Combined with a major or minor in another field, the B.A. in foreign languages opens many possibilities in the worlds of international trade, international relations, diplomacy, government, tourism, and service organizations.

Given the increasing diversity of the American population and the presence of large numbers of persons whose native language is not English, foreign language study is also an asset to those who plan to work in a variety of professions within the borders of the United States, both in the public and private spheres. Virtually all large corporations and many smaller ones in Michigan and throughout the country are now or

soon will be active in international markets. There have never been more opportunities for college graduates with foreign language skills.

Participating Programs

East Asian Studies (www.gvsu.edu/eas)

The east asian studies program at Grand Valley State University explores the languages, cultures, histories, and socioeconomic conditions 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.

Latin American Studies (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. Students in a wide variety of majors and professional programs can benefit from studying Latin America. In fact, the latin american studies program is for any traditional or continuing student who simply wants to learn more about the fascinating and diverse cultures of Latin America.

Middle East Studies (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 and the culture of Michigan, which is home to the nation's largest Arab American community, half Christian, half Muslim, with substantial Jewish congregations.

Russian Studies (www.gvsu.edu/ml/index.cfm)

A major in Russian Studies leads to a Bachelor of Arts degree. Because proficiency in the Russian language forms the most crucial component of the program, the major requires completion of third-year Russian (RUS 301, 302, or equivalent) with a grade of B or above and recommends a Russian language minor. Students need at least three years of Russian language study to be able to grasp basic grammar skills and begin to gain oral proficiency. Students may enhance their language skills by participating in approved summer intensive language programs both in Russia and the United States.

Mary and Wilhelm Seeger Scholarship

Several years ago, Grand Valley State alumni established the Mary and Wilhelm Seeger Scholarship to honor these two well-respected faculty members for the contributions they have made to our students over the last quarter-century. The scholarship, a non-renewable award of \$1,000 will be awarded to a full-time student in the top quarter of the entering class who is planning to study one or more foreign languages at Grand Valley, either as a major or in combination with another field of study.

This scholarship is for entering Freshmen only. In order to qualify the student must meet the following criteria:

- entering freshman
- 3.5 GPA
- 26 ACT composite score
- a possible interest in language

Students are contacted by the department and invited to apply for the scholarship, based on the above criteria.

Student Organizations (www.gvsu.edu/stuey)

Francophiles, Deutsch Klub, Il Geranio, La Tertulia Honors Societies
Pi Delta Pi (French), Delta Phi Alpha (German), Dobro Slovo (Russian), Signa Delta Pi (Spanish).

Degree Requirements

A student working toward any B.A. degree must successfully complete the third semester course in a foreign language.

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 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 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 of at least one semester is strongly recommended.

The 380 special-topics courses are available in all foreign languages. The independent study and research courses in French, German, Russian, and Spanish 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 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.

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” below).

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 for proper placement.

“150” Courses

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. The “150” course fulfills the general education category CGE/B.

Foreign Language Resource Center (Laboratory) (marvin.mll.gvsu.edu/LRCWordpress)

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 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.

Study Abroad (www.gvsu.edu/studyabroad)

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 majority of programs currently offered take place during the summer and are accompanied 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.

Regular accompanied programs include:

- China - One or two semester programs in Chinese language and culture at East China Normal University, Shanghai.
- France - A summer school program in French language and culture located in Nice in southern France.
- Japan - A two-semester exchange program with both the International Christian University in Tokyo and the Japan Center for Michigan Universities in Hikone. Intensive Japanese language study is offered in the summer at the Japan Center.
- Mexico - A summer school program offering classes in Spanish language, literature, culture, and civilization in Guadalajara, Mexico.
- Poland - Summer and academic year programs in economics, management, and the Polish language located at the Krakow University of Economics.
- Russia - A faculty-led summer program for various levels of Russian language and Russian Culture instruction.
- Spain - Intensive Spanish language studies (all levels) for fall, winter, or summer semesters at the University of Deusto in Bilbao, Spain.
- Taiwan - A summer school program offering classes in Chinese language and culture in Taiwan.

Grand Valley offers two full years (16 credits) of instruction in Arabic, Italian, Japanese, and Polish. The 201 course satisfies the B.A. degree cognate. Courses in Arabic are part of the Middle East Studies minor and courses in both Chinese and Japanese language are part of the East Asian Studies minor. Plans are under way to increase offerings in these and other less-commonly taught languages.

Arabic, Chinese, Italian, Japanese, and Polish Language Instruction

Grand Valley offers two full years (16 credits) of instruction in Arabic, Chinese, Italian, Japanese, and Polish. The 201 course satisfies the B.A. degree cognate. Courses in Arabic are part of the Middle East Studies minor and courses in both Chinese and Japanese language are part of the East Asian studies minor. Plans are under way to increase offerings in these and other less-commonly taught languages.

Courses of Instruction in Arabic:

- ARA 101 - Elementary Arabic I
- ARA 102 - Elementary Arabic II
- ARA 180 - Special Topics in Arabic
- ARA 201 - Intermediate Arabic I
- ARA 202 - Intermediate Arabic II
- ARA 280 - Special Topics in Arabic
- ARA 380 - Special Topics in Arabic
- ARA 480 - Special Topics in Arabic

Courses of Instruction in Chinese:

- CHI 101 - Elementary Chinese I Credits: 4
- CHI 102 - Elementary Chinese II Credits: 4
- CHI 180 - Special Topics in Chinese Credits: 1 to 4
- CHI 201 - Intermediate Chinese I Credits: 4
- CHI 202 - Intermediate Chinese II Credits: 4
- CHI 280 - Special Topics in Chinese Credits: 1 to 4
- 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
- CHI 341 - Introduction to Classical Chinese Credits: 3
- CHI 351 - Practical Chinese Credits: 3
- CHI 380 - Special Topics in Chinese Credits: 3
- CHI 399 - Independent Reading Credits: 1 to 4
- CHI 480 - Special Topics in Chinese Credits: 1 to 4

German

Courses of Instruction in Italian:

- ITA 101 - Elementary Italian I Credits: 4
- ITA 102 - Elementary Italian II Credits: 4
- ITA 201 - Intermediate Italian I Credits: 4
- ITA 202 - Intermediate Italian II Credits: 4
- ITA 280 - Special Topics Credits: 1 to 4

Courses of Instruction in Japanese:

- JPN 101 - Elementary Japanese I Credits: 4
- JPN 102 - Elementary Japanese II Credits: 4
- JPN 180 - Special Topics in Japanese Credits: 1 to 4
- JPN 201 - Intermediate Japanese I Credits: 4
- JPN 202 - Intermediate Japanese II Credits: 4
- JPN 280 - Special Topics in Japanese Credits: 1 to 4
- JPN 380 - Special Topics in Japanese Credits: 3
- JPN 399 - Independent Reading Credits: 1 to 4
- JPN 480 - Special Topics in Japanese Credits: 1 to 4

Courses of Instruction in Polish:

- POL 101 - Elementary Polish I Credits: 4
- POL 102 - Elementary Polish II Credits: 4
- POL 201 - Intermediate Polish I Credits: 4
- POL 202 - Intermediate Polish II Credits: 4
- POL 380 - Special Topics Credits: 1 to 6

Bachelor of Arts in German

For additional information about opportunities your college offers, please refer to your college's section in this catalog.

Requirements for a Major in German

Students majoring in German are required to complete at least 34 hours beyond 201, including:

- a 400-level course
- GER 202 - Intermediate German II Credits: 4
- GER 301 - Composition Credits: 3
- GER 302 - Conversation Credits: 3
- GER 495 - Advanced Topics in German (Capstone) Credits: 3

Electives

Of the elective courses, they must take the following:

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.

Majors seeking secondary teacher certification must take GER 322 (Introduction of German Linguistics) in addition to the above requirements.

Literature Courses

At least two literature courses selected from the following:

- 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

Culture and Civilization Courses

At least two culture and civilization courses selected from the following:

- GER 311 - German Civilization and Culture II Credits: 3
- GER 312 - Contemporary German Culture Credits: 3
- GER 315 - German Cinema Credits: 3

Linguistics Course

And at least one linguistics course selected from the following:

- GER 321 - Phonetics Credits: 3
- GER 322 - Introduction to German Linguistics Credits: 3
- GER 421 - History of the German Language Credits: 3

German Minor

Requirements for a Minor in German

Minors must take at least 22 credits of German beyond 201, including GER 202 (if needed), and GER 301 and 302 (Composition and Conversation). Of the elective courses, they must take:

- GER 202 - Intermediate German II Credits: 4
- GER 301 - Composition Credits: 3
- GER 302 - Conversation Credits: 3

Literature Courses

At least two literature courses

- 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

Culture and Civilization Course

And least one culture and civilization course

- GER 311 - German Civilization and Culture II Credits: 3
- GER 312 - Contemporary German Culture Credits: 3
- GER 315 - German Cinema Credits: 3

Linguistics Course

Teaching minors are strongly advised to take a linguistics course as well, preferably

- GER 322 - Introduction to German Linguistics Credits: 3

Master of Health Administration

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

Program Coordinator: Borders. Professors: Balfour, Payne; Associate Professors: Borders, Robbins, Schulte; Assistant Professors: Cline.

Website: www.gvsu.edu/grad/mha

The MHA degree program broadens the commitment of the School of Public, Nonprofit and Health Administration to educate community leaders. The mission of the MHA program at Grand Valley is to teach and prepare individuals for managerial and leadership roles in the challenging and complex field of health care administration. The program centers on inter-disciplinary learning experiences that integrate classroom study, applied research, professional development, and field experience. The curriculum is designed to develop advanced executive abilities through a combination of core competencies and specialized areas of concentration. Consistent with the mission of Grand Valley State University, the program is based in a faculty that values teaching excellence supported by active scholarship and community service.

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: 45 credit hours.

Admission Requirements

1. A completed graduate application.
2. A \$30 nonrefundable application fee unless the applicant has previously applied to Grand Valley State University and paid this fee.
3. An official transcript from each undergraduate and graduate institution.
4. An undergraduate grade point average of 3.0 or higher.
5. Three letters of reference from informed sources.
6. An essay on career and educational objectives.

7. Current resume.
8. Scores from the TOEFL (Test of English as a Second Language)

Applicants with less than a 3.0 grade point average may be admitted if other indicators predict a likelihood of academic success. These include but are not limited to five or more years of professional work experience since receiving a baccalaureate degree, three letters of recommendation, a personal interview, and GRE or GMAT scores.

Program Location: Pew Campus

Master of Health Administration

Requirements for the M.H.A. Master of Health Administration

The curriculum is multi-disciplinary (includes health administration, health professions, public and nonprofit management, business, and social work) and consists of four levels: Level I — one course that covers the basics of the health care system and three foundational management courses in research methods, human resources, and organization theory (students may choose a public sector or a business track in HR and organizations); Level II — four courses on key dimensions of health care administration — public policy, financial administration, economics, law and ethics; Level III — specializations (student chooses one) in health services management, financial management, and health policy analysis; and Level IV — capstone experience in which students will participate in advanced seminars and field experience with other members of the health professions and health care managers. Other courses, such as PA 680: Special Topics, and PA 693: Research Project, may be substituted for specialization courses with advisor approval. The program consists of a total of 45 credit hours.

Core Level I Credits: 12

- PA 611 - Research Methods Credits: 3
- PA 630 - Health Administration and Service Credits: 3
- **AND EITHER** MGT 633 - Management of Human Resources Credits: 3
OR PA 612 - Human Resources in Organizations Credits: 3
- **AND EITHER** BUS 631 - Leadership and Organizational Dynamics Credits: 3
OR PA 614 - Organization Theory Credits: 3

Core Level II Credits: 12

(prerequisite, PA 630 - may be concurrent)

- 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

Level III: Specializations — choose one Credits: 12

1. Health Services Management

(Prerequisites: PA 630 — may be concurrent)

Required:

- MGT 635 - Planned Change and Organizational Development Credits: 3
OR PA 643 - Strategic Management and Planning Credits: 3

Select 3:

- NUR 646 - Nursing Administration and Health Care Systems I Credits: 3 (Note: NUR 646 is a directed elective)
- 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 640 - Marketing Health and Human Services Credits: 3

2. Financial Management

(Prerequisites: Core Level I and PA 630 and 632 — may be concurrent)

Required:

- ACC 511 - Financial and Managerial Accounting Concepts Credits: 3
- FIN 521 - Data Analysis in Business Credits: 2

- FIN 522 - Finance Principles for Managers Credits: 2
- PA 615 - Public Financial Administration Credits: 3
OR PA 662 - Nonprofit Resource and Financial Management Credits: 3

3. Health Policy Analysis

(Prerequisites: PA 630 and PA 631 — may be concurrent)

Required:

- PA 616 - Public Policy Analysis Credits: 3

Select three:

- PA 644 - GIS in the Public Service Credits: 3
- SW 610 - Social Welfare Policy and Services I Credits: 3
- SW 676 - Community and Social Planning Credits: 3

Level IV: Capstone Credits: 9

(Prerequisites: Levels I and II and one course in specialization)

PA 690 is recommended for students with less than 3 years of professional experience. A second semester of internship (PA 691) may be substituted for one of the other capstone courses. Special topics courses (PA 680) or other graduate-level courses may be substituted for specialization courses with advisor's permission.

Select 3:

- HPR 625 - Health Professions Leadership Credits: 3
- PA 619 - Public Management Seminar Credits: 3
- PA 690 - Public Administration Internship I Credits: 3

Health Communication

For additional information about opportunities your college offers, please refer to the School of Communication website.

Website: 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.

Career Opportunities

The health communication curriculum at Grand Valley State University prepares students for careers in the health care industry and allows sufficient flexibility for them to emphasize one or more communication areas. An internship (COM 490) in the field of health communication is required, providing students with professional experience.

Note: The health communication major requires COM 201 to be taken in the School of Communications core.

Bachelor of Arts or Bachelor of Science in Health Communication

Requirements for a Major in Health Communication

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 - Theories of Communication Credits: 3

And one of the following:

- COM 201 - Speech Credits: 3
- 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. Cognates

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. cognate or the B.S. cognate that is intended for a particular undergraduate program.

B.A. Cognate

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

The B.S. Cognate for Health Communications is:

- COM 375 - Communication Research Credits: 3
- MKT 352 - Marketing Research Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

2. Biomedical Sciences Core Credits: 19

A higher-level laboratory biology class (such as BIO 120) can be substituted for BIO 103. 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 - Public Health Concepts Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- HPR 340 - Health Care Management Credits: 2
- HPR 100 - Medical Terminology Credits: 2
- BIO 104 - Biology for the 21st Century Credits: 4

3. 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
- CJR 256 - News Reporting I Credits: 3
- CJR 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

4. Elective Group

(select two of four courses for 6 to 8 credits)

- CFV 125 - Media Production I Credits: 4
- CFV 226 - Media Production II Credits: 4
- CPH 171 - Photography I Credits: 4
- CPH 172 - Photography II Credits: 4

5. Capstone Credits: 3

- COM 495 - Issues in Communication (capstone) Credits: 3

Health Professions

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

Director: Green. Associate Professor: Green; Assistant Professors: Brew, Wambach, Ritch.

Note: The Health Professions Degree is undergoing significant curriculum revisions. Please check with the program director for current requirements.

Website: www.gvsu.edu/hpr

Degree Offered: Bachelor of Science in Health Professions

The B.S. in Health Professions degree is best suited for students interested in pursuing work in the allied health field at the undergraduate level or a graduate degree in a particular health profession. The B.S. in Health Professions degree serves two principle functions: To prepare students for general entry level positions in the allied health field and to prepare students for entry into graduate level degree programs such as physical therapy, physician assistant studies, and occupational therapies. Should a student decide not to directly advance to a graduate level education in the health professions or should a student not be accepted into a desired graduate level program, the student will still have an appropriate foundation and background for employment in the health care arena.

This degree can prepare students for employment opportunities in areas such as: health care informatics, medical interpretation, community mental health, and entry level positions in health care and extended care management.

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 and network, 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 the development of new health care profession educational programs.

Health Professions Degree Goals:

- Prepare students with an educational foundation to succeed in the allied health professions.
- Instill in students the generic 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.

Career Opportunities

The demand for many health care professions exceeds the supply. With the aging of the American population a boom in health care employment is expected. The Bureau of Labor Statistics predicts that at least half of the 10 fastest growing occupations will be in health care fields. The Bureau of Labor Statistics also projects tens of thousands of new jobs for hospital workers. In addition, as the health care system continues its extraordinary state of transition, many new employment opportunities will occur in areas outside the realm of traditional hospitals.

Bachelor of Science in Health Professions

The B.S. in Health Professions degree will be awarded to students following successful completion of a four-year program. Curriculum design will include general education requirements and other specifics appropriate for student interests and academic progress. Students will typically declare a major by the end of their sophomore year. This degree also expects the student to declare a minor in a field that will further assist the student in their overall goal of working in the healthcare arena. Minors

are to be selected after consultation and approval from their academic major advisor.

Once a student declares a major in health professions they will be advised by their assigned major academic advisor and assisted by the Student Services Coordinator for the College of Health Professions. Successful progress through a program should include completion of an externship and an appropriate minor. Students are awarded a B.S. in Health Professions degree upon successful completion of their academic requirements.

Requirements for a Major in Health Professions

A minimum of 120 credits is required for completion of the bachelor's degree. General university degree requirements are identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

B.S. in Health Professions core courses (27 semester credit hours):

- 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
- HPR 110 - Introduction to Health Professions Credits: 3
- HPR 220 - Health Care Delivery Credits: 2
- HPR 301 - Inquiry Into Evidence Based Practice Credits: 3
- HPR 340 - Health Care Management Credits: 2
- HPR 495 - Issues in Health Professions (capstone) Credits: 3
- OSH 300 - Introduction to Occupational Safety and Health Credits: 3

Required science cognate courses (27 semester credit hours):

- 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

A minor with advisor approval

B.S. cognate course sequence:

- BIO 120 - General Biology I Credits: 4
- BMS 290 - Human Physiology Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Suggested Order of Coursework for a Major in Health Professions

Because of the variety of roles this degree serves based on individual student interests, students are strongly encouraged to seek out their academic faculty advisor when setting up a curriculum that will move the student in the direction of their health professions area of interest.

History

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Galbraith. Professors: Cole, Goode, Kelleher, O'Neill, Smither, G. Stark, Tripp; Associate Professors: Benjamin, Buckridge, Cooley, Coolidge, Crouthamel, Galbraith, Montagna, Morison, Murphy, Shan, Shapiro-Shapin, D. Stark, Underwood, Wangdi, Welch; Assistant Professors: Andrews, Chapman, Daley, Eaton, Gottlieb, Lingwood, Moore, Rosales, Stabler.

Website: www.gvsu.edu/history

What human beings can do, might do, or ought to do makes no sense at all unless we know what they have done already. This involves the study of History. History examines the lives of people, the consequences of ideas, and the unending quest of daily bread. It presents human misfortunes and greatness as well as the struggle for survival. Study of the past reveals

valuable achievements as well as dreadful mistakes, and in so doing helps us meet the unexpected challenges of our own day.

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 University Honors College and other interdisciplinary programs; we participate actively in 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.

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 Douglas Montagna Chapter Advisor, for more information.

Career Opportunities

Careful training in research, writing, critical reading, and interpretation makes History graduates attractive to a great number of employers who value these abilities. History majors enjoy a high rate of employment in a wide variety of careers, including politics, law, business, education, journalism, foreign and civil service, editing, and private research.

Graduate School Opportunities

History majors have gone on to graduate work in the fields of Higher Education/Student Affairs, History, International Relations, Law, Library and Information Science, Museum Studies, Philosophy, Politics, Psychology, Public History, Social Work.

Participating Programs

The History Department participates in the following programs:

- African/African American Studies
- College of Education
- East Asian Studies
- Group Social Studies
- Honors College
- Latin American Studies
- Liberal Studies
- Middle East Studies
- Russian Studies
- Women and Gender Studies

History

Student Organizations (www.gvsu.edu/stuey)

Beginning in the Fall of 2009, the History Club will offer history oriented programs. Please see the Department of History website for updates: www.gvsu.edu/history/.

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.

Scholarship Opportunities

The Breen Prize and Niemeyer Scholarship(s)

The Breen Prize and Niemeyer Scholarship are awarded by the department each year. Details are available in the History Department office, D 1160 MAK and on our website.

Bachelor of Arts or Bachelor of Science in History

Requirements for a Major in History

Students majoring in history are required to complete at least 39 credit hours, including the four survey courses, a course in the writing of history, and the capstone. Students pursuing teacher certification must also take SST 310 and six 300-level electives in history. Students not pursuing teacher certification must take seven history electives at the 200 or 300 level. The required courses include:

- 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 300 - Writing History Credits: 3
- HST 495 - Varieties of History (capstone) Credits: 3

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. Students who choose to earn a B.S. degree must complete the following cognate sequence:

- CIS 150 - Introduction to Computing Credits: 3
- SS 300 - Research Methods in the Social Sciences Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

History Electives

The electives in history for all majors must include at least one 300-level course in United States history, European history, and non-Western history. Students pursuing teacher certification must take three additional 300-level history courses plus SST 310. Students not pursuing teacher certification must take four additional electives from HST 210 or 211, HST 301–391, or HST 498. 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 300 and 495. Majors seeking teacher certification must maintain a GPA of at least 2.7.

Category 1: U.S. History

- HST 301 - Colonial U.S. History to 1763 Credits: 3
- HST 302 - American Revolution and Federalist Era Credits: 3
- HST 303 - Era of Sectional Conflict and Civil War Credits: 3
- HST 305 - The United States Transformed Credits: 3
- HST 306 - Recent U.S. History, 1930 to Present 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 325 - History of American Sports Credits: 3
- HST 326 - Industrializing America Credits: 3
- HST 327 - History of American Urban History Credits: 3
- HST 328 - Constitutional History of the U.S. Credits: 3
- HST 329 - Intellectual History of the United States Credits: 3
- HST 370 - History of Medicine and Health Credits: 3
- HST 371 - History of Gender, Family, Sexuality Credits: 3

Category 2: European History

- HST 350 - Classical Greece and Rome Credits: 3
- HST 355 - The Middle Ages Credits: 3
- HST 360 - Tudor and Stuart England Credits: 3
- HST 361 - Modern Britain Credits: 3
- HST 363 - European Social and Cultural History Credits: 3
- HST 364 - Renaissance and Reformation Europe Credits: 3
- HST 365 - Early Modern Europe Credits: 3
- HST 370 - History of Medicine and Health Credits: 3
- HST 371 - History of Gender, Family, Sexuality Credits: 3
- HST 376 - History of Witches Credits: 3
- HST 377 - History of Warfare Credits: 3
- HST 384 - Revolutionary Europe, 1789-1900 Credits: 3
- HST 385 - Europe 1900-1945 Credits: 3
- HST 386 - Europe since World War II Credits: 3
- HST 387 - Modern Germany Credits: 3
- HST 390 - Soviet History Credits: 3

Category 3: Non-Western History

- HST 330 - Early Latin America Credits: 3
- HST 331 - Modern Latin America Credits: 3
- HST 333 - Survey of Modern Chinese History Credits: 3
- HST 334 - The Making of the Caribbean Credits: 3
- HST 335 - African Civilizations 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 340 - A History of East Asia to 1800 Credits: 3
- HST 341 - A History of East Asia since 1800 Credits: 3
- HST 342 - History of East Asian Religions Credits: 3
- HST 345 - The Ancient Mediterranean and Orient Credits: 3
- HST 372 - From Slavery to Freedom Credits: 3
- HST 374 - Revolution in the Americas Credits: 3
- HST 389 - Russian History Credits: 3
- HST 391 - Russian Thought-Ninth to Twentieth Centuries 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 Major in History

First Year

- Three General Education Foundation courses
- Two foreign language courses (B.A. candidates)

OR

- CIS 150 - Introduction to Computing Credits: 3
AND STA 215 - Introductory Applied Statistics Credits: 3
(B.S. Candidates)
- HST 203 - World History to 1500 A.D. Credits: 3
- HST 204 - World History since 1500 Credits: 3
- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4

Second Year

- Four General Education Foundation courses
- HST 205 - American History to 1877 Credits: 3
- HST 206 - American History since 1877 Credits: 3
- HST 300 - Writing History Credits: 3
- One elective
- SS 300 - Research Methods in the Social Sciences Credits: 3 (B.S. candidates)
- One foreign Language course (B.A. candidates)

Third Year

- Three 300-level history courses
- Five elective courses (non teachers)
- SST 310 - Strategies for Social Studies Teachers Credits: 3 (teacher cert. candidates)
- Four elective courses (teacher cert. candidates)
- Two General Education Theme courses

Fourth Year

- Three 300-level history courses
- One General Education Theme course
- Six elective courses
- HST 495 - Varieties of History (capstone) Credits: 3

Additional Course Information

Courses on the 100 level are introductory courses designed to fulfill the general education requirement in Historical Perspectives. Courses on the 200 level are introductory courses designed to prepare students for advanced study in history; HST 203 also fulfills the general education requirement in Historical Perspectives. Courses on the 300 level focus on particular regions, era 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.

Master of Education, Advanced Content Specialization in History

The History Department offers graduate courses that are included in the options in the M.Ed. in general education (Advanced Content Specialization).

Students apply to the College of Education for admission to the M.Ed. Program. Students selecting the history option should have earned an undergraduate major or minor in history or social science. Prerequisites in all 600-level courses include: graduate standing with a major or minor in history or social science or consent of instructor.

The program consists of a minimum of 33 hours (at least 11 courses), including a minimum of 18 hours (at least six courses) in education and a minimum of 15 hours (at least five courses) in history. Students in the program will have an advisor from the College of Education and an advisor from the History Department.

Students who choose this concentration will, with the help of an advisor from the History Department, select courses from the following groups, as indicated (all courses carry three credits).

Historical and Research Methods (minimum of one course):

- HST 600 - Historiography Credits: 3
- HST 605 - Techniques in Local and Archival History Credits: 3

U.S. History (minimum of one course):

- HST 625 - The United States in the Nuclear Age Credits: 3

Non-Western History (minimum of one course):

- HST 630 - The Middle East in the Twentieth Century Credits: 3
- HST 632 - A History of Brazil Credits: 3
- HST 633 - Issues in Third World History Credits: 3

European History (minimum of one course):

- HST 643 - The French Revolution Credits: 3
- HST 648 - European Origins of World Wars I and II Credits: 3

Course Option

- HST 680 - Special Topics in History Credits: 1 to 3

History Minor**Requirements for a Minor in History**

Students who minor in history must complete at least 20 credit hours, including:

- 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

Additional Courses

The remaining three courses must be selected from HST 210 or HST 211, HST 301-391 (see Categories 1, 2, and 3 in the History B.A., B.S. section), or HST 495. At least one of these courses must be in European or non-western history (see Categories 2 and 3). HST 210 and HST 211 count as electives in non-western history. Depending on the topic studied, HST 380, 490, 495, and 498 may be used for any of the three categories listed in the History B.A., B.S., section of this catalog. Minors must maintain a GPA of at least 2.0 in courses in the department. Minors seeking teacher certification must maintain a GPA of at least 2.7.

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.

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.

Frederik Meijer Honors College

Director: Chamberlain.

Faculty: Alderink, Baum, Benjamin, DenDulk, Ellenberger, Fitzpatrick, McGee, Swartzlander, Toot, White.

Joint-Appointments: Anderson, Flaschenriem, Levitan, Morison, Pazdernik, Rayor, Rudolph.

Faculty Fellows: Al-Mallah, Alexander, Alvarez, Ambrose, Balfour, Bernstein, Blackman, Buckridge, Burg, Cataldo, Chapman, Cimitile, Cole, Coolidge, Crouthamel, deYoung, Evans, Feurzeig, Franciosi, Galbraith, Glass, Gross, Hewitt, Hull, Joanisse, Kelleher, Kopperl, Kravitz, Lai, Lane, Lockerd, Montagna, Morgan, Morison, Patel, Pestana, Pozzi, Rydel, Scott, Smith, Spear, Stillerman, Tripp, Wilson, Wright.

Website: www.gvsu.edu/honors

Mission

The mission of the Frederik Meijer Honors College is to provide a challenging interdisciplinary liberal education in a personal, nurturing living/learning environment. Honors education encourages students to develop high-level skills, knowledge and expertise and prepares them to be intellectually curious, life-long learners and extraordinarily capable leaders in their communities and the world.

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 intelligence, motivation, creativity, and academic

Frederik Meijer Honors College

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 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 at the Grand Valley State University Student Scholarship 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 is an annual summer service-learning program 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 Honors College requirements results in the “Meijer Honors College Graduate” designation on both the baccalaureate diploma and the college transcript. Graduates wear a special stole at Commencement.

Admission

Applicants must first be accepted to GVSU, and then 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 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 forms can be picked up at the Honors office or from the Website (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 a semester 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 resign from Honors but will be responsible for completing the regular general education program of the University.

Learning and Living Community

The Glenn A. Niemeyer Learning and Living Center

Students who have been admitted to the Meijer Honors College are encouraged to live in the Glenn A. Niemeyer Learning and Living Center, a state-of-the-art residential and academic center for Honors. This arrangement allows students who have a strong commitment to academic excellence to live with other students of similar interest. The Center is administered through a cooperative agreement between the Director of Housing and the Meijer Honors College Director. Students living in Niemeyer are involved in governance, social activities, and in program planning through the Honors Community Council (see below under Student Organizations). Residents are often called upon by various University staff and administrators for suggestions, ideas, and reactions on matters of importance to the campus community.

Space in Niemeyer is limited. Returning honors students are strongly advised to submit their housing applications on line as soon as possible. Incoming freshmen interested in living in Niemeyer must submit (1) their Meijer Honors College application and (2) a separate University Housing application. On that application they select Honors housing as their first option. These can be submitted on line.

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.

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.

The Frederick Meijer First Generation Honors College Student Scholarship 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 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 Honors College to renew this scholarship.

For more information on applying and competing for scholarships, contact an admissions counselor at admissions@gvsu.edu or (616) 331-2025 or 1-800-748-0246. For all of the possibilities, see www.gvsu.edu/financialaid or call (616) 331-3234 or (800) 748-0246.

Student Organizations

Honors Community Council

The Honors Community Council is the student group responsible for contributing to Meijer Honors College governance and provides all honors students, not just those living in the Niemeyer Learning and Living Center, opportunities to be heard. The Community Council provides input to the College, develops programming and service 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

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

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 theme requirement.

University Basic Skills Requirements

1. Mathematics

All Grand Valley students must satisfy this requirement by taking the course, testing out of the course, or by waiver from the combination of mathematics taken in high school and a sufficiently high ACT score.

- MTH 110 - Algebra Credits: 4

2. 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 Arts and Humanities sequence with a B average satisfies the WRT 150 requirement.

- WRT 150 - Strategies in Writing Credits: 4

3. Junior Level Writing Assessment

Honors students may satisfy this requirement by completing ONE of the following:

- Maintaining a grade point average of 3.2 or higher, completing any Arts and Humanities sequence with a B or better grade average, and completing all Honors requirements prior to the Senior Project.
- Passing a junior level writing proficiency test administered through the Student Academic Success Center.

4. 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: 5
- MTH 221 - Mathematics for Elementary Teachers I Credits: 4
- PHI 103 - Logic Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

5. General Education Theme

Honors students satisfy this requirement 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 three-course requirement of the University.

Honors College Requirements

1. Integrated Arts and Humanities

All honors students must complete one of the integrated Honors Arts and Humanities 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.

American Civilization, European Civilization, Classical World, Islamic Middle East, Asian Civilization, Latin American Civilization, and African Civilization 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.

American Civilization

- HNR 213 - American Civilization I Credits: 3
- HNR 214 - American Civilization I Credits: 3
- HNR 223 - American Civilization II Credits: 3
- HNR 224 - American Civilization II Credits: 3

Classical World

- HNR 211 - Classical World I Credits: 3
- HNR 212 - Classical World I Credits: 3
- HNR 221 - Classical World II Credits: 3
- HNR 222 - Classical World II Credits: 3

European Civilization

- HNR 215 - European Civilization I Credits: 3
- HNR 216 - European Civilization I Credits: 3
- HNR 225 - European Civilization II Credits: 3
- HNR 226 - European Civilization II Credits: 3

Islamic Middle East

- HNR 209 - Islamic Middle East I: The Classical Period Credits: 3
- HNR 210 - Islamic Middle East I: Philosophy and Art Credits: 3
- HNR 219 - Islamic Middle East II: The Modern World Credits: 3
- HNR 220 - Islamic Middle East II: Philosophy and Art Credits: 3

The Making of Europe

- HNR 217 - The Making of Europe I Credits: 3
- HNR 218 - The Making of Europe II: The High Middle Ages Credits: 3
- HNR 227 - The Making of Europe III: Early Renaissance Credits: 3
- HNR 228 - The Making of Europe IV: Late Renaissance Credits: 3

2. World Perspectives

Students selecting the Meijer Honors College will most often satisfy the U.S. Diversity and World Perspectives requirements with the Arts and Humanities sequences and/or other specifically designated courses in the Honors College. For example, students taking American Civilization will need a World Perspectives course, while students taking Classical World, European Civilization, Islamic Middle East, 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 Honors College.

3. Honors Social Sciences

Students need two Honors Social Sciences courses, each from a different discipline. They may select an integrated sequence such as Society and Self (HNR 233 and 234), or may take two separate courses. High school advanced placement exams may satisfy an Honors Social Science 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 (Honors section) - Cultural Anthropology (Honors Section) Credits: 3
- PSY 101 (Honors section) - Introductory Psychology (Honors Section) Credits: 3
- ECO 211 (Honors section) - Introductory Macroeconomics (Honors Section) Credits: 3
- ECO 211 (Honors section) - Introductory Microeconomics (Honors Section) Credits: 3
- HNR 233 - Society and Self: Sociological Perspective Credits: 3
- HNR 234 - Society and Self: Psychological Perspective 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

Hospitality and Tourism Management

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 300 - Classical Mythology Credits: 3
- HNR 311 - Honors Junior Seminar Credits: 3
- HNR 312 - Honors Junior Seminar Credits: 3
- HNR 313 - Honors Junior Seminar Credits: 3
- HNR 324 - Worlds of Late Antiquity Credits: 3
- HNR 331 - Culture and the Holocaust 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. Engineering majors must meet with the Director of Engineering as well as a Meijer Honors College advisor for program planning.

Students, especially in the pre-health 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 (below) 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

- Honors Arts & Humanities (Civilization) Sequence - 6 credit hours
Fall, 6 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

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

Chair: Stansbie. Assistant Chair: Rood; Associate Professors: Baker-Clark, Countryman, Nash, Scantlebury; Assistant Professors: Adams, Chang, Jack, Rood, Sisson, Stansbie; Affiliate Professors: Morey, Robins; Visiting Professor: Zemmol.

Website: www.gvsu.edu/htm

Degrees offered

B.S., B.A. in hospitality and tourism management. The B.S. degree requires a three-course cognate in quantitative reasoning. The B.A. degree requires third-semester proficiency in a foreign language.

Mission

The mission of the Hospitality and Tourism Management Department is to prepare professionals in the global industry of hospitality and tourism.

Career Opportunities

Students are assigned faculty mentors who are available to work with them on career planning. In addition, a dedicated advising center offers comprehensive academic support in degree planning (www.gvsu.edu/ccpsadvising). The department also works closely with the Career Services Office which provides additional assistance to students (www.gvsu.edu/careers). Both the department and Career Services are involved in a number of career fairs, on campus and off, where students may meet with company recruiters. Students have many opportunities to interview for internship employment as well as placement after graduation. Typical careers include the following types of positions:

Lodging and Resort Management:

- Director of Rooms Division
- Executive Housekeeper
- General Manager
- Director of Sales
- Program Director

Meetings and Events Management:

- Convention sales and service
- Conference services/meeting planning
- Special events management
- Convention and visitors bureaus
- Association meeting manager

Food and Beverage Service Management:

- Hotel food and beverage management
- Restaurant management
- Onsite food and beverage management
- Responsible beverage management
- Banquet/catering management

Club Management

Tourism

- Commercial Recreation Operator
- Tourism Manager
- Travel Consultant
- Convention Visitor Bureau Manager
- Tour operations
- Tourism entrepreneur

Recreation/Theme Park Management

- Adventure Tour Operator

Student Organizations (www.gvsu.edu/stuey)

Hospitality and Tourism Management Club

Bachelor of Arts or Bachelor of Science in Hospitality and Tourism Management

Requirements for a Major in Hospitality and Tourism Management

Students interested in majoring in hospitality and tourism management must complete the following:

Cognate Degree Requirements:

The hospitality and tourism management program offers a Bachelor of Science (B.S.) or a Bachelor of Arts (B.A.) degree. The B.S. degree requires a three-course cognate in quantitative reasoning. The B.A. degree requires third-semester proficiency in a foreign language. 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

28 credit minimum; 21 required and 7 credits core electives.

Required Core Courses:

- HTM 101 - Fundamentals Credits: 4
- HTM 343 - Human Resource Management Credits: 4
- HTM 361 - Hospitality Law and Legislation Credits: 3
- HTM 373 - Hospitality Information Analysis Credits: 4
- HTM 452 - Hospitality Marketing Credits: 3
- HTM 495 - Hospitality Management (capstone) 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, of which at least six credits must be in HTM, with advisor approval).

a. Food Management Emphasis

Students are required to complete the following courses and two additional credits in Hospitality and Tourism Management; and 11 credits of electives as part of their emphasis. The approval of the student's academic advisor is required to ensure that the course choices meet program requirements.

b. Lodging Emphasis

Students are required to complete the following courses and three additional credits in HTM; and nine credits of electives as part of their emphasis. The approval of the student's academic advisor is required to ensure that the course choices meet program requirements.

c. Tourism/Travel Emphasis

Students are required to complete the following courses and three additional credits in HTM; and nine credits of electives as part of their emphasis. The approval of the student's academic advisor is required to ensure that the course choices meet program requirements.

d. Other Emphasis

An emphasis of the student's own choosing *with prior advisor and department chair approval*. Examples of other emphases include computer applications, meetings and events management, facilities management, health care, human resource management, clubs, and security.

5. Science and Mathematics Core Credits: 9

- CIS 150 - Introduction to Computing Credits: 3
- MTH 110 - Algebra Credits: 4
- STA 215 - Introductory Applied Statistics Credits: 3

6. Business Cognate

The following courses are required. Note: with the addition of MGT 331 and FIN 320 a business minor can be obtained.

- 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

Suggested Order of Coursework for a Major in Hospitality and Tourism Management**First Year - Fall Semester**

- HTM 101 - Fundamentals
- WRT 150 - Strategies in Writing
- CIS 150 - Introduction to Computing
- General Education Course

First Year - Winter Semester

- HTM 190 - Field Preparation
- HTM Emphasis/Core Course
- MTH 110 - Algebra
- Two General Education Courses

First Year - Summer Session

- HTM 290 - Field Experience I

Second Year - Fall Semester

- HTM Emphasis/Core Course
- ACC 212 - Principles of Financial Accounting
- STA 215 - Introductory Applied Statistics
- Two General Education Courses

Second Year - Winter Semester

- HTM Emphasis Course
- ACC 213 - Principles of Managerial Accounting
- BUS 201 - Legal Environment for Business
- Two General Education Courses

Second Year - Summer Session

- HTM 390 - Field Experience II

Third Year - Fall Semester

- HTM 343 - Human Resource Management
- HTM 361 - Hospitality Law and Legislation
- HTM Emphasis Elective
- Two General Education Courses

Third Year - Winter Semester

- HTM 373 - Hospitality Information Analysis
- MKT 350 - Marketing Management
- HTM Emphasis Elective
- Two General Education Courses

Third Year - Summer Session

- HTM 452 - Hospitality Marketing
- HTM Emphasis Elective
- General Education Course

Fourth Year - Fall Semester

- HTM 452 - Hospitality Marketing
- HTM Emphasis Elective
- General Education Course
- Elective

Fourth Year - Winter Semester

- HTM 495 - Hospitality Management (capstone)
- HTM Emphasis Elective
- Two Electives

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 Fundamentals, totaling a minimum of 21 credits, with advisor approval. Students minoring in HTM are encouraged to consider including at least one field experience course in their program. Interested students should meet with an HTM faculty mentor to establish a specific plan.

Information Systems

For courses, curriculum, other degree related information, and faculty listings, please visit the Grand Valley State University catalog online at www.gvsu.edu/catalog/.

Adventure Tourism Management Minor

Students in other majors may minor in hospitality and tourism management by completing a minimum of 21 credits in HTM (including HTM 101 Hospitality Fundamentals as a required course) with the prior approval of an HTM faculty mentor. Students minoring in HTM are encouraged to consider including at least one field experience course in their program. Interested students should meet with an HTM faculty mentor to establish a specific plan.

Requirements for a Minor in Adventure Tourism Management

Students in HTM and other majors may minor in adventure tourism management by completing 14 credits in the required foundation and 7 electives as per the following plan:

Required Foundation Courses (14 Credits):

- HTM 268 - Adventure Tourism Credits: 3
- HTM 235 - Tourism and Commercial Recreation Systems Credits: 3
- HTM 368 - Ecotourism Credits: 3
- NRM 420 - Wildland Recreation Management Credits: 3
- PED Skills Development Courses (2 from the following):
 - PED 119 - Outdoor Skills/Snowshoeing Credits: 1
 - PED 128 - Rock Climbing Credits: 1
 - PED 153 - Sailing-Large Boat Credits: 1
 - PED 155 - Coastal Kayaking Credits: 1
 - (or advisor approved PED course)

Electives (Minimum of 7 Credits):

To complete the adventure tourism management minor, students must also undertake a minimum of 7 **further** credits from the choice below:

- HTM 202 - International Tourism Credits: 3
- NRM 451 - Natural Resource Policy Credits: 4
- 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 (with HTM Internship Coordinator approval).

Interested students should meet with an HTM faculty mentor to establish a specific minor plan.

Information Systems

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.

Director: Leidig; Program Chair: Nezelek; Professors: Alsabbagh, Ferguson, Grissom, Jorgensen, Leidig, Tao, Tusch; Associate Professors: Adams, Dulimarta, El-Said, Engelsma, Kotman, Kurmas, McGuire, Nandigam, Nezelek, Reynolds, Trefftz, Wolfe; Assistant Professors: DeHondt, Kalafut, Scripps; Instructors: Hornik, Lange, Peterman; Affiliate Faculty: Bregre, Mansour, Posada.

Degrees offered: M.S. in Computer Information Systems; M.S. in Medical and Bioinformatics; B.S., B.A. in Computer Science; B.S., B.A. 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.

The Information Systems website is: www.cis.gvsu.edu/UndergradMajor/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 system 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 & 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.
- Provide all students, regardless of their major interests, fundamental knowledge of computers and information processing.

Information Systems Objectives:

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.
- use technical, communication, teamwork, and leadership skills to function productively, professionally, and ethically.

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.
- show a recognition of the need for, and ability to engage in, continuing professional development.

School of Computing & 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

Admission to major standing in computer science or information systems is competitive and requires a secondary 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 technical core with a grade of C or above (C- is not sufficient).
3. GPA of 2.5 or above in the technical core.

Technical core 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 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.

The technical core includes CIS 162 and 163; MTH 225; STA 215, 312 or 318; COM 201 or WRT 350. Completing the core courses requires programming, analytical reasoning, and communication skills. These skills are important to excel in the computing field.

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.

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.

Career Opportunities:

Is the field of computers for you? You'll need technical knowledge and skills as well as the ability to concentrate on your work and to think logically. You should enjoy working with ideas and solving problems. If you do, you will find that a degree in this field can open the door to a rewarding career in the computing industry.

Job opportunities in the computing and information technology industry are expected to grow rapidly, particularly as computers are used to solve problems in ever-expanding areas, including accounting and business management services and research and development.

The U.S. Department of Labor projects six of the fastest growing occupations for 2004-2014: network systems analyst, software engineer, systems software developer, network administrator, database administrator and system analyst. *Money Magazine* and *Salary.com* researched hundreds of jobs, considering their growth, pay, stress-levels, and other factors (2006). Software engineering was ranked number 1 and computer IT analyst was ranked number seven.

In short, the employment prospects indicate high demand for college graduates with majors or minors in the computing fields.

Participating Programs:

The School of Computing & Information Systems currently is participating with the following programs/colleges/schools to offer students varying computing programs:

- The Professional Science Masters Program: Master of Science in Medical and Bioinformatics
- The School of Engineering: Computer Engineering Major
- The School of Engineering: Computer Engineering Minor
- The College of Health Professions: Healthcare Information Systems Minor
- The School of Criminal Justice: Information Security Systems Minor

Scholarship Opportunities:

Scholarships are available in the following categories:

(1) Freshman Scholarships:

Scholarships are available to a limited number of incoming first-year students who have indicated an interest in majoring in either computer science or information systems. These scholarships are available to a select group of students who meet the minimum requirements. The scholarship is dependent on maintaining certain academic standards while at GVSU.

Eligibility:

A student is eligible to apply for a School of Computing & Information Systems Scholarship if the student satisfies all of the following:

- The student must be admitted to Grand Valley State University and have declared the intent to major in either Computer Science or Information Systems.
- The student must have at least high school GPA of 3.5 and an ACT score of 28 or better.
- The student must be enrolling at GVSU as a full-time student.

To apply for the School of CIS' First-Year Computing Academic Scholarship, a student meeting eligibility requirements listed above must submit to the School of Computing and Information Systems a completed application package containing all of the following:

- The Scholarship Application.
- An essay explaining the student's academic goals. The essay must be typewritten and double-spaced (approximately 2 pages).
- In addition, the student must have their high school grades delivered or sent to the School of Computing and Information Systems.

In the evaluation of candidates for a scholarship, all of the above items will be considered, including the quality of the essay and the candidate's academic performance.

(2) Academic Scholarships:

Academic Scholarships will be awarded to Computer Science and Information Systems majors to honor those students for their outstanding performance and to encourage them to continue in the field of Computer Science or Information Systems at his/her level of excellence. These scholarships are made possible by the generous support of contributors to the School of Computing & Information Systems Endowment Fund. Students who apply in the winter semester by 5 p.m. on the Friday before Spring Break and who satisfy the eligibility requirements will be considered for a scholarship. The winners will be announced by the end of the winter semester. The scholarships will be awarded for the following academic year.

Eligibility:

A student is eligible to apply for a School of Computing & Information Systems Scholarship if the student satisfies all of the following:

- The student must be second-admitted into either the Computer Science or Information Systems major.
- The student must have at least 45 credit hours completed at the time of application.
- The student must have completed at least 14 credit hours in the major (excluding cognates) at Grand Valley State University and be

Information Systems

enrolled in at least one course in Computer Science or Information Systems at the time of application.

- The student must be returning to GVSU, as a full-time student, the following fall semester and is expected to take at least one Computer Science or Information Systems course that academic year.
- The student must have an overall GPA of 3.2 or better.

Go to www.cis.gvsu.edu/scholarships/Academic for more details and application form.

(3) Study Abroad Scholarships:

Scholarships are available to CS and IS majors who study abroad at an institution of higher learning in another country. The purpose of the scholarship is to provide students with greater opportunities in their study of computer science or information systems. Students who apply in the winter semester by 5:00 p.m. on the Friday before Spring Break and who satisfy the eligibility requirements will be considered for a scholarship. The winners will be announced by the end of the winter semester. The scholarships will be awarded for the following academic year. These scholarships are made possible by the generous support of contributors to the School of Computing & Information Systems Endowment Fund.

Eligibility:

- CS or IS major.
- 45 credit hours completed.
- 14 credit hours in the major completed at GVSU.
- GPA of 3.2 overall or better.

Go to www.cis.gvsu.edu/StudyAbroad/Scholarship for more information and application form.

(4) James Parmelee Memorial Scholarships:

This scholarship is awarded to a rising senior each year through nomination by Padnos College faculty. The scholarship recognizes student accomplishment through diligent pursuit of academic excellence.

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.
- (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.

Student Organizations:

The Computing Club is GVSU's student organization for Computer Science and Information Systems majors and minors, students taking Computer Science classes, or anyone interested in computers and technology.

The Cyber Defense Club, which is sponsored by the School of CIS, prepares students to be security professionals and to be aware of current threats on the Internet. Also, it prepares them for the National Cyber Defense Competition, which is usually held in February.

The CIS Ethics Club, which is sponsored by the School of CIS, is a group of students and faculty interested in exploring the ethical issues that computer professionals face in today's society. The club meets weekly and has multiple guest speakers presenting case studies to the group. The main event the group sponsors is a campus-wide seminar on ethics in the computing field. Visit our website at: www.cis.gvsu.edu/~ethics.

Bachelor of Arts or 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. Information Systems Majors

All information systems majors must complete the following 49–52 semester credit hours of computer science courses with a minimum 2.0 GPA:

- CIS 150 - Introduction to Computing Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 163 - Computer Science II Credits: 4
- CIS 230 - Hardware and Software Credits: 3
- CIS 238 - Internet Media and Programming Credits: 3
- CIS 253 - COBOL Credits: 4
- OR 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 (Capstone) Credits: 3
- CIS 490 - Internship Credits: 2 to 5

Select one:

Information Systems majors must select one of the following tracks:

Software Development

Select: (whichever course was not previously chosen in the core requirements: CS 253 or CS 260) and CS 443

- CIS 253 - COBOL or CIS 260 - Application Development in Visual Basic
- CIS 443 - Software Development Tools

Networking

- CIS 338 - Wide Area Network Engineering
- CIS 437 - Distributed Computing

3. Cognate Courses

Completion of either MTH 225 or 227, and either STA 215 or 312, and either STA 216 or 318 satisfy the B.S. degree cognate requirement for information systems majors. Students completing a B.A. degree must complete a third-semester proficiency in a foreign language.

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 - Introduction to Management Information Systems Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- MKT 350 - Marketing Management Credits: 3
- WRT 350 - Business Communication Credits: 3

Select one from each of the following 4 groupings:

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- MTH 225 - Discrete Structures: Computer Science Credits: 3
- MTH 227 - Linear Algebra I Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- STA 312 - Probability and Statistics Credits: 3

- STA 216 - Intermediate Applied Statistics Credits: 3
- STA 318 - Statistical Computing Credits: 3

Suggested Order of Coursework for a Major in Information Systems

These options assume students will complete the technical core and general education courses with the help of their advisor and apply for secondary 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, they should be the student's top priority.

First Year:

- General Education course
- CIS 150 - Introduction to Computing Credits: 3
- CIS 162 - Computer Science I Credits: 4
- MTH 122 - College Algebra Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- General Education course
- COM 201 - Speech Credits: 3
- CIS 163 - Computer Science II Credits: 4
- MTH 225 - Discrete Structures: Computer Science Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Second Year:

- General Education course
- ACC 212 - Principles of Financial Accounting Credits: 3
- CIS 230 - Hardware and Software Credits: 3
- CIS 238 - Internet Media and Programming Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
OR STA 318 - Statistical Computing Credits: 3
- General Education course
- ACC 213 - Principles of Managerial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3
- CIS 253 - COBOL Credits: 4 OR CIS 260 - Application Development in Visual Basic Credits: 4
- MGT 268 - Introduction to Management Information Systems Credits: 3

Third Year:

- General Education course
- CIS 290 - CIS Internship Preparation Credits: 1
- 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 course
- 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 Credits: 3

Fourth Year:

- General Education courses
- CS elective course
- 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
- CS elective course
- CIS 463 - Information Systems Project (Capstone) Credits: 3
- FIN 320 - Managerial Finance Credits: 3

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.

- BMS 222 - Introduction to Public Health Credits: 3

- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 340 - Health Care Information Systems Credits: 4
- HPR 100 - Medical Terminology Credits: 2
- HPR 220 - Health Care Delivery Credits: 2
- HPR 340 - Health Care Management Credits: 2
- SOC 356 - Sociology of Health Care Credits: 3

Select One:

- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 162 - Computer Science I Credits: 4

Select One:

- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 353 - Database 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.

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 Administration and Legal Issues Credits: 3
- CIS 458 - System Security Credits: 3

Select one course from each grouping:

- CJ 201 - Criminology Credits: 3
- CJ 302 - Criminal Law Credits: 3
- CJ 311 - Criminal Investigation Credits: 3
- CJ 408 - White-Collar and Corporate Crime Credits: 3
- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 162 - Computer Science I Credits: 4
- CIS 163 - Computer Science II Credits: 4
- CIS 233 - Concepts of Database Systems Credits: 3
- CIS 333 - Database Management and Implementation Credits: 3
- CIS 353 - Database Credits: 3
- CIS 337 - Network Systems Management Credits: 3
- CIS 457 - Data Communications Credits: 4

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 - Introduction to 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 (Hours: 6)

- 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 - Advanced Spreadsheet Development Credits: 3
- CIS 338 - Wide Area Network Engineering Credits: 3

Integrated Science

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Coordinator: Burton.

Program Faculty: Associate Professors: Ambrose, Burton, Dobson, Golden, Goossen, Henderleiter, Joseph, Mattox, Soman, Vail, Vigna; Assistant Professors: Herrington, Oliver, Yeziarski.

Website: www.gvsu.edu/isci

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, pedagogy, and apply that knowledge to science teaching. On completion of this cohesive and integrated program, preservice teachers understand the importance of lifelong learning.

Career Opportunities

Students enrolled in the program have numerous opportunities to grow as professionals. Students generally join the Michigan Science Teachers Association and GVSU's student chapter of the National Science Teachers Association. There are many opportunities to attend regional and national meetings as part of coursework requirements and/or independently. Integrated Science majors are also active in the community and heavily involved in service learning in area schools. Our graduates are also encouraged to participate in the programs of the Regional Math and Science Center housed at GVSU.

Associated Programs

The Integrated Science Program faculty collaborates 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.

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 pre-service and in-service

elementary and middle school teachers. These courses are offered by the faculty in Grand Valley's academic 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.

Requirements for a Major in Integrated Science

The integrated science major is designed for students seeking certification to teach at the elementary school level. It provides the pre-service 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 Graduate and Undergraduate Catalog.

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 for K-8 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
- CHM 201 - Introduction to Chemical Sciences Credits: 4
- PHY 200 - Physics for the Life Sciences Credits: 4
- PHY 201 - Inquiry: The Mechanical and Thermal World Credits: 4

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
- CHM 201 - Introduction to Chemical Sciences Credits: 4

Second Year

- BIO 205 - Genetics for K-8 Pre-Service Teachers Credits: 2
- GEO 203 - Weather for K-8 Pre-Service Teachers Credits: 3
- PHY 200 - Physics for the Life Sciences Credits: 4
- 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

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

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

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.

Career Opportunities

Large and small companies throughout the world are searching for employees who understand global business and can successfully operate in the international marketplace. As more companies increase their business activities around the world, they are looking for employees who have knowledge of world events, different cultures, alternative business practices, and a working competence in a second language. You may find career opportunities in areas such as international sales and marketing, international logistics and freight forwarding, consulting and strategic planning for international expansion, or international human resource management.

Bachelor of Business Administration in International Business**Requirements for the B.B.A.****Cognate Degree Requirements**

- CIS 150 - Introduction to Computing 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
- 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: 5
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates 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 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 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. However, at least 60 hours of the total program must be in nonbusiness courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as nonbusiness credit.

Requirements for a Major in International Business

Required courses: business core, five courses from the business disciplines component, one option from the cultural component, a second Seidman major (excluding general business), and a foreign language minor or demonstrated proficiency in a foreign language. At least six credits of these must be obtained through a Grand Valley approved study abroad program. Students who feel they can demonstrate proficiency in a language will be assessed by the modern language faculty, based on American Council for Teaching of Foreign Language (ACTFL) guidelines and a personal interview.

Business Disciplines 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

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:

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

International Relations

- GPY 220 - Cultural Geography Credits: 3
- GPY 235 - World Regional Geography Credits: 3
- GPY 350 - Geography of Russia and Its Neighbors 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 282 - Government and Politics of Russia and Eastern Europe Credits: 3
- PLS 283 - Chinese Politics and US-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 - Introduction to International Business 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.

International Relations

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Coordinator: Diven. Professor: Goode; Associate Professors: Caillaud, Diven, Wei Sun.

Website: www.gvsu.edu/polisci/ir

Worldwide mass communications, technological advances, and burgeoning international trade 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 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, study globalization and interdependence among nations, and learn about the ways in which international management and diplomacy can promote international cooperation.

International relations is an interdisciplinary program that includes coursework in political science, history, economics, business, geography, and foreign language. As part of their studies, students are encouraged to become proficient in a foreign language and to study abroad at one of the universities with which Grand Valley has an institutional exchange agreement. 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.

Career Opportunities

Career opportunities in the field of international relations have expanded as interaction among nations has increased. Many international relations majors will pursue careers with multinational corporations in the fields of international marketing, finance, and business. International careers in the public sector include opportunities in the Department of State, the Department of Defense, the Department of Commerce, and the Central Intelligence Agency, among others. Some graduates of the international relations program will pursue careers with international civic and nonprofit organizations. In addition, there is an increasing demand for professionals with international relations backgrounds in the fields of law, journalism, teaching, information technology, and research.

Study Abroad (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 an 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.

STAIR Program

The International Relations program is currently engaged in a three-way student and faculty exchange with the University of Debrecen (Hungary) and the Cracow University of Economics (Poland). The Studies in Trans-Atlantic International Relations (STAIR) program is funded by the U.S., Department of Education and provides generous financial assistance for eligible students. This program began in Fall 2009 and will continue through the Winter 2013.

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 DC, and overseas, including placements at the Voice of America, Peace Corps, International Red Cross, United Nations, and U.S. Embassy.

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 political science and international relations majors have access to GVSU's Laker Jobs site. To get started, click on the internships link at www.gvsu.edu/polisci/.

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 see: www.gvsu.edu/gvdc/.

Professor Polly Diven, the IR program coordinator also serves as internship advisor. She can be reached at divenp@gvsu.edu.

Honors Organization

Phi 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.apsanet.org/~psa/.

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.

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. Faculty in IR will hold office hours in the living center and tutoring in related coursework will be available. There will also be international programming designed 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 below. The remaining 15 hours should be selected from the list of international relations course electives below 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 - World Regional Geography Credits: 3
- PLS 211 - International Relations Credits: 3
- PLS 312 - US 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 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 - Geography of Russia and Its Neighbors Credits: 3
- GPY 351 - Geography of Africa Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- GPY 354 - Geography of Asia Credits: 3
- GPY 355 - Geography of Southwest Asia (The Middle East). Credits: 3
- GPY 356 - Geography of Europe Credits: 3
- HST 210 - Empire, Culture, and Conflict Credits: 3
- HST 211 - History of Islamic Civilization Credits: 3
- HST 331 - Modern Latin America Credits: 3
- HST 333 - Survey of Modern Chinese History 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 341 - A History of East Asia since 1800 Credits: 3
- HST 385 - Europe 1900-1945 Credits: 3
- HST 386 - Europe since World War II 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.

- PLS 212 - Great Decisions Credits: 3
- PLS 221 - Government and Politics of Western Europe Credits: 3
- PLS 283 - Chinese Politics and US-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 321 - The European Union Credits: 3
- PLS 327 - Politics of Developing Countries Credits: 3
- PLS 339 - Comparative Democratization Credits: 3
- PLS 382 - Politics of Post-Communist Europe Credits: 3
- PLS 385 - Russian and Post-Soviet Politics 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: 2-6
- 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-2, or Phil/Lit)

Journalism

First Year Winter:

- WRT 150 or MTH 110 (Basic skills)
- GPY 235 - World Regional Geography GPY Credits: 3 (Major + Gen Ed Soc Science + World Perspectives)
- Language 102 second semester (2nd of four-semester requirement)
- General Education (Arts, History, Science-2, or Phil/Lit)

Second Year Fall:

- ECO 210 - Introductory Macroeconomics ECO Credits: 3 (Major requirement + Gen Ed Social Science)
- Language 201 (3rd of four-semester requirement)
- General Education (Arts, History, Science-2, or Phil/Lit)
- General Education (Math)

Second Year Winter:

- ECO 211 - Introductory Microeconomics ECO Credits: 3 (Major requirement + Gen Ed Social Science)
- PLS 312 - US Foreign Policy PLS Credits: 3 (Major requirement)
- Language 202 (4th of 4-semester requirement)
- General Education (Arts, History, Science-2, or Phil/Lit)
- General Education (U.S. Diversity)

Third Year Fall & Winter — Study Abroad or On Campus:

- IR electives (15 hours total)
- General Education (Arts, History, Science-2, or Phil/Lit)
- General Education Theme 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 Political Science 211, either History 317 or Political Science 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 - US Foreign Policy Credits: 3
- AND PLS 211 - International Relations Credits: 3

Journalism

For additional information about opportunities your college offers, please refer to the School of Communications website.

School of Communications Director: Thompson

Associate Professors: Beery, Pednekar-Magal; Assistant Professor: Hyun.

Website: www.gvsu.edu/soc

The journalism program offers majors a broadly based education in which the study of journalism is grounded in the liberal arts. This 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 embraces the phenomenon of news in society and 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 encouraged to develop a thorough background in writing skills of different kinds and in literature.

The journalism program also offers majors the challenge of entering the job market as prepared, professional journalists. It offers the opportunity for students to develop gateway skills of reporting (interpersonal communication and information gathering), writing (a very rich variety of nonfiction writing in print and electronic formats), and editing (visual communication, critical thinking, analysis, ethics and law).

Most media outlets today have developed an Internet outlet. Broadcasters are hiring print journalists to assist with online information delivery. Print publishers are hiring broadcast majors to assist with audio and video online presentations. There are lots of opportunities for a graduate with specialized skills.

Students have the opportunity to develop depth inside journalism through courses offered in related majors through the School of Communications, including advertising, broadcasting, film/video, photography and public relations. For example, journalism majors may earn a minor in public relations; explore photojournalism through a series of classes through the largest photography program in the state; or gain broadcast reporting and news-delivery skills through broadcast and theatre classes.

In addition, journalism majors are encouraged to develop depth outside of journalism in an area common to the news: arts, computer science, economics, political science and sociology, among others.

Finally, students engage their chosen profession through internships independent studies, employment and other experiences in print, broadcast, cable and Internet-based media. There is opportunity or networking and making contacts within the profession, and Grand Valley allows students to apply up to 15 internship credits toward graduation. The Grand Rapids area is a top-50 market for television and it features three commercial television stations, two public TV/radio stations and over 50 radio stations. Area print media include four daily newspapers (The Grand Rapids Press, The Holland Sentinel, The Greenville Daily News and the Grand Haven Tribune); over 15 weekly newspapers; and minority, arts, business and other specialty magazines.

Students also have opportunity to earn a paycheck and gain valuable experience at the twice-weekly *Grand Valley Lanthorn* and *Lanthorn.com* (www.lanthorn.com), the student-run campus newspapers.

Career Opportunities

Journalism graduates find employment in all fields where strong communication and writing skills are required. Graduates find jobs in all media - print, broadcast and online - and in related fields. In addition, there are new opportunities for the entrepreneur with multi-media skills. While the media business is rapidly changing, basic gateway journalism skills are still excellent preparation for most entry-level jobs.

Internships

Journalism majors are strongly encouraged to take multiple internships in a variety of settings: print, broadcast and on line. Most local media have developed on line services, where students also find a variety of internship opportunities. Students may apply up to 15 internship credits toward graduation. Students are strongly urged to work closely with their faculty advisor or internship coordinator in identifying internships that best suit their interest and career ambitions.

Scholarships

The School of Communications' Scholarships honor upper level School of Communications students who have demonstrated promise in their chosen field of study.

The Michigan Press Association Foundation award is given each year to a journalism student who has demonstrated a commitment to community journalism.

The Corky Meinecke Memorial Scholarship is intended to benefit students with an interest in a career in sports, be it in radio, television, or print media, or in media relations.

The Grand Valley Lanthorn Merit Scholarships benefit student staff members working in editorial, advertising and business departments.

The Jennifer Youssef Journalism Scholarship benefits a student who intends to pursue a career in print or broadcast journalism.

Student Organizations

The primary student media outlet is the twice-weekly print edition of the Grand Valley Lanthorn and its on line associated outlet, www.lanthorn.com. Staff positions in all departments are paid.

Students also have the opportunity to gain experience at WCKS, the student-run radio station, and GVTV, the student-run television station.

Bachelor of Arts or Bachelor of Science in Journalism

Requirements for a Major in Journalism

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 - Theories of Communication Credits: 3

And one of the following:

- COM 201 - Speech Credits: 3
- 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. Cognates

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. cognate or the B.S. cognate that is intended for a particular undergraduate program.

B.A. Cognate

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

The B.S. Cognate for the Journalism Program is:

- COM 375 - Communication Research Credits: 3
- SS 300 - Research Methods in the Social Sciences Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

2. Journalism Core Credits: 24

- CJR 236 - News in Society Credits: 3
- CJR 256 - News Reporting I Credits: 3
- CJR 270 - News Reporting II Credits: 3
- CJR 290 - Journalism History Credits: 3
- CJR 316 - Editing Credits: 3
- CJR 454 - Community Reporting Credits: 3
- CJR 465 - Issues in Journalism Credits: 3
- COM 203 - Argument and Analysis Credits: 3

3. Emphasis Area

select one, either A or B

A. Print Journalism Credits: 9

- CJR 364 - Article Writing Credits: 3
- CJR 365 - Advanced Editing Credits: 3
- CJR 481 - Investigative Reporting Credits: 3

B. Electronic Journalism Credits: 14

- CBR 368 - Broadcast News I Credits: 3
- CBR 468 - Broadcast News II Credits: 3
- CFV 125 - Media Production I Credits: 4
- CFV 226 - Media Production II Credits: 4

4. Outside Electives Credits: 9

A minimum of nine credits from outside the School of Communications selected with advisor approval. These electives can be chosen from a coherent group of courses or from more than one discipline, but should offer coherence and depth to complement the journalism program. All courses in this group must be at the 200 level or above and must not have been counted for general education credit.

5. Capstone Credits: 3

- COM 495 - Issues in Communication (capstone) Credits: 3

Latin American Studies

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

Director: Moret.

Website: 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 American neighbors -from Mexico and the Caribbean to Central and South America- continue to grow in importance.

Career Opportunities

Students in a wide variety of majors and professional programs can benefit from studying Latin America: the biology major who wishes to work on rainforest ecology, the business major who plans to work in international trade, the international relations major who wants to learn in depth about Latin America, the education or health sciences student who expects to work in almost any U.S. city, or the literature major who plans a graduate degree in Spanish or comparative literature. In fact, the Latin American Studies program is for any traditional or continuing student who simply wants to learn more about the fascinating and diverse cultures of Latin America.

Student Organizations and Involvement

The Latin American Studies program encourages student participation with Latin American and international student organizations on campus, and via internships or on an informal basis with the West Michigan Latino community and its institutions as well as groups dealing with international relations such as the Institute for Global Education and the World Affairs Council. Students are also welcomed to participate on the Latin American Studies executive and advisory committees and are encouraged to take part in faculty and student directed research projects. Finally, minors are urged to study abroad, either in Grand Valley State University's summer programs in Mexico or Central America or in other appropriate programs in Latin America.

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 director for information on international internships and other study abroad opportunities in Latin America.

Latin American Studies Minor

Requirements for a Minor in Latin American Studies

Minors in Latin American Studies (LAS) are required to complete 21 credit hours. No more than two courses from any department other than LAS can be counted toward the minor. There is no limit on the courses designated LAS that may apply to the minor. (The University rule is that students must complete 30 unduplicated credits for the major.)

All minors will be required to complete three core courses

- LAS 210 - Exploring Latin America Credits: 3
- LAS 374 - Revolution in the Americas Credits: 3
- SPA 202 - Intermediate Spanish II Credits: 4

Additional Courses

Note: Students who enter the university competent in Spanish at the 202 level or higher will take one extra course from the list below. Those with fourth-semester or higher competence in Portuguese may substitute Portuguese for the Spanish requirement but will likewise take one extra course from the list below.

In addition to the above required courses, students will choose four courses from the following list:

- AAA 202 - African Diaspora Credits: 3
- ANT 355 - Migration in Americas Credits: 3
- ANT 360 - Ethnology of Mesoamerica Credits: 3
- BIO 310 - Biological Diversity of the Americas Credits: 3
- ENG 378 - Contemporary Latin American Literature Credits: 3
- ENG 385 - Writing and Revolution in the Americas Credits: 3
- GEO 350 - Geology's Great Debate in the New World Credits: 3
- GPY 352 - Geography of Latin America Credits: 3
- GPY 380 - Special Topics in Geography Credits: 3
- HST 315 - Latinos: The Forging of Ethnic Identities Credits: 3
- HST 330 - Early 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 632 - A History of Brazil Credits: 3
- LAS 320 - Model Organization of American States Credits: 3
- LAS 378 - Contemporary Latin American Literature Credits: 3
- LAS 380 - Special Topics in Latin American Studies Credits: 1 to 3
- LAS 399 - Independent Studies Credits: 1 to 3
- LAS 475 - Latinos in West Michigan Credits: 3
- LAS 490 - Latin American Studies Internship Credits: 1 to 3
- PLS 284 - Latin American Politics 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 324 - Spanish-American Novel in Translation 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)

Legal Studies

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

Interim Director: Hughes; Professor: Mullendore; Assistant Professors: Steffel, Stevens, Yalda.

Website: www.gvsu.edu/cj/legalstudies

The Legal Studies major is designed to prepare students for careers as legal assistants by providing a liberal education and the practical skills needed for success in this field. The Legal Studies program also provides its graduates with skills and knowledge necessary for study at law schools

and other graduate programs, including criminal justice, social justice, and related programs. The 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;
5. Development of appropriate professional behavior and job-seeking skills.

A legal assistant, also known as a paralegal, performs substantive legal work under the supervision of an attorney. While legal assistants 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 Legal Studies courses may be applicable to a Criminal Justice major. Check with your advisor for possible selections.

Legal Studies Advisory Board

The Legal Studies Advisory Board consists of attorneys and legal assistants 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.

Career Opportunities

Legal assistants are employed by law firms, corporations, federal, state, and local government agencies, and nonprofit organizations. Legal assistants also work for banks and companies in various industries, such as insurance, real estate, retail, and manufacturing. Public sector employers include district attorneys, public defenders, attorney generals, and legal aid offices. Regardless of the employer, legal assistants typically work in one or two specialty areas. Examples include civil litigation, criminal law, business law, labor and employment law, real estate law, environmental law, probate and estate planning, family law, intellectual property, employee benefits, and bankruptcy. Legal assistants have used their education and experience to enter other law-related careers such as court and legal administration, arbitration, mediation, computer consulting, and sales. Some legal assistants decide to continue their education and pursue careers as attorneys. Regardless of the setting in which they work, legal assistants need to be able to think logically and analytically, to present facts and conclusions in a clear, concise manner, to write effectively, to utilize ingenuity during fact-finding, and to demonstrate good judgment and ethical behavior. All of these skills are supported by the academic offerings of the Legal Studies program.

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. See below for further details regarding the program.

Scholarship Opportunities

There are several scholarships available to Legal Studies students, including the Mullendore Legal Studies and Criminal Justice Scholarship and scholarships provided by law firms and legal assistant organizations. For details, see the School of Criminal Justice website, www.gvsu.edu/cj.

Student Organizations

Law Society

The Law Society is comprised of students who have an interest in the study of law and pursuing legal professions. Members participate in community service and campus life.

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 cognate requirements of the School of Criminal Justice, i.e., third-semester proficiency in a foreign language to earn a B.A. for Legal Studies, or CJ 300, CJ 400 and STA 215 to earn a B.S.

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.

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 Credits: 3
- LS 428 - Factual Investigation Credits: 3
- LS 495 - Legal Studies Internship Credits: 3
- LS 495 - Legal Thought (capstone) Credits: 3

In Addition

In addition, all majors must take:

- ACC 212 - Principles of Financial Accounting Credits: 3
- and three of the following courses:
- CJ 302 - Criminal Law Credits: 3
 - CJ 305 - Constitutional Rights and Civil Liberties Credits: 3
 - CJ 408 - White-Collar and Corporate Crime Credits: 3
 - CJ 444 - Forensic Behavior and Law Credits: 3
 - CIS 150 - Introduction to Computing 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
 - WRT 350 - Business Communication 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 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. 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 Credits: 3
- LS 428 - Factual Investigation Credits: 3
- LS 495 - Legal Studies Internship Credits: 3
- **OR** LS 495 - Legal Thought (capstone) Credits: 3

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 3.5 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 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 495 - Legal Studies Internship Credits: 3
- LS 495 - Legal Thought (capstone) Credits: 3

Liberal Studies

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

Chair: Glass (Interim); Assistant Chair: Wolverton. Professor: Ford, Whipples; Assistant Professors: Hussain, McClure, Peterson, Shel-Weiss; Instructor: Drewel; Affiliate Professors: Baker-Boosamra, Fauvel, Krohmer, Maodush-Pitzer, Povolo, Wolverton.

Website: www.gvsu.edu/liberalstudies

The Liberal Studies major provides an alternative and individualized approach to higher education. It allows students to custom-design a significant portion of their degree around a topic or theme (called an Emphasis Area), in consultation with a Liberal Studies advisor. The Liberal Studies major is distinctive in that it is centered on liberal education as a developmental practice that helps us become our genuine selves. It is distinctive in integrating that personal pursuit with career

Liberal Studies

goals. The major provides a context in which the individual student can address educational needs, and engage a rich intellectual heritage, while pursuing a variety of interdisciplinary and/or career-relevant specializations.

Career Opportunities

Liberal Studies Emphasis Areas do not need to be career related, but liberal education and career education do not conflict. An education that emphasizes the ability to think critically and to synthesize divergent points of view is the best kind of career preparation. It is career preparation informed by an understanding of context, and of historic, cross-cultural, and ethical perspectives. It is career preparation that promotes flexibility, which is critically important as career shifts become more and more typical in our working lives.

The vitality of the Liberal Studies major arises from a vigorous dialogue between individual interests and a tradition of inquiry and questioning. This dialogue is a conversational relationship out of which creative work occurs. It is from this same relationship that we emerge as alert and effective human beings.

Advising

Prospective majors should choose an advisor who will work with them during their years in the program to develop coherent study plans, to choose effectively from among general education offerings, and to consider career paths or graduate schools. Substantial information, forms, guidance, and resources are also available on the departmental website at www.gvsu.edu/liberalstudies/.

Student Organizations

There are two registered student organizations for Liberal Studies majors: The Liberal Studies Student Organization (LSSO) and the Traverse City Liberal Studies Student Organization (TC Libs). Potential majors may find it helpful to dialogue with current majors. Meeting times and events connected with these two organizations vary. Please check the departmental website for details.

Holland Degree Completion Program

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 www.degreeinholland.com, for more information.

Muskegon Leadership Degree

This degree program is specially designed for the student who is interested in learning leadership principles applied directly to the business and nonprofit sectors. 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 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. So, the degree provides considerable flexibility for the student to design a degree that best fits him/her. See www.gvsu.edu/learn/muskegon/the-degree-41.htm for more information.

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 Emphasis Area. Study Plan Forms and Sample Emphasis Area Forms are located on the departmental website under Advising Resources for Students. The Liberal Studies major consists of 44 credits, distributed as follows:

- The Core (Credits: 12)
- The Emphasis (Credits: 19, of which 15 need to be at the 300 level or above)
- Contextual Electives (Credits: 9)
- Practicum (Credits: 2 or more)
- Senior Seminar (Credits: 3)

Student still must complete and satisfy Grand Valley's degree cognates, themes, and general education requirements like any other major.

Requirements for a Major in Liberal Studies

The Core (Credits: 12)

All majors are required to take four core courses that introduce them to the basic principles of liberal education: Students typically begin with LIB 100, a course on educational philosophy, in which they examine the implications of different visions of what education can and should be for themselves and for their society. The second core requirement, PHI 102, is an ethics course, which engages questions of value and judgment. For their third core course students take either LIB 311 or LIB 312 to develop skills of interpretation and rhetoric. They also take LIB 400 or LIB 401, courses that study the life and work of a visionary figure.

- LIB 100 - Introduction to Liberal Education Credits: 3
- PHI 102 - Ethics Credits: 3
- LIB 311 - Meaning Credits: 3
OR LIB 312 - Dialogue, Integration and Action Credits: 3
- LIB 400 - Visionary Thinkers Credits: 3
OR LIB 401 - Visionary Thinkers in the American Mosaic Credits: 3

The Emphasis Area (Credits: 18)

At least 15 of these 18 credits must be at the 300 level or above.

Liberal studies students work in consultation with their advisors to develop an individualized emphasis area of six or more courses drawn from the whole Grand Valley curriculum. Typically emphasis areas are organized around either a major issue in human life or an interdisciplinary area of study. You may consider taking all of the courses in an upper-level theme for your emphasis (for example, Ethics; The Human Journey; or Gender, Society, and Culture). Other recent emphasis areas in the program include Sustainability, Social Relations, Gender Studies, American Studies, Business and Society, Religious Studies, Peace Studies, Oppression and Human Rights, Scientific Culture and the Humanities, Cultural Studies, Business and Economics, Humanities, Technical and Scientific Communication, Political Economy, Childhood Development and Literature, and Management and Society.

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 Practicum (Credits 5 or more)

The required 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 491, the practicum, allows students to put into practice their ideas and explore the applications of their emphases. Guidelines for constructing a 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 491 - Practicum Credits: 1 to 6
- LIB 495 - Senior Seminar (capstone) Credits: 3

Degree Cognates

Liberal studies majors may earn either of the following degrees:

1. B.A. degree (by demonstrating third semester proficiency in a foreign language)
2. B.S. degree (by successfully completing the following courses).
 - PHI 103 - Logic Credits: 3
 - SS 300 - Research Methods in the Social Sciences Credits: 3
 - STA 215 - Introductory Applied Statistics 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 Area and the electives. See departmental website for sample Study Plans and Emphasis Areas. 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.

Applied Linguistics

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

The applied linguistics minor is designed to provide systematic study of and principled approaches to issues in which language is implicated, including language teaching, language learning, and language use. Relying on foundational linguistic concepts and an understanding of the structural properties of language as elaborated in phonology, morphology, syntax, and semantics, the minor engages issues and seeks resolution to language-related problems in the world. Courses in the minor consider such topics as learning and teaching of languages, social and regional language variation, literacy, language policy, language disorders, and language history, to name a few. The applied linguistics minor serves as an excellent disciplinary complement to such fields as African/African American studies, anthropology, classics, communications, computing and information systems, English, education, modern languages, philosophy, political science, psychology, sociology, and writing.

Career Opportunities

The discipline of applied linguistics has application to careers in a wide variety of fields, including computer science, foreign and second language teaching, speech-language pathology and intervention, forensic analysis, literacy and educational assessment, language planning and policy, and publishing and advertising. Applied linguists, for example, teach second and foreign languages, compile dictionaries, resolve communication problems among pilots who must use a common nonnative language, work with legislators in countries to develop language policies, and assist with criminal and legal investigations.

Applied Linguistics Minor

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 African/African American Studies, Anthropology, Classics, Communications, Computing and Information Systems, English, Education, Modern Language, Philosophy, Psychology, and Writing. The minor requires a minimum of 21 hours: 9 hours in the foundation and 12 hours in 300-level and 400-level electives (*2 exceptions). Three electives must be taken from English electives (see below) and one elective must be taken from Cross-departmental electives (see below).

Requirements for a Minor in Applied Linguistics Credits: 21

Foundation Courses (required): 9 hours

- ENG 261 - Foundations of Language Study Credits: 3
- ENG 363 - Applied Linguistics Credits: 3
- ENG 364 - Sociolinguistics Credits: 3

Electives: 12 hours

The minor requires four electives. Three electives must be chosen from the English electives (below). The fourth elective must be chosen from the

Cross-departmental electives (below), or be an elective approved by an English linguistics advisor.

English Electives: 9 hours

- 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 392 - Language and Power Credits: 3
- ENG 461 - Language and Gender Credits: 3
- ENG 467 - Language Disorders and English Literacy Credits: 3
- ENG 390 - Topics in Language and Rhetoric Credits: 3

Cross-departmental electives: 3 hours

- AAA 350 - African American Identity and Communication Credits: 3
- * ANT 207 - Language and Culture Credits: 3
- CLA 410 - Literary Translation: Theory and Practice 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 305 - French Phonetics Credits: 3
- FRE 355 - Introduction to French Linguistics Credits: 3
- GER 321 - Phonetics 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
- 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

Management

For additional information about opportunities your college offers, please refer to the Seidman College of Business section in this catalog.

The management major 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 major offers four areas of emphasis.

General Management

This 18-credit hour emphasis is recommended if you are interested in more diverse areas of management. It allows for combining interests in areas such as human resource management, organizational information systems and operations management by selecting from a range of courses.

With the versatile general management emphasis, you are prepared for positions as branch managers, customer service managers, departmental managers, account managers, and catalog managers.

Human Resources

Business, nonprofit, government, and union organizations all need specialists who are trained to respond to employee concerns, administer labor and employment laws, and design policies dealing with diversity and equal opportunity, recruiting and selection, training, performance appraisal, compensation, benefits, discipline, and labor negotiations. Study in the area of human resources emphasizes the management of the relationship between an organization and its employee.

As organizations grow and add employees, the demand for human resource managers increases. With an emphasis in human resources, graduates may find employment as human resource managers, training directors, staffing specialists, human resource specialists, and benefits managers.

Operations Management

Operations Management involves the application of managerial, quantitative, and computer skills to areas of quality assurance, inventory

Management

management, forecasting and scheduling, with the goal of providing you with the tools you need to effectively manage service and manufacturing operations. This emphasis is designed to prepare you in the technical and strategic aspects of producing goods and services.

Graduates from the operations management emphasis are prepared for employment in a variety of businesses that require technical and strategic analysis of their business processes. Careers in operations management include materials managers, plant managers, quality managers, continuous improvement coordinators, service managers, and customer service managers.

Management Information Systems

The Management Information Systems emphasis provides you with the combination of technical and managerial skills that prepare you to function as the liaison between technical staff and the end-users of information systems.

As computers continue to become the central nervous system for business organizations, people with an understanding of the technical and managerial aspects of information systems will remain in demand. You may find positions such as Webmaster, director of e-commerce, Web analyst developer, ERP administrator, SAP consultant, and applications consultant.

Bachelor of Business Administration in Management

Requirements for the B.B.A.

Cognate Degree Requirements

- CIS 150 - Introduction to Computing 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
- 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: 5
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates 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 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 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. However, at least 60 hours of the total program must be in nonbusiness courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as nonbusiness credit.

Requirements for a Major in Management

General Management

This 18-credit-hour emphasis is recommended for students interested in more diverse areas of management and allows for combining interests in areas such as human resource management, organizational information systems and operations management by selecting from a range of courses.

Required Courses:

Business core and six additional management courses at or above the 300 level.

Human Resources

Study in the area of human resources emphasizes the management of the relationship between an organization and its employees. Business, non-profit, government, and union organizations all need specialists who are trained to respond to employee concerns, administer labor and employment laws, and design policies dealing with diversity and equal opportunity, recruiting and selection, training, performance appraisal, compensation, benefits, discipline, and labor negotiations.

Required Courses:

Business core,

- MGT 333 - Human Resource Management Credits: 3
- MGT 334 - Labor and Employment Law Credits: 3
- MGT 336 - Compensation and Benefits Management Credits: 3
- MGT 431 - Advanced Human Resources Management Credits: 3
- MGT 432 - Grievance Administration, Arbitration, and Collective Bargaining Credits: 3

And one of the following:

- MGT 355 - The Diversified Workforce Credits: 3
- MGT 430 - Organizational Development Credits: 3
- OR** MGT 433 - International Human Resource Management Credits: 3

Operations Management

This emphasis 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 quality assurance, 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, is integrated into the majority of the operations management courses.

Required Courses:

Business core and the following:

- MGT 361 - Management Science Credits: 3
- MGT 362 - Computers in Operations Management Credits: 3
- MGT 367 - Manufacturing and Planning and Control Credits: 3

MGT 361 is an option in the cognate quantitative group and may also be used as one of the required business 300/400 level electives.

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

Management Information Systems

The MIS emphasis provides students with the appropriate knowledge and skills to define, design and develop Management Information Systems, with the ability to specialize in Electronic Commerce. The emphasis provides students with a strong technical background, but emphasizes business knowledge and analytic skills to successfully plan and implement such systems.

Required Courses:

Business core,

- CIS 160 - Programming with Visual Basic Credits: 3
- CIS 333 - Database Management and Implementation Credits: 3
- MGT 350 - Principles of Electronic Commerce Credits: 3
- MGT 371 - Systems Analyses and Design Credits: 3
- MGT 451 - Introduction to E-Commerce Applications Credits: 3
- MGT 452 - Advanced E-Commerce Applications Credits: 3

Electives:

Any one of the following:

- MGT 351 - Enterprise Information Systems Credits: 3
- MGT 360 - Business Process Redesign Credits: 3
- MGT 471 - Enterprise Systems Configuration Credits: 3
- MGT 475 - Customized ERP Solutions Credits: 3

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.

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 are:

- MGT 331 - Concepts of Management Credits: 3
- MGT 333 - Human Resource Management Credits: 3
OR MGT 334 - Labor and Employment Law Credits: 3
- MGT 339 - Business and Society Credits: 3
OR 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 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

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.

Career Opportunities

General Marketing

The general marketing emphasis is appropriate if you are interested in broad marketing careers related to general marketing strategy, marketing research, new product development, product and brand management, promotion and advertising, e-commerce marketing, consumer behavior, and customer relations. You are placed with manufacturer and retailer marketing departments, market research firms, advertising agencies, and other employers needing marketing generalists.

Distribution and Logistics

Career opportunities are in executive positions with major manufacturers, wholesalers, retailers, third-party logistics providers, and transportation providers.

Sales

You can obtain sales positions for business-to-business firms, including manufacturers, wholesalers, and retailers.

Bachelor of Business Administration in Marketing

Requirements for the B.B.A.

Cognate Degree Requirements

- CIS 150 - Introduction to Computing 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
- 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: 5
PHI 103 - Logic Credits: 3
MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates 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 - Business, Social Change and Ethics Credits: 3

Mathematics

- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 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. However, at least 60 hours of the total program must be in nonbusiness courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as nonbusiness credit.

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,

- Three additional marketing electives at or above the 300 level.
- MKT 351 - Consumer Behavior Credits: 3
- MKT 352 - Marketing Research Credits: 3
- MKT 451 - Marketing Strategy 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,

- 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

Distribution

Business Core

- 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

Mathematics

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Aboufadel. Professors: Aboufadel, Austin, Beckmann, Fishback, Mack, Novotny, Schlicker, Sundstrom; Associate Professors: Billings, Boelkins, Coffey, Dickinson, Dogru, Gardner, Golden, Haidar, Hodge, Tefera, Walker, C. Wells, P. Wells, Yu; Assistant Professors: Alayont, Drake, Hindeleh, Klingler, Molenje, Parker, Smith, Suh; Instructors: Alexander, Friar, Mays; Affiliate Faculty: Bailey, Fackler, Frobish, Gross, Hammer, Jones, Mannard, Meyering, Reilly, Srinivasan,

Stone, Thull, Welling. Visiting Assistant Professors: Cruz-Cota, Durusoy, Ramirez-Rosas.

Website: 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 mathematics careers in industry, in elementary and secondary teaching, and as preparation for graduate school. 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.

Career Opportunities

Are you challenged by problems? Do you enjoy working on their solutions? If so, you have a wide variety of career opportunities after completing the appropriate mathematical background. Some of these opportunities require only a college degree in mathematics while others require additional work in another discipline or graduate training. A degree in mathematics opens many doors to careers in business, industry, and education.

Scholarship Opportunities

Mathematics Scholarships. These scholarships are given to mathematics majors (double majors are eligible for these scholarships) to honor students with outstanding performance and to encourage them to continue in mathematics at that level of excellence. These scholarships are made possible by the generous support of contributors to the Mathematics Endowment Fund. The scholarship amount is at least \$500. Application packets for these scholarships are available from the Mathematics Department. Applications are due in February. Contact the Math Office for the exact due date and the eligibility requirements.

Donald and Barbara VanderJagt Mathematics and Athletics

Scholarship. The donors of this scholarship recognize that there are two activities on campus that take a considerable amount of time and commitment, namely, majoring in mathematics and participating in athletics. A significant number of students do either of these, a considerably smaller number of students do both. The purpose of this scholarship is to recognize and award students who both major in mathematics and participate in athletics. The donors also recognize that the outstanding mathematics major and the person who excels on an intercollegiate athletic team will each be recognized in their respective units. The intention of this scholarship is to recognize student-athletes who may not be outstanding in either area, but still are committed to both areas and spend considerable time and energy to stay competitive both in the classroom and on the playing field. Application packets for these scholarships are available from the Mathematics Department and the applications are due to the Financial Aid Office in March. Contact the Math Office or the Financial Aid Office for the exact due date.

Student Organizations

The Mathematics and Statistics Club is a place for all students interested in mathematics and/or statistics. The Club organizes many activities throughout the year, including showings of math related movies, the annual fall picnic, career and advising events, math/stats software workshops, social gatherings and more. Any student currently enrolled at GVSU can become a member of the Math & Stats Club.

Honors Organization

Pi Mu Epsilon (PME) is the National Mathematics Honor 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 toward the mathematics major. At least 9 of these credit hours must have been taken at Grand Valley State University and consist of mathematics or statistics courses at the level of MTH 203 (Calculus III) or higher that count toward our mathematics major.

Study Abroad

Many study abroad programs offer a wide selection of courses, including mathematics courses that can be approved by the Department of Mathematics to contribute to a mathematics major. 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 credits for academic work related to the technical skills required in performing the job. Contact the department for further information.

Mathematics Placement For New Students

Our goal is that during your first year at GVSU, you enroll in the correct mathematics or statistics courses that fits your academic plans and your background. As a first step, an initial mathematics placement is determined, based on the mathematics subscore on the ACT or SAT exam. There are four possible initial placements: MTH 097, MTH 110, waiver of MTH 110, and the Advanced Waiver.

For “MTH 097”, you may directly enroll in MTH 097. For “MTH 110”, you may directly enroll in MTH 097 or MTH 110.

For “waiver of MTH 110”, you have satisfied the Basic Skills graduation requirement, and you may directly enroll into MTH 122, 125, 131, or 221, or STA 215. The choice of course depends on your major.

For the Advanced Waiver, you have satisfied the Basic Skill graduation requirement, and you may directly enroll into MTH 122, 123, 125, 131, 201, 221, or 225, or STA 215. The choice of course depends on your major.

Mathematics Proficiency Testing

If you believe that you are capable of doing mathematics work above your initial placement, then you are strongly encouraged to take one or more mathematics proficiency tests at orientation. Successful completion of a proficiency test allows you to waive a pre-requisite for certain mathematics courses. There are proficiency tests for MTH 110 (Algebra), MTH 122 (College Algebra), and MTH 123 (Trigonometry).

For example, if your initial mathematics placement is “waiver of MTH 110”, and because of the mathematics course you took during your senior year in high school you believe you are ready for MTH 201 (Calculus), then at orientation you should take the MTH 122 and MTH 123 proficiency tests. If you are successful with those tests, then you can register for MTH 201.

Another example is if 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, then you should take the MTH 110 proficiency test at orientation.

Some other notes about mathematics proficiency testing:

- Testing is free and results are available immediately.
- This is the most efficient way for students to demonstrate proficiency in MTH 110, 122, and 123 and therefore avoid needing to take these courses.
- Students are allowed to take each test twice, but not on the same day.
- Students can come back for another orientation session to take a test. The tests will also be offered at the beginning of Fall semester.
- Passing the 122 or 123 proficiency test does not replace the General Education mathematics requirement.

Many courses at GVSU have MTH 122 and/or MTH 123 as a prerequisite. These courses require students at the onset to have proficiency in MTH 122 and/or MTH 123. In order to demonstrate that proficiency, students can do one of the following:

- Successfully complete the prerequisite course(s).
- Pass the new MTH 122 and/or MTH 123 proficiency exams.

Mathematics Graduation Requirements

All undergraduate students graduating from GVSU must meet two mathematics requirements: the Basic Skills Mathematics requirement, and the General Education - Mathematical Sciences requirement. (See the GVSU catalog: catalog.gvsu.edu/content.php)

The Basic Skills Mathematics requirement can be met by successfully completing MTH 110. It can also be met in one of the following ways:

- Initial mathematics placement of "waive MTH 110" or the Advanced Waiver.
- Pass the MTH 110 proficiency test.
- Transfer credit for MTH 110, 122, 123, 125, 201, 202, 203, 225, or 302.
- AP credit for MTH 201 and/or 202. (Score of 3 or higher required.)
- CLEP credit for MTH 122 or 201.

Note: The Department of Mathematics will closely review transfer equivalency requests for MTH 122, 123, 125, and 225 to confirm that the level of algebra in requested transfers is such that MTH 110 should be waived.

The General Education - Mathematical Science Requirement can be met by completing a course in mathematics, statistics, computer science, or philosophy, from the approved list: STA 215, CS 160, PHI 103, MTH 122, MTH 123, MTH 125, MTH 131, MTH 201, or MTH 221. This is separate from the Basic Skills requirement.

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:

Degree Cognate Requirements

Completion of MTH 201, 202, and STA 312 satisfies the B.S. degree cognate 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: 5
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 3
- MTH 227 - Linear Algebra I Credits: 3
- MTH 310 - Modern Algebra 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 below 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 310 - Modern Algebra Credits: 3
- MTH 410 - Modern Algebra II Credits: 3

(Advanced Calculus)

- MTH 408 - Advanced Calculus I Credits: 3
- MTH 409 - Advanced Calculus II Credits: 3

(Geometry)

- MTH 341 - Euclidean Geometry Credits: 3
- MTH 431 - Non-Euclidean Geometry Credits: 3

Mathematics

(Applied Analysis)

- MTH 300 - Applied Analysis I Credits: 3
- MTH 400 - Applied Analysis II Credits: 3

(Discrete Mathematics and Applications)

- MTH 345 - Discrete Mathematics Credits: 3
- MTH 360 - Operations Research Credits: 3

c. Additional Course(s):

From the following list for a total of 11 courses in mathematics:

- MTH 300 - Applied Analysis I Credits: 3
- MTH 304 - Analysis of Differential Equations Credits: 3
- MTH 327 - Linear Algebra II Credits: 3
- MTH 341 - Euclidean Geometry Credits: 3
- MTH 345 - Discrete Mathematics Credits: 3
- MTH 360 - Operations Research Credits: 3
- MTH 400 - Applied Analysis II Credits: 3
- MTH 402 - Complex Variables Credits: 3
- MTH 405 - Numerical Analysis Credits: 3
- MTH 409 - Advanced Calculus II Credits: 3
- MTH 410 - Modern Algebra II Credits: 3
- MTH 431 - Non-Euclidean Geometry Credits: 3
- MTH 441 - Topology Credits: 3
- MTH 465 - Automata and Theory of Computation Credits: 3

Graduate Work Preparation

Majors who plan to complete graduate work in mathematics are encouraged to (1) take as many upper-division mathematics courses from the courses listed above as possible; (2) 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.

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 162 - Computer Science I Credits: 4
- 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
- ECO 342 - Strategic Games Credits: 3
- ECO 480 - Special Topics in Economics Credits: 3
- EGR 304 - Innovation Credits: 3
- GEO 440 - Geohydrology Credits: 3
- GEO 470 - Geophysics Credits: 4
- HSC 201 - The Scientific Revolution Credits: 3
- PHY 230 - Principles of Physics I Credits: 5
- PSY 300 - Research Methods in Psychology Credits: 3
- SS 300 - Research Methods in the Social Sciences Credits: 3
- STA 314 - Statistical Quality Methods Credits: 3
- STA 412 - Mathematical Statistics I Credits: 4

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:

Degree Cognate Requirements

Completion of MTH 201, 202, and STA 312 satisfies the B.S. degree cognate 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: 5
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 3
- MTH 227 - Linear Algebra I Credits: 3
- MTH 310 - Modern Algebra 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 below:

- 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 341 - Euclidean Geometry Credits: 3
- MTH 345 - 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 162 - Computer Science I Credits: 4
- ECO 342 - Strategic Games Credits: 3
- ECO 480 - Special Topics in Economics Credits: 3
- EGR 304 - Innovation Credits: 3
- GEO 440 - Geohydrology Credits: 3
- GEO 470 - Geophysics Credits: 4
- HSC 201 - The Scientific Revolution 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
- SS 300 - Research Methods in the Social Sciences 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: 3

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:

Degree Cognate Requirements

Completion of MTH 201, 202, and STA 312 satisfies the B.S. degree cognate 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: 5
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 3
- MTH 227 - Linear Algebra I Credits: 3
- MTH 310 - Modern Algebra 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 below:

- MTH 203 - Calculus III Credits: 4
- MTH 229 - Mathematical Activities for Secondary Teachers Credits: 3
- MTH 329 - Teaching Middle Grades Mathematics Credits: 3
- MTH 341 - Euclidean Geometry Credits: 3
- MTH 345 - 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 - Applied Analysis I Credits: 3
- MTH 304 - Analysis of Differential Equations Credits: 3
- MTH 327 - Linear Algebra II Credits: 3
- MTH 360 - Operations Research Credits: 3
- MTH 400 - Applied Analysis II Credits: 3
- 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 410 - Modern Algebra II Credits: 3
- MTH 431 - Non-Euclidean Geometry Credits: 3
- MTH 441 - Topology 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 162 - Computer Science I Credits: 4
- ECO 342 - Strategic Games Credits: 3
- ECO 480 - Special Topics in Economics Credits: 3
- EGR 304 - Innovation Credits: 3
- GEO 440 - Geohydrology Credits: 3
- GEO 470 - Geophysics Credits: 4
- HSC 201 - The Scientific Revolution Credits: 3
- PHY 230 - Principles of Physics I Credits: 5
- PSY 300 - Research Methods in Psychology Credits: 3
- SS 300 - Research Methods in the Social Sciences 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: 3
- MTH 229 - Mathematical Activities for Secondary Teachers Credits: 3
- MTH 341 - 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: 5
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 3

Second Year

- Appropriate courses in general education
- CIS 162 - Computer Science I Credits: 4
- MTH 203 - Calculus III Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- MTH 310 - Modern Algebra Credits: 3

Third Year

- Cognate Courses in the major
- Appropriate courses in general education
- MTH 408 - Advanced Calculus I Credits: 3
- MTH 409 - Advanced Calculus II Credits: 3
- STA 312 - Probability and Statistics Credits: 3

Fourth Year

- Two electives for the major
- 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: 5
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 3
- 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

Mathematics

Third Year

- Elective in the major
- Student Assisting
- Cognate course for major
- Appropriate courses in general education
- MTH 310 - Modern Algebra Credits: 3
- MTH 341 - Euclidean Geometry Credits: 3
- STA 312 - Probability and Statistics Credits: 3

Fourth Year

- Capstone course
- Student Teaching
- Appropriate courses in general education
- MTH 345 - Discrete Mathematics Credits: 3

Mathematics Major with Elementary Certification Emphasis

First Year

- Appropriate course in general education
- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 3
- PSY 101 - Introductory Psychology Credits: 3

Second Year

- Appropriate courses in general education
- MTH 227 - Linear Algebra I Credits: 3
- MTH 310 - Modern Algebra Credits: 3
- MTH 322 - Geometry for Elementary Teachers Credits: 3
- 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 341 - Euclidean Geometry Credits: 3

Fourth Year

- Capstone course
- Student Teaching
- Appropriate courses in general education
- MTH 345 - Discrete Mathematics 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 below.

1. Mathematics (not for teacher certification)

The non-certification 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, 322, 323, 324, 329 and STA 215.

The following courses must be completed:

- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4
- MTH 203 - Calculus III Credits: 4
- **OR** MTH 210 - Communicating in Mathematics Credits: 3
- 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 300-400 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, 322, 323, 324, and STA 215.

The following courses must be completed:

- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 3
- 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 310 - Modern Algebra Credits: 3
- MTH 341 - 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, and STA 215.

The following courses must be completed:

- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4
- MTH 210 - Communicating in Mathematics Credits: 3
- 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 Education Advanced Content Specialization in Mathematics

A Master of Education degree with a concentration in mathematics along with an emphasis in either advanced content specialization or adult and higher education is offered by the College of Education in cooperation with the Department of Mathematics. The primary purpose of the degree is to provide middle school and high school teachers with the opportunity to update and expand their knowledge in the field of mathematics, but it also serves those who wish to develop their skills and competencies in working with adult and higher education students.

Admission

Admission to the M.Ed. program requires teaching certification with either a major or minor in mathematics. Students must submit three letters of recommendation, transcripts of all previous coursework, and copies of teaching certificates. Students must have at least a 3.0 cumulative GPA. For additional details, see the College of Education section of the Grand Valley State University Catalog.

Curriculum Overview

The degree program requires completion of at least 33 graduate credits, including 18 credits in education and 15 credits in mathematics. The specific requirements in education may be found in that section of the Grand Valley State University Catalog.

Upon admission to the degree program, the student will meet with an advisor in the College of Education and an advisor in the Department of Mathematics who will evaluate all previous coursework taken in mathematics. A curricular plan reflecting the student's needs, interests, and goals will be agreed upon. Each student must complete a minimum of 15 credits in approved graduate courses in mathematics, including:

All students must take MTH 629 Secondary Student Issues.

At least one course from

- MTH 603 - Foundations of Calculus Credits: 3
- MTH 620 - Modern Algebra Credits: 3
- MTH 641 - Modern Geometry Credits: 3

At least one course from

- MTH 615 - Statistics with Probability Credits: 3
- MTH 625 - Number Theory Credits: 3
- MTH 645 - Discrete Mathematics Credits: 3

At most three credits from

- MTH 685 - Mathematics Workshop for Teachers Credits: 1 to 3
- MTH 686 - High School Mathematics Workshop Credits: 1 to 3

Medical and Bioinformatics

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.

Director: Leidig; Professors: Alsabbagh, Ferguson, Grissom, Jorgensen, Leidig, Tao, Tusch; Associate Professors: Adams, Dulimarta, El-Said, Engelsma, Kotman, Kurmas, McGuire, Nandigam, Nezlek, Reynolds, Trefftz, Wolffe.

Degrees offered: M.S. in Computer Information Systems; M.S. in Medical and Bioinformatics. B.S., B.A. in Computer Science; B.S., B.A. 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.

The website for the Medical and Bioinformatics Program is:
www.cis.gvsu.edu/graduate/mbi/

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, new 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.

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 contains a specifically designed Medical and Bioinformatics Laboratory in downtown Grand Rapids.

Internships

A minimum of 4 credits of internship(s) is a required component of the Medical and Bioinformatics Program.

School of CIS Mission

The mission of the School of Computing & 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.
- Provide all students, regardless of their major interests, fundamental knowledge of computers and information processing.

Minimum number of hours for graduation

Twelve varied-credit courses (totaling 36 credit hours) make up the Master of Science in Medical and Bioinformatics degree.

Admission

In addition to the requirements listed in the Graduate Admission section, candidates must satisfy all the following:

1. 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 & Information Systems for advising.
2. Resume detailing work experiences and accomplishments.
3. Personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.
4. Written recommendations from at least two individuals who are in positions to attest to the applicant's potential for successful completion of the program.
5. 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.

Program Location

Downtown Grand Rapids (Pew Campus) Cook-DeVos Center for Health Sciences

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

Middle East Studies

policy, all courses must be completed within 8 consecutive years from entry into the first graduate course. The specific course requirements include:

4 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

2 Common Seminar Courses (Credits: 2)

- PSM 661 - Seminar in Professional Science Practice I Credits: 1
- PSM 662 - Seminar in Professional Science Practice II Credits: 1

5 Directed Courses (Credits: 15)

- CIS 635 - Knowledge Discovery and Data Mining Credits: 3
- CIS 671 - Information Visualization Credits: 3
- CIS 673 - Principles of Database Design Credits: 3

Choose either Group 1 or Group 2: (2-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

Middle East Studies

information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

Director: Al-Mallah. Professors: Brashler, Cole, Goode, Kopperl; Associate Professors: Al-Mallah, Roos, Schaub, Dogru, Fitzpatrick; Assistant Professors: Danielson, DeMuth, Gasim, Lingwood, Maisel, Schwartz; Visiting Professor: Cataldo.

Website: 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 Egypt and Jordan 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 Barbara H. Padnos International Center (PIC) or the director of the Middle East Studies program.

Career Opportunities

Students come from anthropology, business, communications, criminal justice, geography, history, and international relations—indeed, from all those disciplines in which there is increasing interest in the non-Western world. For example, for aspiring teachers, knowledge of Islamic civilization provides tools for understanding and teaching about areas far removed from the Middle East, such as South Asia, Indonesia, and sub-Saharan Africa. Business majors who can demonstrate some understanding of regional customs, cultural practices, and language, can gain advantage with the many local firms with Middle East trade links. For aspiring teachers, knowledge of Islamic civilization provides tools for understanding and teaching about areas far removed from the Middle East, such as South Asia, Indonesia, and sub-Saharan Africa. Business majors who can demonstrate some understanding of regional customs, cultural practices, and language, can gain advantage with the many local firms with Middle East trade links.

Student Organizations and the Model Arab League

Students are encouraged to join the Arab Culture Club or the Muslim Student Association, which sponsor a variety of activities during the academic year. They can also participate in the Model Arab League simulations held annually during the winter semester and in field trips to points of cultural interest locally and in the Detroit area.

Middle East Studies Minor

For additional information about opportunities your college offers, please refer to the 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 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 above 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 below.

Students will select three courses (nine credits) from the following list:

- ANT 330 - Ethnology 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 210 - Empire, Culture, and Conflict Credits: 3
- HST 337 - The Age of Islamic Empire Credits: 3
- HST 338 - Modern Middle East Credits: 3
- MES 380 - Special Topics in Middle East Studies Credits: 3
- MES 399 - Independent Studies Credits: 1 to 3

Movement Science

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Hatzel. Professors: Kilbourne, Schutten; Associate Professors: Albrecht, Beaudoin, Lewis, Munk, Rowe, Scott, Sherman; Assistant Professors: Bartz, Gulgin, Johnson, Lemmer, Padilla, Parker Roskamp.

Website: www.gvsu.edu/move-sci

Mission

The Department of Movement Science is a multidisciplinary unit, which encompasses programs in Physical Education, Health Education, Exercise Science, Athletic Training, and Sport Leadership bound by the common theme of movement as the basis for healthy living. The department contributes to the enrichment of society through excellent teaching, scholarly activity, and service, which reflect the department's commitment to university, community, state, national, and global issues related to healthy, active lifestyles.

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 A - K-12 Professional Instruction, is required to seek Michigan K-12 teacher certification in Physical Education. Secondary-level (7-12) teachable minors in School Health Education and Physical Education may also be used for teacher certification purposes.

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 preprofessional needs of Grand Valley State University students who seek careers in K-12 Physical Education professional instruction, sport leadership, fitness/wellness, exercise science, athletic training, and health education. The department also provides skills development activity courses in fitness, wellness, and leisure sport activities for motor skill development and the personal enrichment of Grand Valley State University students, faculty, and staff.

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

For additional information about opportunities your college offers, please refer to your college's section in this catalog.

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.

Requirements for K-12 Professional Instruction Emphasis:**1. University Degree Requirements**

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. B.S. degree cognates: Physical Education Major (Credit Hours: 10)

The following B.S. Degree cognate must be completed for the major in Physical Education.

- BMS 202 - Anatomy and Physiology Credits: 4 (Gen. Ed. NS/B)
- MOV 304 - Physiology of Activity 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 Physical Education and Sport Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2
- MOV 201 - Psycho-social 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. Skills Development Activity Courses (Credit Hours: 5)

Selected from PED 100 through 179, one of which must be swimming. PED 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. After 2009 Physical Education majors will NOT be eligible for teacher certification in Michigan with the Elementary Education minor. 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 cognates, 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. University Degree Requirements**

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. B.S. degree cognates: Physical Education Major (Credit Hours: 10)

The following B.S. Degree cognate must be completed for the major in Physical Education.

- BMS 202 - Anatomy and Physiology Credits: 4 (Gen. Ed. NS/B)
- MOV 304 - Physiology of Activity Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3 (Gen. Ed. CGE/A)

3. Sport Leadership Core Courses (Credit Hours: 26)

- COM 201 - Speech Credits: 3
- MOV 101 - Foundations of Physical Education and Sport Credits: 3
- MOV 102 - First Aid, CPR and AED Credits: 2
- MOV 201 - Psycho-social Aspects of Physical Education and Sport Credits: 3
- MOV 202 - Social Cultural Dimensions of Sport Credits: 3
- PED 460 - Fieldwork in Sport Leadership Credits: 3
- PED 490 - Internship in Sport Leadership Credits: 6-12
- PED 495 - Administration in Sport Leadership Credits: 3 (Capstone) (SWS)

Movement Science

4. Sport Leadership Concentration Courses

Majors who select the Sport Leadership emphasis must also select a concentration area in either Coaching (A) or Sport Management (B).

Concentration A: Coaching (Credit Hours: 30-32)

Students selecting the Coaching concentration must complete the following courses:

- BMS 105 - Basic Nutrition Credits: 3
- CAP 305 - Sports Promotion Credits: 3
- MOV 300 - Kinesiology Credits: 3
- MOV 310 - Motor Skill Development Credits: 3
- PED 217 - Modern Principles of Athletic Training Credits: 3
- PED 218 - Officiating Seasonal Sports Credits: 2
- PED 355 - Current Topics in Coaching Credits: 3
- PED 120-179 Skill Development Activity Course (2) Credits: 2

Elect 2 of the following “team sport” courses:

- PED 230 - Team Sports K-12 Credits: 3
- PED 250 - Baseball Coaching Theory Credits: 2
- OR PED 258 - Softball Coaching Theory Credits: 2
- PED 251 - Basketball Coaching Theory Credits: 2
- PED 252 - Football Coaching Theory Credits: 2
- PED 255 - Volleyball Coaching Theory Credits: 2
- PED 260 - Soccer Coaching Theory Credits: 2
- PED 261 - Rowing Coaching Theory Credits: 2
- PED 262 - Ice Hockey Coaching Theory Credits: 2

Elect 2 of the following “individual sport” courses:

- PED 220 - Individual Sports K-12 Credits: 3
- PED 254 - Track and Field Coaching Theory Credits: 2
- OR PED 263 - Cross Country Coaching Theory Credits: 2
- PED 256 - Wrestling Coaching Theory Credits: 2
- PED 257 - Coaching Theory Course Credits: 2 (Swimming/Diving)

Concentration B: Sport Management (Credit Hours: 30)

Students selecting the Sport Management concentration must complete the following courses:

- ACC 212 - Principles of Financial Accounting Credits: 3
- BUS 201 - Legal Environment for Business Credits: 3
- CAP 305 - Sports Promotion Credits: 3
- ECO 330 - Sports Economics Credits: 3
- MGT 331 - Concepts of Management Credits: 3
- PED 356 - Current Topics in Sport Management Credits: 3

Elect 2 of the following “sport resource management” courses:

- MGT 333 - Human Resource Management Credits: 3
- MGT 345 - Team Building Credits: 3
- MKT 350 - Marketing Management Credits: 3
- MKT 351 - Consumer Behavior Credits: 3
- MKT 353 - Marketing Negotiations Credits: 3
- MKT 361 - Sports Marketing Credits: 3
- PA 375 - Public Budgeting and Finance Administration Credits: 3

Elect 2 of the following “sport information management” courses:

- CAP 220 - Fundamentals of Public Relations Credits: 3
- CIS 150 - Introduction to Computing Credits: 3
- PA 335 - Grant Writing Credits: 3
- STA 345 - Statistics in Sports Credits: 3
- 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 cognates, and emphasis areas. Attention should be paid to prerequisite requirements. Courses 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 are should be taken during the freshman year.
- 200-level courses are should be taken during the sophomore year.
- 300-level courses are should be taken during the junior year.
- 400-level courses are 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 the following courses: MOV 300, 304.
- MOV 309 - Measurement and Evaluation Credits: 2
Note: STA 215 must be taken before MOV 309.
- 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 Physical Education and Sport
- BMS 202 - Anatomy and Physiology Credits: 4
- MOV 202 - Social Cultural Dimensions of Sport
- OR MOV 201 - Psycho-social Aspects of Physical Education and Sport Credits: 3
- MOV 102 - First Aid, CPR and AED
- PSY 101 - Introductory Psychology
- PED 200 - Rhythms and Dance K-12

Second Year:

- MOV 300 - Kinesiology
- ED 315 - Diverse Perspectives on Education Credits: 3
- ED 225 - Diversity in Education
- STA 215 - Introductory Applied Statistics
- ED 337 - Introduction to Learning and Assessment Credits: 3
- PED 210 - Tumbling and Gymnastics, K-12
- PED 220 - Individual Sports K-12

Third Year:

- MOV 304 - Physiology of Activity
- PED 202 - Adapted Physical Education and Recreation Credits: 2
- MOV 309 - Measurement and Evaluation
- PSY 301 - Child Development
- PSY 325 - Educational Psychology
- PED 240 - Methods for Teaching Fitness
- PED 230 - Team Sports K-12

Fourth Year:

- MOV 310 - Motor Skill Development
- PED 306 - Teaching Physical Education — Elementary
- PED 307 - Teaching Physical Education — Secondary
- PED 401 - Organization and Administration of Physical Education and Sport (Capstone)

Fifth Year:

- ED 310 - Organizing and Managing Classroom Environments
- ED 321 - Content Area Literacy
- ED 331 - Methods and Strategies of Secondary Teaching
- ED 370 - Technology in Education Credits: 3
- ED 379 - Universal Design for Learning: Secondary Credits: 3
- ED 431 - Student Teaching, Secondary
- ED 485 - The Context of Educational Issues Credits: 3

For Sport Leadership Emphasis

First Year:

- BMS 105 - Basic Nutrition MOV 101 - Foundations of Physical Education and Sport
- MOV 102 - First Aid, CPR and AED

Second Year:

- BMS 202 - Anatomy and Physiology
- BUS 201 - Legal Environment for Business
- COM 201 - Speech
- MOV 201 - Psycho-social Aspects of Physical Education and Sport
- MOV 202 - Social Cultural Dimensions of Sport
- PED 217 - Modern Principles of Athletic Training
- PED 218 - Officiating Seasonal Sports
- STA 215 - Introductory Applied Statistics

Third Year:

- CAP 305 - Sports Promotion
- ECO 330 - Sports Economics
- MOV 300 - Kinesiology
- MOV 304 - Physiology of Activity
- MOV 310 - Motor Skill Development
- PED 355 - Current Topics in Coaching

Fourth Year:

- PED 460 - Fieldwork in Sport Leadership
- PED 490 - Internship in Sport Leadership
- PED 495 - Administration in Sport Leadership

Recommended Sequences:

- MOV 202 taken before PED 356
- BUS 201 or PED 380 (Sport Law) taken before PED 356
- MOV 102 taken before PED 460
- PED 355 or PED 356 taken before PED 460
- PED 460 taken before PED 490

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 - Psycho-social Aspects of Physical Education and Sport Credits: 3
- MOV 202 - Social Cultural Dimensions of Sport Credits: 3
- MOV 300 - Kinesiology Credits: 3
- MOV 304 - Physiology of Activity 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 24-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
- NUR 220 - Self-Health and Wellness Credits: 2
- PED 270 - School Health Ed: Curric & Eval Credits: 3
- PED 301 - Methods of Teaching Health Education Credits: 3
- SOC 384 - Sociology of Drug Use and Abuse Credits: 3
- BIO 325 - Human Sexuality Credits: 3
- OR PSY 316 - The Psychology of Human Intimacy and Sexuality Credits: 3

Music

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Phipps. Assistant Chair: Tutt. Professors: Campbell, Martin, B., Norris, Phipps, Schuster-Craig; Associate Professors: Copenhaver, Feurzeig, Mahave-Veglia, Marlais, Pool, Ryan, Schriemer, Stieler, Stoelzel, Tutt; Assistant Professors: Martin, J., Maytan, Nichol, Vavrikova, Williams.

In addition to the full-time faculty, 40+ distinguished musicians and educators teach applied music and courses in music on a part-time basis.

Website: www.gvsu.edu/music

The Department of Music offers curricula leading to the Bachelor of Arts, Bachelor of Music, and Bachelor of Music Education degrees, as well as the B.A. with a major in dance. These degree programs present professional training in music in the context of a broad liberal education. They provide courses of study for gifted students who are interested in performance, composition, music technology, jazz studies, preparing for advanced study in graduate school, and vocal and instrumental music education, for those who seek careers in elementary and secondary school teaching.

Additionally, in the tradition of liberal education, the department is committed to providing the experience of music for students in all departments and to serving the university community by providing appropriate musical support for all facets of academic life.

Grand Valley State University is an accredited institutional member of the National Association of Schools of Music.

Career Opportunities

Music provides many career opportunities—from playing in a symphony orchestra to becoming a recording studio musician, from teaching privately or in a college to being a band leader or an organist and church choir director. For the talented and versatile music educator, there are many opportunities to teach music in public and private schools. In addition to careers in performance and teaching, there are numerous other challenging opportunities that demand thorough music training. These include being a music therapist, copyist, conductor, performance manager, composer, arranger, librarian, journalist, church musician, instrument repair person, studio musician, or fine arts broadcaster. Persons who combine training in music with one of the other arts, such as theatre, dance, or communications, are prepared for still other career possibilities.

Admission

In addition to the 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 a tape recording of an appropriate performance. Arrangements for auditions may be completed only after the applicant has been admitted to Grand Valley. Audition appointments should be made at least 3 weeks in advance. Entering freshmen and transfer students will be required to take a theory placement exam and a keyboard placement exam. Recommended audition repertoire and an application can be found at www.gvsu.edu/music.

In addition to completion of a successful audition prior to admission, a second screening occurs before admission to upper-division courses. This evaluation includes performance, faculty recommendations, a brief essay, an interview, and, for music education majors, a profile of teaching competencies.

Scholarship Opportunities

In addition to a generous array of academic scholarships and awards based on financial need, the Department of Music annually awards nearly \$200,000 in talent scholarships to students in music and dance who show exceptional talent as performers and composers. Department of Music

Music

scholarships are awarded on the basis of achievement and potential in music and dance performance (by audition) and composition (portfolio).

Available each year are twelve **Music Honors Scholarships**, each carrying a minimum of \$2,000 and renewable for up to a total of four years. The honors scholarships are awarded to outstanding new music majors in performance and composition. Freshman music majors and transferring majors are eligible. Honors scholarships are awarded on the basis of achievement and potential in performance (by audition) and composition (portfolio). Students are expected to enter and maintain performance at the level of Bachelor of Music degree students, although they may elect the B.A., B.M., or B.M.E. degree curricula. Honors Scholarship awards may be combined with music ensemble awards, as well as with general university academic awards.

Ensemble Performance Awards - For Majors and Non-Majors Gierst-Egler Awards up to \$500 to band instrumentalists. These awards require an audition and participation in an ensemble. Students may also elect private study on an instrument.

Branstrom Awards up to \$500 to outstanding musicians, with special consideration given to pianists and singers. These awards require an audition and participation in a major choral ensemble. Students may also elect private study.

Orchestra Awards from \$500-\$1,000 to string, woodwind, brass, percussion, and piano/harpsichord players. Audition and participation in orchestra are required. Students may also elect private study.

Jazz Orchestra Awards up to \$1,500 to outstanding jazz musicians with excellent improvisational skills. Requires participation in Studio Jazz Orchestra and small ensembles, and private study.

Chamber Orchestra Awards up to \$1,500 to outstanding string players. Requires participation in University-Community Orchestra and Chamber Orchestra, and private study.

Vocal/Keyboard Awards up to \$1,000 each to one soprano, alto, tenor, bass, and two pianists with excellent accompanying skills. Audition and participation in GVSU Singers and/or Festival Chorale are required. Students may also elect private study.

Individual Music Scholarships

Edith Blodgett Piano Scholarship: Awards of \$1,000 minimum to outstanding freshman pianists in either the Bachelor of Arts or Bachelor of Music degree program. Required are an audition, self-evaluative paper, and letter of recommendation.

Eitzen Voice Scholarship: Awards of \$1,000 minimum to outstanding freshman voice majors. Required are an audition, self-evaluative paper, and letter of recommendation from voice instructor or high school choir director.

Arthur C. Hills Music Scholarship: Awards of \$1,500 to music majors to be used during the junior or senior year by a music major. Requires audition, nomination by a GVSU music faculty member, self-evaluative paper, 3.0 GPA, and two letters of recommendation from GVSU faculty members, including one from the performance instructor. The deadline is February 1.

Friends of the Arts Fine Arts Scholarship: A division-wide fine and performing arts competitive scholarship to be used during the senior year at Grand Valley. The scholarship covers up to 15 hours of course work for each of the two semesters of the senior year. Requires audition, current transcript, curriculum vita, analytical essay on accomplishments and plans for future, two or more letters of recommendation. The deadline is March 1.

Upper Division Scholarships - For Music Majors

Ten \$1,000 Upper Division Scholarships recognize achievement beyond the first year and encourage continuing high levels of performance. Students must be full-time music majors and have completed at least 30

credit hours. For application procedures and further eligibility provisions, students should consult the Music Major Handbook. The deadline is March 1.

Student Organization

Collegiate Chapter of the National Association for Music Education (CMENC) is the only national association that addresses every aspect of music education – band, chorus, orchestra, general music, teacher education, and research. CMENC's more than 70,000 members represent all levels of teaching, from pre-kindergarten through postgraduate. Since 1907, the national association for music education has worked to ensure that every student has access to a comprehensive sequential and high-quality program of music education. The collegiate chapter at GVSU offers the future music educator – BME candidate – opportunities to serve music education needs of the surrounding area and experiences that facilitate professional growth and development. Further information is available from Professor Charles Norris, who serves as faculty advisor.

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.

Graduate Work

The Department of Music offers graduate courses that can be taken to complete the music education concentration of the Master of Education — Middle and High School Emphasis, offered through the College of Education. Students must apply to the College of Education for admission to the M.Ed. program. Students selecting the music emphasis should have earned a B.M.E.

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. Course requirements are as follows:

Requirements for a Major in Music Major Ensembles (4 credit hours)

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 (4 credit hours)

- 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 (15 credit hours)

- 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 (2 credit hours)

- MUS 263 - Keyboard Musicianship I Credits: 1
- MUS 264 - Keyboard Musicianship II Credits: 1

Aural Perception and Sight Singing (2 credit hours)

- MUS 133 - Aural Perception and Sight-Singing I Credits: 1
- MUS 134 - Aural Perception and Sight-Singing II Credits: 1

Music Technology (1 credit hour)

- MUS 181 - Technology for Musicians Credits: 1

Music Literature (6 credit hours)

- MUS 119 - Survey of Music Literature I Credits: 3
- MUS 120 - Survey of Music Literature II Credits: 3

Music Electives (6 credit hours)

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 after 1900 Credits: 3
- MUS 310 - Piano Literature Credits: 2
- MUS 313 - Vocal Literature Credits: 2
- MUS 320 - Introduction to Conducting Credits: 2
- MUS 330 - Instrumentation/Orchestration Credits: 3
- MUS 335 - Counterpoint Credits: 3
- MUS 337 - Jazz Theory Credits: 2
- MUS 339 - Jazz Arranging and Composition Credits: 3
- MUS 380 - Special Topics in Music Credits: 1 to 4

Final Project

- MUS 479 - BA Senior Project Credits: 1-2

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 181 - Technology for Musicians Credits: 1
- MUS 230 - Music Theory III Credits: 3

Junior Year - Winter

- Music electives Credits: 3
- MUS 231 - Music Theory IV Credits: 3

Senior Year - Fall

- Music electives Credits: 3

Senior Year - Winter

- MUS 479 - BA Senior Project Credits: 1-2
- 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
- Bachelor of Music with Keyboard Emphasis
- Bachelor of Music with Vocal Emphasis

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 335 - Counterpoint 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 after 1900 Credits: 3

Music

Conducting (Credits: 2)

- MUS 320 - Introduction to Conducting Credits: 2

Music Technology (Credits: 1)

- MUS 181 - Technology for Musicians Credits: 1

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

Half Recital and Full Senior Recital (Credits: 0-3)

(0 Credits or may be taken for credit)

Chamber Music (Credits: 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 - Instrumental Literature Credits: 2
- MUS 370 - Instrumental 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: 4)

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 112 - Symphonic Wind Ensemble Credits: 1
- MUS 117 - Grand Valley University Arts Chorale Credits: 1

Collaborative Piano (Credits: 7)

One semester of MUS 141 and six semesters of MUS 126:

- MUS 141 - Private Instruction in Voice and Instruments – Freshman Credits: 1
- 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 313 - Vocal Literature Credits: 2
- MUS 358 - Vocal Pedagogy Credits: 2
- MUS 359 - Diction for Singers 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)

- DAN 170 - Stage Movement Credits: 1
- MUS 267 - Opera Workshop Credits: 1
- Foreign Language for Voice Majors (Credits: 8)
(Two courses in differing languages.)

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 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

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.

Requirements for Music, B.M.E.

MUS Requirements Credits: 77-78 (3 are general education)

Certification Requirements Credits: 39 (3 are general education)

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
- MUS 337 - Jazz Theory Credits: 2

OR

- MUS 330 - Instrumentation/Orchestration Credits: 3

Music Literature and History (Credits: 15 - 3 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

Two courses 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 after 1900 Credits: 3

Keyboard Musicianship (Credits: 3 for Instrumental, 4 for Choral/Vocal)

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 26, Choral/Vocal 25)

- MUS 181 - Technology for Musicians Credits: 1
- MUS 200 - Introduction to Music Education Credits: 1
- MUS 320 - Introduction to Conducting Credits: 2
- MUS 321 - Instrumental Conducting Credits: 3
(Instrumental Majors only)
- MUS 322 - Choral Conducting Credits: 3
(Choral/Vocal Majors only)
- MUS 354 - Teaching the Developing Voice Credits: 2
(Choral/Vocal Majors only)
- MUS 362 - Marching Band Techniques Credits: 2
(Instrumental Majors only)

- 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
- MUS 495 - Analytical Techniques (capstone) Credits: 3
- MUS 250 - Class Voice Credits: 1 (Instrumental Majors only)
- MUS 253 - Woodwind Techniques Credits: 2
- MUS 255 - Brass Techniques Credits: 2
- MUS 257 - Class Percussion Credits: 1
- MUS 258 - String Techniques Credits: 2

Ensembles (Credits: 7)**Instrumental Music Majors:**

May be repeated for credit.

Two must be 107.

- 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

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 & 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

Recital (Credit: 1)

- MUS 343 - Half Recital Credits: 1

Certification Requirements (Credits 39 - 3 are general education)

- PSY 301 - Child Development Credits: 1 to 3
- ED 337 - Introduction to Learning and Assessment Credits: 3
- ED 315 - Diverse Perspectives on Education Credits: 3
- ED 370 - Technology in Education Credits: 3
- ED 310 - Organizing and Managing Classroom Environments Credits: 3
- ED 321 - Content Area Literacy Credits: 3
- ED 379 - Universal Design for Learning: Secondary Credits: 3
- ED 331 - Methods and Strategies of Secondary Teaching Credits: 5
- ED 431 - Student Teaching, Secondary Credits: 10
- ED 485 - The Context of Educational Issues Credits: 3

Master of Education Advanced Content Specialization Music Education

The M.Ed. degree Advanced Content Specialization with a Concentration in Music Education is offered by the College of Education in cooperation with the Department of Music Education. Students must apply to the College of Education for admission to the M.Ed. program. Students selecting the music concentration should have a B.M.E.

The degree program consists of a minimum of 33 semester hours, including a minimum of 18 hours in education and a minimum of 15 hours in music. Students in the program will have an advisor from the College of Education and an advisor from the Department of Music.

Natural Resources Management

Degree Requirements

- MUS 651 - Measurement and Evaluation in Music Education Credits: 3
- MUS 655 - Foundations and Principles of Music Education Credits: 3
- MUS 656 - Introduction to Research in Music Education Credits: 3

Plus an additional 6 credit hours chosen from:

- MUS 621 - Advanced Instrumental Conducting and Literature Credits: 3
- MUS 622 - Advanced Choral Conducting and Literature Credits: 3
- MUS 643 - Applied Music Credits: 3
- MUS 658 - Applications of Technology in Music Education Credits: 3
- MUS 680 - Special Topics in Music Credits: 1 to 3

Natural Resources Management

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Program Coordinator: Keenlance; Professors: Griffin, MacDonald, Northup; Associate Professors: Menon, Rueth; Assistant Professors: Aschenbach, Keenlance, Nordman.

Website: 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 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 geology, statistics, 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 focused on ecosystem science and management, resource information science, or environmental science.

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.

Career Opportunities

NRM students may gain practical work experience through internships with environmental agencies, non-profit organizations, and industry. In addition, they can arrange special studies or research with faculty on a wide range of topics.

Career opportunities include both the traditional natural resource disciplines and emerging fields in environmental sustainability. The public demand for environmental quality has spurred employment in both the private and public sectors. Private sector employers include industrial forestry companies, urban foresters and arborists, environmental engineering and consulting firms, outdoor recreation providers, and non-governmental advocacy organizations. Graduates have also applied their NRM degrees in local, state, and federal government agencies dedicated

to environmental regulation, fish and wildlife management, recreation, and public forest management.

Graduate School Opportunities

The Natural Resources Management Program prepares students to pursue graduate studies in a wide range of natural resource management disciplines, including forestry, fisheries, recreation, wildlife, watershed management, sustainability, extension and education, economics, and policy.

Student Organizations

The program hosts a student chapter of the Soil and Water Conservation Society (SWCS). The national organization serves as an advocate for conservation professionals and for science-based conservation practice, programs, and policy. The student chapter provides an opportunity for students to participate in local, community-based conservation projects as well as in professional networking activities.

Bachelor of Science in Natural Resources Management

Requirements for a Major in Natural Resources Management Cognate Degree Requirements:

B.S. cognate requirements:

- MTH 122 - College Algebra
- NRM 320 - Introduction to Resource Systems
- BIO 460 - Terrestrial Ecosystem Ecology

Core: Completion of 33 additional NRM course credits, including:

- NRM 150 - Introduction to Natural Resources
- NRM 495 - Trends in Natural Resource Management (capstone)

Major Cognate Requirements: Completion of 24 additional credits, including:

- BIO 120 - General Biology I
- BIO 121 - General Biology II
- BIO 215 - General Ecology
- CHM 109 - Introductory Chemistry **OR** CHM 115 - Principles of Chemistry I Credits: 5
- GEO 111 - Exploring the Earth
- STA 215 - Introductory Applied Statistics

Electives: Completion of 13 additional credits:

The elective courses from the list below must be taken with the consultation and approval of the student's academic advisor.

- BIO 222 and above
- CHM 116 and above
- CS 150 and above
- GEO 112 and above
- GPY 307 or 407
- MTH 123 and above
- STA 216 and above

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.

Emphases (optional):

1. Ecosystem Science and Management:

This emphasis is designed for students interested in a career in the traditional biological and ecological areas of natural resources management. These courses will prepare students for entry-level professional positions, graduate study, and community involvement in areas such as forestry, fisheries, wildlife, soil conservation, watershed management, and related natural resources fields. The emphasis retains

flexibility so students also can build complementary strengths in aquatics, wildlife, soils, or resource policy, or develop additional skills in spatial or quantitative methods.

Completion of this emphasis does not require any additional credits over that of the general NRM degree. In order to complete the requirements for this optional emphasis, students must select the following:

Cognate Degree Requirements:

Same as general degree requirements.

Core Completion of 33 additional NRM course credits, including:

- NRM 150 - Introduction to Natural Resources
- NRM 250 - Resource Measurement and Maps
- NRM 281 - Principles of Soil Science
- NRM 350 - Aerial Photography and Remote Sensing of the Environment
- NRM 452 - Watershed and Wetland Management
- NRM 462 - Forest Ecosystem Management
- NRM 495 - Trends in Natural Resource Management (capstone)

Major Cognate Requirements:

Same as general degree requirements.

Electives: Completion of 13 additional credits:

The elective courses from the list below must be taken with the consultation and approval of the student's academic advisor. Additional elective hours can be taken from the list of electives for the general degree.

1. BIO 333 - Systematic Botany Credits: 3
2. BIO 362 - Fisheries Biology Credits: 4
3. BIO 408 - Wildlife Management Credits: 4

2. Environmental Science:

This emphasis is designed for students interested in a career in the areas in which traditional natural resources management and environmental science overlap, while providing an integrated and broad education not limited to these areas. Making environmental decisions requires scientific knowledge about the natural world, as well as an understanding about the ways in which humans interact with the natural world. Students selecting this emphasis will examine effects of human actions on the environment and the means by which policies, regulations, and decisions influence human actions. Graduates are likely to pursue careers in field or laboratory science with research institutions, regulatory agencies, nonprofit organizations, or private consulting firms that highlight environmental quality.

Completion of this emphasis does not require any additional credits over that of the general HRM degree. Students selecting this emphasis are required to take the following set of courses as part of their NRM and cognate courses:

- CHM 115 - Principles of Chemistry I Credits: 5
- CHM 116 - Principles of Chemistry II Credits: 5
- NRM 250 - Resource Measurement and Maps Credits: 4
- NRM 281 - Principles of Soil Science Credits: 4
- NRM 330 - Environmental Pollution Credits: 3
- NRM 451 - Natural Resource Policy Credits: 4
- NRM 452 - Watershed and Wetland Management Credits: 4

Cognate Degree Requirements:

Same as general degree requirements.

Core Completion of 33 additional NRM course credits, including:

- NRM 150 - Introduction to Natural Resources Credits: 3
- NRM 250 - Resource Measurement and Maps Credits: 4
- NRM 281 - Principles of Soil Science Credits: 4
- NRM 330 - Environmental Pollution Credits: 3
- NRM 451 - Natural Resource Policy Credits: 4
- NRM 452 - Watershed and Wetland Management Credits: 4
- NRM 495 - Trends in Natural Resource Management (capstone) Credits: 4

Major Cognate Requirements:

Same as general degree requirements, with the following constraints and additions:

- CHM 115 - Principles of Chemistry I Credits: 5 (CHM 109 does not count)
- CHM 116 - Principles of Chemistry II Credits: 5

Electives: Completion of eight (8) additional credits:

The elective courses from the list below must be taken with the consultation and approval of the student's academic advisor.

- BIO 338 - Environmental Ethics Credits: 3
- BIO 357 - Environmental Microbiology Credits: 4
- BIO 440 - Limnology Credits: 4
- BIO 450 - Stream Ecology Credits: 4
- BIO 470 - Conservation Biology Credits: 3
- CHM 221 - Survey of Analytical Chemistry Credits: 4
- CHM 222 - Quantitative Analysis Credits: 3
- CHM 231 - Introductory Organic Chemistry Credits: 4
- CHM 232 - Biological Chemistry Credits: 4
- CHM 321 - Environmental Chemistry Credits: 3
- CHM 322 - Environmental Chemical Analysis Credits: 3
- GEO 112 - Earth History Credits: 5
- GEO 320 - Geomorphology (Earth Science Capstone) Credits: 4
- GEO 430 - Oceanography Credits: 3
- GEO 440 - Geohydrology Credits: 3
- GEO 445 - Introduction to Geochemistry Credits: 4
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- OSH 414 - Environmental Safety and Health Regulations Credits: 3
- PHY 200 - Physics for the Life Sciences Credits: 4

3. Resource Information Science:

This emphasis is designed for students interested in a career in resource information technologies such as Geographic Information Systems (GIS), Global Positioning Systems (GPS), and remote sensing. Such technologies have increasingly widespread applications in natural resource management. This emphasis will enable students to specialize in the use of these technologies for spatial analysis and in supporting decision-making for natural resource management. The emphasis retains flexibility so that students can build complementary strengths in areas of natural resources such as aquatic systems, forests, soils, wildlife, or policy.

Completion of this emphasis does not require any additional credits over that of the general NRM degree. In addition to courses required for the general NRM degree, students are required to take the following:

- CIS 150 - Introduction to Computing Credits: 3 **OR** CIS 160 - Programming with Visual Basic Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 233 - Concepts of Database Systems Credits: 3
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- NRM 250 - Resource Measurement and Maps Credits: 4
- NRM 350 - Aerial Photography and Remote Sensing of the Environment Credits: 4
- NRM 395 - GIS Applications in Resource Management Credits: 3

Cognate Degree Requirements:

Same as general degree requirements.

Core Completion of 33 additional NRM course credits, including:

Same as general degree requirements, plus the following courses:

- NRM 250 - Resource Measurement and Maps Credits: 4
- NRM 350 - Aerial Photography and Remote Sensing of the Environment Credits: 4
- NRM 395 - GIS Applications in Resource Management Credits: 3

Major Cognate Requirements:

Same as general degree requirements.

Nursing

Electives: Completion of 13 additional credits:

The elective courses from the list below must be taken with the consultation and approval of the student's academic advisor. Additional elective hours can be taken from the list of electives for the general degree with the consultation and approval of the student's academic advisor.

- CIS 150 - Introduction to Computing Credits: 3
- CIS 231 - Problem Solving Using Spreadsheets Credits: 3
- CIS 233 - Concepts of Database Systems Credits: 3
- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3

Associate Wildlife Biologist Certification

This professional track is designed for students who intend to pursue a career in wildlife biology and management. Completion of this track will provide students with the necessary coursework for certification by The Wildlife Society (www.wildlife.org) as an Associate Wildlife biologist. This course work 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/.

Wildlife Society certification is a professional track rather than an academic emphasis. For the most up-to-date requirements and a recommended schedule of courses to complete the certification, please refer to the NRM Program website (www.gvsu.edu/biology/nrm).

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: 5 (Only students who plan to take additional chemistry courses as cognates should take CHM 115.)
- GEO 111 - Exploring the Earth Credits: 4
- MTH 110 - Algebra Credits: 4
- MTH 122 - College Algebra Credits: 3
- NRM 150 - Introduction to Natural Resources Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

Second Year

- General education courses
- BIO 215 - General Ecology Credits: 4
- NRM 250 - Resource Measurement and Maps Credits: 4
- NRM 281 - Principles of Soil Science Credits: 4
- NRM 395 - GIS Applications in Resource Management Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Third Year

- General education courses
- Cognate courses
- Elective
- NRM 320 - Introduction to Resource Systems Credits: 3
- NRM 451 - Natural Resource Policy Credits: 4
- NRM 452 - Watershed and Wetland Management Credits: 4
- NRM 462 - Forest Ecosystem Management Credits: 4

Fourth Year

- Electives
- Cognate courses
- BIO 460 - Terrestrial Ecosystem Ecology Credits: 4
- NRM 495 - Trends in Natural Resource Management (capstone) Credits: 4

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:

- 10 hours of 300 and 400-level courses
- NRM 150 - Introduction to Natural Resources Credits: 3

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

For additional information about opportunities your college offers, please refer to your college's section in this catalog.

Associate Dean: Van Doren. Professors: Bostrom, Coviak, Gendler, Grinstead, Kline, McCurren, Scott; Associate Professors: Bambini, Barry, Beel-Bates, Brintnall, Davis, Droste-Bielak, Jensen, Leder, Martin, Mupepi, Schafer, Schoofs, Van Doren; Assistant Professors: Britton, Leiras-Laubach, Mlynarczyk, Reick, Ryan, Schumacher, Vander Werf, Washburn; Affiliate Faculty: Baar, Bollman, Brown Bayus, Butcher, Carlson, Cooper, Cunningham, Damstra, Hooper, Jarchow, Leigh, Mielke, Sanchez, Shaw, Stockdale; Visiting Professor: Roberts; Visiting Assistant Professor: Weisbeck.

Website: www.gvsu.edu/kcon

The undergraduate program is designed for all qualified applicants, including high school graduates, nurses holding diplomas or associate degrees, practical nurses, and persons holding degrees in other fields.

Nursing majors must complete a core of courses in the humanities and the social, physical, natural, and health sciences that provides a strong scientific and humanistic foundation upon which the clinical nursing courses are based. Before graduation, students must also have completed the skill and 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.)

The program stresses health promotion and illness prevention as well as care of the sick. The ability to think critically, to solve problems, formulate concepts, make judgments, analyze, summarize, and form valid conclusions is emphasized. This focus provides the student with the characteristics necessary for professional development and personal enrichment in a changing society.

The baccalaureate degree in nursing prepares graduates to fulfill the professional nursing roles of providers of care, designers/managers/coordinators of care, and members of the profession.

The outcomes of the KCON undergraduate program are:

1. provide nursing care based on expanding clinical judgments 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. (designer/manager/coordinator of care)
2. coordinate health care with individuals, families, groups, and communities across the lifespan, using communication skills, in collaboration with members of the health care team. (coordinator of care)
3. assume ethical, legal, and professional accountability for the development and practice of nursing in a changing health care environment. (member of the profession)

The undergraduate program provides learning experiences in clinical sites that combine the liberal arts and basic sciences with nursing theory and clinical practice. Students are prepared to provide nursing interventions for individuals, families, and communities at a beginning generalist level. Students are scheduled for clinical practice at a variety of community hospitals and health care agencies, including home care, communities, and other ambulatory settings.

Students should be aware that most clinical facilities require a criminal background check and/or drug screening prior to allowing a student to practice at the site. 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). 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.

Bachelor of Science in Nursing - Traditional Undergraduate Nursing Admission

Freshman Nursing Majors (Direct Admit)

A limited number of new freshman students are eligible for direct admission to the nursing major. Admission is based on exceptional performance in a number of academic and leadership areas.

Eligibility for Direct Admit status to the undergraduate nursing program includes:

- New freshman student
- Cumulative high school grade point average of 3.6 or higher
- ACT composite score of 30 or higher
- All of the application for admission documents, including ACT score, must be submitted to the GVSU Admissions Office by December 31 of the senior year of high school
- Declaration of a nursing major by the end of the first week of classes during the first semester of enrollment at GVSU

Maintenance of Direct Admit status requires students to:

- Meet with their academic advisor in the Office of Student Services in the Kirkhof College of Nursing during their freshman year to identify the anticipated semester of entry into the initial clinical course
- Maintain a cumulative grade point average of 3.5, including transfer credits
- Attain a non-factored 3.5 grade point average in the decision courses
- Maintain congruency with GVSU and KCON policies regarding course repeats
- Be aware that a change of major will result in loss of Direct Admit Status

Progression into the clinical portion of the undergraduate nursing program requires students with Direct Admit status to:

- Complete the necessary pre-requisite and decision courses prior to beginning the initial clinical course in the undergraduate nursing program
- Meet with their academic advisor by the specified date (November 1 for Spring/Summer entry; March 1 for Fall or Winter entry) to complete the Verification of Preclinical Coursework (VOPC) document. Failure to meet with their academic advisor to complete the VOPC will jeopardize their direct admit status.

Evidence of the following items are required before the student begins NUR 315:

1. Health and immunization reports.
2. Certification in an American Heart Association course in cardiopulmonary resuscitation (CPR) for health professionals.
3. Transportation for clinical experiences.

Freshman Prenursing Majors

Students who are admitted to the university but do not immediately qualify for direct admission to the nursing major enroll as prenursing majors and must complete a secondary application. They are assigned an advisor who can guide them through the requirements.

- Students must have successfully completed (with a grade of C or better) all prerequisite coursework by the end of the term in which they are applying and none of the prerequisite or decision courses may be repeated more than once.
- After completing their application, students must meet with their academic advisor by November 1 for Spring/Summer entry or March 1 for Fall or Winter entry to verify that they will have completed their preclinical coursework and meet the minimum requirements.
- After this meeting and on the same day, the student must submit the completed application and Verification of Preclinical Coursework (VOPC) to 300 CHS.
- Admission to the program is highly competitive. Students who only met minimum requirements, such as a 2.8 admission GPA or average grades in the science courses, may not be competitive.

Procedures for admission to the nursing major are available on our website at www.gvsu.edu/kcon/. Select "Application Process."

Multiple selection criteria are used to determine admission to the nursing major. These include but are not limited to:

- prenursing must be declared as major prior to application submission.
- a completed application by March 1 for admission Fall or Winter semester; students will be notified by early May, or
- a completed application by November 1 for Spring/Summer admission; students will be notified by early January;
- competitive grades on the decision courses;
- a personal statement;
- a record of leadership and service indicating principal activities and other information that speak to individual accomplishments; and
- other areas as detailed on the nursing application.

Evidence of the following is required before the student begins NUR 315:

1. Health and immunization reports.
2. Certification in an American Heart Association course in cardiopulmonary resuscitation (CPR) for health professionals.
3. Transportation for clinical experiences.

In the semester that students are completing the prerequisite courses and the decision courses as listed below, they can submit an application for consideration by the application deadlines listed above. The co-requisite courses are designed for students to take at a time that complements the nursing clinical courses. All courses listed below must be completed with a minimum of C (2.0). Continued progression through the nursing major requires a minimum of C (2.0) in corequisite courses.

Prerequisite courses:

- BIO 120 - General Biology I Credits: 4
- BMS 213 - Laboratory in Microbiology Credits: 1
- CHM 109 - Introductory Chemistry Credits: 4
- MTH 110 - Algebra Credits: 4
- NUR 120 - Explorations in Nursing Credits: 2
- NUR 220 - Self-Health and Wellness Credits: 2
- PSY 101 - Introductory Psychology Credits: 3
- WRT 150 - Strategies in Writing Credits: 4

Decision courses

Decision courses should not be taken as credit/no credit.

- BIO 355 - Human Genetics Credits: 3
- BMS 250 - Anatomy & Physiology I Credits: 4
- BMS 251 - Anatomy & Physiology II Credits: 4
- BMS 212 - Introductory Microbiology Credits: 3
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- PSY 364 - Life Span Developmental Psychology Credits: 3

Corequisites

Corequisite courses should not be taken as credit/no credit.

- BMS 305 - Clinical Nutrition Credits: 3
- BMS 310 - Basic Pathophysiology Credits: 3
- BMS 311 - Pharmacological Aspects of Biomedical Sciences. Credits: 3

Nursing

- STA 215 - Introductory Applied Statistics Credits: 3
- WRT 305 - Writing in the Disciplines Credits: 3

Transfer Students

Students planning to transfer to GVSU from a community college should work closely with their local academic advisor. All transfer students should carefully review their degree analysis, which will be sent to them upon admission to the university. Students must be admitted to GVSU and must also be admitted to the prenursing major. Admission is selective and highly competitive. Additionally, no course may be repeated more than once, regardless of where the course is taken.

To be considered for the Program, students must be admitted to GVSU and prenursing must be declared as a major prior to application.

- Students must have successfully completed (with a grade of C or better) all prerequisite coursework by the end of the term in which they are applying and none of the prerequisite or decision courses may be repeated more than once.
- After completing their application, students must meet with their academic advisor by November 1 for Spring/Summer entry or March 1 for Fall or Winter entry to verify that they will have completed their preclinical coursework and meet the minimum requirements.
- After this meeting and on the same day, the student must submit the completed application and Verification of Preclinical Coursework (VOPC) to 300 CHS.
- Admission to the program is highly competitive. Students who only meet minimum requirements, such as a 2.8 admission GPA or average grades in the science courses, may not be competitive.

Evidence of the following is required before the student begins NUR 315:

1. Health and immunization reports.
2. Certification in and American Heart Association course in cardiopulmonary resuscitation (CPR) for health professionals.
3. Transportation for clinical experiences.

Suggested Order of Coursework for a Major in Nursing

First Semester Credits: 16

- BIO 120 - General Biology I Credits: 4
- CHM 109 - Introductory Chemistry Credits: 4
- MTH 110 - Algebra Credits: 4
- PSY 101 - Introductory Psychology 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 & Physiology I Credits: 4
- NUR 120 - Explorations in Nursing Credits: 2

Third Semester Credits: 13

- General Education (FC/Phi/Lit)
- General Education (FC/Arts)
- BMS 251 - Anatomy & Physiology II Credits: 4
- PSY 364 - Life Span Developmental Psychology Credits: 3

Fourth Semester Credits: 12

- General Education (FC/Philosophy or Lit) Credits: 3
- BMS 212 - Introductory Microbiology Credits: 3
- BMS 213 - Laboratory in Microbiology Credits: 1
- BIO 355 - Human Genetics Credits: 3
- NUR 220 - Self-Health and Wellness Credits: 2

Fifth Semester Credits: 15

- General education (C/Hst) Credits: 3
- WRT 305 - Writing in the Disciplines Credits: 3
- BMS 310 - Basic Pathophysiology Credits: 3
- BMS 305 - Clinical Nutrition Credits: 3
- NUR 315 - Nursing Health Assessment Credits: 3

Sixth Semester Credits: 16

- General Education (US Diversity) Credits: 3
- NUR 320 - Theoretical Nursing I Credits: 3

- NUR 321 - Clinical Practice I Credits: 4
- BMS 311 - Pharmacological Aspects of Biomedical Sciences. Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Seventh Semester Credits: 16

- General Education course (World Perspectives) Credits: 3
- NUR 350 - Theoretical Nursing II Credits: 4
- NUR 351 - Clinical Practice II Credits: 7
- NUR 435 - Research Application in Nursing Practice Credits: 2

Eighth Semester Credits: 13

- General Education (Theme) Credits: 3
- NUR 420 - Theoretical Nursing III Credits: 4
- NUR 421 - Clinical Practice III Credits: 6

Ninth Semester Credits: 14

- General Education (Theme) Credits: 3
- NUR 450 - Theoretical Nursing IV (Capstone) Credits: 4
- NUR 451 - Clinical Practice IV Credits: 7

Total Credits: 130

Notes

In order to progress in the nursing program a minimum grade of C (2.0) is required in the prerequisite, decision, 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.

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 part-time or full-time study. The required plan of study can be shortened by transfer of credits from Prerequisite and Decision courses.

To be considered for the Program, students must be admitted to Grand Valley and prenursing must be declared as a major prior to application.

- Students must have successfully completed (with a grade of C or better) all prerequisite coursework by the end of the term in which they are applying and none of the prerequisite or decision courses may be repeated more than once.
- After completing their application, students must meet with their academic advisor by November 1 for Spring/Summer entry or March 1 for Fall or Winter entry to verify that they will have completed their preclinical coursework and meet the minimum requirements.
- After this meeting and on the same day, the student must submit the completed application and Verification of Preclinical Coursework (VOPC) to 300 CHS.
- Admission to the program is highly competitive. Students who only meet minimum requirements, such as a 2.8 admission GPA or average grades in the science courses, may not be competitive.

Evidence of the following is required before the student begins NUR 315:

1. Health and immunization reports.
2. Certification in and American Heart Association course in cardiopulmonary resuscitation (CPR) for health professionals.
3. Transportation for clinical experiences.

Decision Courses:

- BIO 355 - Human Genetics Credits: 3
- BMS 252 - Anatomy and Physiology I Credits: 4
- BMS 253 - Anatomy and Physiology II Credits: 4
- BMS 212 - Introductory Microbiology Credits: 3
- CHM 230 - Introduction to Organic and Biochemistry Credits: 5
- PSY 364 - Life Span Developmental Psychology Credits: 3

Note: In order to progress in the nursing program, a minimum grade of C (2.0) is required in the following (1) Prerequisite, (2) Corequisite, and Nursing courses:

- BMS 305 - Clinical Nutrition Credits: 3
- See note (2) above
- BMS 310 - Basic Pathophysiology Credits: 3
- See note (2) above
- BMS 311 - Pharmacological Aspects of Biomedical Sciences Credits: 3
- See note (2) above
- NUR 220 - Self-Health and Wellness Credits: 2
- NUR 315 - Nursing Health Assessment Credits: 3
- NUR 320 - Theoretical Nursing I Credits: 3
- NUR 321 - Clinical Practice I Credits:
- NUR 350 - Theoretical Nursing II Credits: 4
- NUR 351 - Clinical Practice II Credits: 7
- NUR 420 - Theoretical Nursing III Credits: 4
- NUR 421 - Clinical Practice III Credits: 6
- NUR 435 - Research Application in Nursing Practice Credits: 2
- NUR 450 - Theoretical Nursing IV (Capstone) Credits: 4
- NUR 451 - Clinical Practice IV Credits: 7
- STA 215 - Introductory Applied Statistics Credits: 3
- See note (2) above
- BIO 355 - Human Genetics Credits: 3
- BMS 250 - Anatomy and Physiology I Credits: 4
- BMS 251 - Anatomy and Physiology II Credits: 4
- BMS 212 - Introductory Microbiology Credits: 3
- CHM 230 - Introduction to Organic and Biochemistry Credits: 5
- PSY 364 - Life Span Developmental Psychology Credits: 3

Bachelor of Science in Nursing - RN to B.S.N.

Registered Nurses

The KCON offers programs of study specifically designed for R.N.s to obtain the B.S.N. and M.S.N. The programs are designed for part-time or full-time study. Individual needs and appropriate alternatives for program planning are examined. Options for part-time study make degree completion more accessible to employed nurses.

Admission

1. Registered nurse students apply to Grand Valley State University for admission to the university as degree-seeking students. This must occur before seeking admission to Kirkhof College of Nursing. To be admitted to senior level nursing courses, students must have an overall GPA of 2.8. Admission GPA is based on post-secondary coursework with special attention to nursing courses in the earlier program. Students must also have completed the required Prerequisite courses with a minimum grade of C (2.0). Admission is selective and highly competitive.
2. Registered nurses are given advanced standing in the program through the following mechanisms:
 - Direct transfer of credits.
 - University credits for nursing courses.
 - National certification.
3. Evidence of the following are required before the student begins NUR 410:
 - Health and immunization reports.
 - Certification in an American Heart Association course in cardiopulmonary resuscitation (CPR) for health professionals.
 - RN licensure.
 - Documentation of HIPAA training.
4. Students are scheduled for clinical practice at a variety of community hospitals and health care agencies, including home care, communities, and other ambulatory settings. Students should be aware that most clinical facilities require a criminal background check and/or drug screening prior to allowing a student to practice at the site.

Requirements for a Major in Nursing

Completion of the baccalaureate in nursing requires:

1. General university requirements as identified in the General Academic Regulations section in this catalog. R.N. students are required to fulfill the university basic skills and general education requirements listed elsewhere in this catalog and complete a minimum of 120 semester hours of credit for graduation.
2. Required prerequisite courses with a minimum grade of C (2.0). In order to progress in the nursing program, a grade of C (2.0) is required in core and nursing courses.
 - BIO 355 - Human Genetics Credits: 3
 - BMS 250 - Anatomy & Physiology I Credits: 4
 - BMS 251 - Anatomy & 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
 - 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

Note: Upon completion of NUR 410 students may be eligible to receive credits for these courses if they do not have transferable college courses. All prerequisite courses taken at another university must have a grade of C (2.0) or better.

Required Nursing Courses

- NUR 310 - Professional Nursing Seminar Credits: 2
- NUR 400 - Health Assessment Skills for Nurses Credits: 3
- NUR 410 - Professional Role Transition Credits: 4
- NUR 425 - Care of Clients with Chronic Conditions Credits: 5
- NUR 426 - Health in Diverse Communities Credits: 5
- NUR 435 - Research Application in Nursing Practice Credits: 2
- NUR 455 - Leadership and Nursing Care Management (capstone) Credits: 3

Note: Upon completion of NUR 140 students will receive 30 upper division University credits for these courses. Prior to admission to KCON students will take NUR 310 and NUR 400.

Suggested Order of Coursework (after admission to KCON)

Summer

- NUR 410 - Professional Role Transition Credits: 4
- NUR 435 - Research Application in Nursing Practice Credits: 2

Fall

- NUR 425 - Care of Clients with Chronic Conditions Credits: 5

Winter

- NUR 426 - Health in Diverse Communities Credits: 5
- NUR 455 - Leadership and Nursing Care Management (capstone) Credits: 3

Master of Science in Nursing

Associate Dean: Scott. Professors: Bostrom, Coviak, Gendler, Grinstead, Kline, McCurren, Scott; Associate Professors: Bambini, Barry, Beel-Bates, Brintnall, Davis, Droste-Bielak, Jensen, Leder, Martin, Muepi, Schafer, Schoofs, Van Doren; Assistant Professors: Britton, Leiras-Laubach, Mlynarczyk, Reick, Ryan, Schumacher, Vander Werf, Washburn; Affiliate Faculty: Baar, Bollman, Brown Bayus, Butcher, Carlson, Cooper, Cunningham, Damstra, Hooper, Jarchow, Leigh, Mielke, Sanchez, Shaw, Stockdale; Visiting Professor: Roberts; Visiting Assistant Professor: Weisbeck.

Nursing

The Kirkhof College of Nursing offers a program of graduate study leading to 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 (patient care units/settings) in a reformed healthcare system. 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 and coordination of care delivery processes that will improve client outcomes in a cost effective, fiscally responsible manner.

Graduates 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.
3. Contribute to the advancement of the profession.

Admission Process and Procedures

The M.S.N. admission process is designed for post-baccalaureate in nursing (B.S.N.) entry. Applicants must have graduated from a BSN program that was accredited by either the Commission on Collegiate Nursing Education (CCNE) or National League for Nursing (NLN).

Applicants will be required to:

- Complete the GVSU graduate application available at admissions.gvsu.edu/admissions/grad-application specifying the MSN option.
- Submit transcripts from all previous undergraduate and graduate coursework (if applicable).
- Have a minimum GPA of 3.0 (on a 4.0 scale) for all undergraduate coursework.
- Submit official Graduate Record Examination (GRE) Scores. In general, scores on the GRE for successful applicants are 500 for both verbal and quantitative scales, and 4.0 for analytical writing. Students who completed the GRE prior to the analytical writing assessment and whose scholarly writing assessment samples are deemed inadequate will be required to retake the GRE.
- Prepare a written goal statement describing professional and educational goals.
- Submit a current curriculum vitae/resume.
- Participate in an interview process as requested.
- During a designated time, prepare a written essay on a specified topic and submit electronically as directed.
- International student applicants must meet TOEFL requirements for GVSU.

Full admission is contingent on successful completion of the following:

- NUR 400 - Health Assessment Skills for Nurses
- Current licensure to practice nursing in Michigan.
- A required criminal background check and drug screen.
- Health record documentation and immunization requirements.

An admission cohort will begin the M.S.N. curriculum each fall semester. For consideration for admission, the application and supplemental materials must be received by February 1 of the calendar year in which the student desires entry.

Requirements for the Master of Science in Nursing

The M.S.N. curriculum for an advanced generalist consists of 41 credits completed over 7 semesters. Students must complete the following coursework with a grade of B (3.0) or better.

Graduate Nursing Core: 12 Credits

- NUR 605 - Theoretical Perspectives in Nursing I Credits: 3
- NUR 607 - Health Care System, Policy & 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 & Evidence-Based Practice I Credits: 3
- NUR 614 - Nursing Research & Evidence-Based Practice II Credits: 1

Doctor of Nursing Practice

For additional information about opportunities your college offers, please refer to the Kirkhof College of Nursing section in this catalog.

Associate Dean: Scott. Professors: Bostrom, Coviak, Gendler, Grinstead, Kline, McCurren, Scott; Associate Professors: Bambini, Barry, Beel-Bates, Brintnall, Davis, Droste-Bielak, Jensen, Leder, Martin, Mupepi, Schafer, Schoofs, Van Doren; Assistant Professors: Britton, Leiras-Laubach, Mlynarczyk, Reick, Ryan, Schumacher, Vander Werf, Washburn; Affiliate Faculty: Baar, Bollman, Brown Bayus, Butcher, Carlson, Cooper, Cunningham, Damstra, Hooper, Jarchow, Leigh, Mielke, Sanchez, Shaw, Stockdale; Visiting Professor: Roberts; Visiting Assistant Professor: Weisbeck.

Website: 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 or administrative practice. The changing demands of this nation's complex health care environment require the highest level of scientific knowledge and practice expertise to assure high quality patient outcomes.

Graduates will be prepared to:

1. Provide advanced and complex care within an area of specialization in nursing that is scientifically and evidence-based; incorporating the science of nursing and other disciplines to optimize the functioning of individuals, their families, and communities.
2. Use organizational and systems leadership, information technology, interprofessional collaboration, and policy advocacy to improve and transform health care.
3. Contribute to the practice of nursing through clinical expertise, clinical scholarship for evidence-based practice, and active leadership in local, regional, and national professional groups.

Admission Process and Procedures

The D.N.P. program is designed for both post-baccalaureate in nursing (BSN) and post-master's degree in nursing (MSN) entry. If a post-BSN applicant, the BSN program must have been accredited by the Commission on Collegiate Nursing Education (CCNE) or National League for Nursing (NLN). If an MSN applicant, BSN and MSN programs must have been accredited by CCNE or NLN. Official transcripts must verify completion of BSN and/or MSN program(s) in nursing.

The admission process for the D.N.P. program is highly competitive. Applicants will be required to:

1. Complete the GVSU graduate application available at: http://admissions.gvsu.edu/admissions/grad_application/

2. Select one of two program emphases: advanced practice (child/adolescent or adult/older adult); or nursing administration and health care systems.
3. Submit transcripts from all previous undergraduate and graduate coursework.
4. Have a minimum GPA of 3.0 (on a 4.0 scale) for all undergraduate coursework for a BSN to D.N.P. applicant.
5. Have a minimum GPA of 3.0 (on a 4.0 scale) for all graduate coursework for a MSN to D.N.P. applicant.
6. Submit official Graduate Record Examination (GRE) Scores. In general, scores on the GRE for successful applicants are 500 for both verbal and quantitative scales, and 4.0 for analytical writing. Students who completed the GRE prior to the analytical writing assessment and whose scholarly writing assessment samples are deemed inadequate will be required to retake the GRE.
7. Participate in a scholarly writing exercise.
8. Prepare a written goal statement describing professional and educational goals.
9. Submit a current curriculum vitae/resume.
10. Participate in an interview process as requested.
11. International student applicants must meet TOEFL requirements for GVSU.

Full admission is contingent on successful completion of the following:

1. Current licensure to practice nursing in Michigan.
2. A required criminal background check and drug screen.
3. Health record documentation and immunization requirements.

An admission cohort will begin the D.N.P. curriculum each fall semester. For consideration for admission, the application and supplemental materials must be received by February 1 of the calendar year in which the student desires entry.

Requirements for the D.N.P.

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 nursing administration and health care systems consists of 79 credits completed over 10 semesters. Because program plans are individualized for post-MSN 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 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 & 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: 1-2
- NUR 793 - Scholarly Inquiry in Nursing Practice II Credits: 2

Advanced Practice Nursing (APN) Track: Core Courses

- NUR 610 - Advanced Assessment Credits: 2
- 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 - Acute/Critical Care: Child/Adolescent Credits: 3
- NUR 725 - Acute/Critical 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 Adult/Older Adults Credits: 3
- NUR 733 - Chronic Care Practicum: Adult/Older Adult Credits: 4
- NUR 734 - Acute/Critical Care: Adult/Older Adult Credits: 3
- NUR 735 - Acute/Critical 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

Nursing Administration and Health Care Systems Track

Students also complete the D.N.P. core courses.

- NUR 646 - Nursing Administration and Health Care Systems I Credits: 3
- NUR 647 - Nursing Administration & Health Care Systems II Credits: 3
- NUR 650 - Business and Quality in Nursing Credits: 3
- NUR 702 - Nursing Administration and Health Services Research Credits: 3
- NUR 740 - Administration Practicum I Credits: 6
- NUR 741 - Administration Practicum II Credits: 6
- NUR 742 - Administration 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

Occupational Safety and Health Management

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

Director: Van Fleet; Professor: Van Fleet; Assistant Professor: Huizen, Wu.

Website: 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. These laws are extensive and profoundly affect every element of our society. The demand for competent, fully qualified safety

Occupational Therapy

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. To be admitted into the program, the student must have completed 45 semester hours of instruction and obtained an overall G.P.A. of 2.25. Additionally, the student must have completed one course in chemistry and be enrolled in or have completed PHY 200. 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 316, OSH 324, or OSH 495.

Career Opportunities

With increased emphasis on workplace safety, career opportunities for graduates with a B.S. in Occupational Safety and Health Management continue to be very good. Most employers with 200 or more employees have one or more full-time safety specialists working in the safety area. In addition, many smaller employers (those with fewer than 200 employees) also hire a full-time safety professional. Job opportunities exist in all occupational settings, to include: hospitals, municipalities, manufacturing, retail, wholesale, construction, transportation, consulting, and insurance, to name a few. Starting salaries for OSHM graduates is very competitive with the degree being recognized as counting for up to three years worth of work experience.

Bachelor of Science in Occupational Safety and Health Management

Requirements for a Major in Occupational Safety and Health Management

Students planning to major in occupational safety and health management degree 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.

2. OSH Core:

Forty-eight semester hours

- OSH 300 - Introduction to Occupational Safety and Health Credits: 3
- 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 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

3. OSH Electives:

In addition to the above, students must take nine hours of electives.

Electives must be approved by their OSH Advisor.

- 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

4. OSH Science Cognate:

Twenty-four semester hours:

- One year of chemistry to include one lab course (8-10 hours of chemistry)
- PHY 200 - Physics for the Life Sciences Credits: 4
- Electives: 10-12 semester hours of behavioral or natural sciences with OSH advisor approval.

5. B.S. Degree Cognate

Students must take the following courses.

- MTH 110 - Algebra Credits: 4
- MTH 125 - Survey of Calculus Credits: 3
OR STA 215 - Introductory Applied Statistics: 3 Credits
- PHY 200 - Physics for the Life Sciences Credits: 4

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: 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 316, OSH 324, or OSH 495.

Occupational Therapy

For additional information about opportunities your college offers, please refer to the College of Health Professions section of this catalog.

Chair: Grapczynski; Associate Professor: Beasley, Grapczynski; Assistant Professors: Meier, Sisco; Visiting Faculty: Cleghorn, Truskowski.

Degree offered: Master of Science in Occupational Therapy.

Website: www.gvsu.edu/ot

Accreditation Status

The Occupational Therapy (OT) Traditional Program and the OT Hybrid Weekend Program are accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is (301) 652-AOTA. 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.

Professional Conduct

Because the College of Health Professions prepares students to practice in a variety of health professions, we assume the responsibility to assure the public that our students have met high standards of professional behavior and academic achievement and have demonstrated consistent evidence of response to consumer needs. Criminal background checks may be required prior to participation in certain clinical experiences.

The program requires that students attain a minimum of 84 percent competency in each course, which is reflected in each course syllabus across the professional curriculum.

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.

Career Opportunities

Occupational therapy provides excellent employment potential. The field continues to show growth in many areas of clinical and community practice, including private practice. Numerous job opportunities are available in a variety of areas, including acute care facilities; physical rehabilitation; mental health rehabilitation; developmental disabilities centers; nonprofit organizations; school systems, business; industry and organizational settings; home health care; geriatric settings; nursing homes; health and wellness promotion; research centers and universities.

Occupational Therapy at Grand Valley

The Occupational Therapy Traditional Program is a two-year curriculum leading to an entry-level Master of Science degree. The Weekend occupational therapy program is a three-year 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 full-time students, which the weekend program is intended for students who must attend part time. The mission of the Master of Science in Occupational Therapy program is to prepare graduates for professional practice, research, and leadership roles in the development and implementation of occupational policies, programs, and services. The occupational therapy curriculum is built around the concept 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 health professions, biology, biopsychology, psychology, or sociology. Although these degrees provide a well-rounded background, any undergraduate major may be selected as long as the required occupational therapy preprofessional courses can be completed along with the undergraduate degree before beginning the professional program. Once a selection 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 preprofessional courses. All of these required preprofessional 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.

Admission to the Occupational Therapy Programs is competitive. Maximum class size is 30. The candidates are ranked on a total score basis and our top 30 candidates (minus early admits from CMU 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 30 candidates decline admission.

Admission decisions will be made in the first and second semesters of the calendar year. Late applications will be considered, assuming all preprofessional requirements are met and there is space available in the program. Once enrolled in the Occupational Therapy Program, students will take professional courses in human development, 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, unless otherwise specified by the occupational therapy program. Degree requirements include a final research project and/or thesis, four Level I Fieldwork and 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.

Application Procedures

High school seniors interested in the Occupational Therapy Program must first complete an undergraduate application to Grand Valley State University or any accredited four year or higher education institution. They will begin their preprofessional studies and typically declare an undergraduate major in their freshman year.

Transfer students from community or four-year colleges must also complete an undergraduate application to Grand Valley State University in preparation for completing a baccalaureate degree, which is required for admission to the occupational therapy program. Transfer students should review with their local academic advisor and an occupational therapy program advisor, the courses that will satisfy Grand Valley State University requirements. Upon acceptance to the University, the student should consult immediately with an academic advisor in their major and an advisory from the occupational therapy program, to ensure they are on the right track.

Students from other institutions who wish only to complete a required preprofessional course at Grand Valley State University may apply for non-degree-seeking status. Those students still needing to complete preprofessional courses must submit an undergraduate application; those students who have completed the preprofessional courses must submit a graduate application. Students are encouraged to meet with an advisor from the occupational therapy program regarding preprofessional course completion to ensure a smooth transition into the program.

Admission to the Occupational Therapy Program first requires completion of the Grand Valley State University graduate application. Applications may be obtained from the Admissions Office or online at www.gvsu.edu/admissions/. Upon return of the completed graduate application the Admission Office will mail supplementary materials for the occupational therapy program application. These forms are also available online at the Occupational Therapy website. For first consideration for admission into the traditional program, supplementary materials must be returned to the Admissions Office by January 15 of the calendar year the student wishes to begin the professional program. For those interested in the weekend program, supplementary materials must be returned to the Admission Office by May 15 of the year the student wishes to begin. Rolling admissions are in effect. Please call the occupational therapy department to discuss your application and timeline. Late applications will be considered if the prospective class is not full.

Philosophy

Professional Program Admission Criteria

Admission to the Occupational Therapy Program is competitive. Application materials are available by contacting the Admissions Office or from the OT website: www.gvsu.edu/ot/. The criteria for acceptance includes:

1. Academic achievement of a minimum 3.0 grade point average in preprofessional courses and a 3.0 grade point average in the last 60 credit hours of academic course work. All preprofessional courses must be completed with a grade of "C" or better. Students accepted into the Occupational Therapy program must have a completed baccalaureate degree from an accredited institution of higher education.
2. Two recommendation letters. Using the forms provided in the application packet, including one from a registered occupational therapist, and one professor (for current full-time undergraduate students), or an employer (for non-traditional students) who can comment on your study and/or work habits.
3. An interview and an on-site writing sample.
4. Documented volunteer experience submitted on the form included in the application packet, for a minimum of 50 hours under the supervision of an occupational therapist. Volunteer hours must be verified by a registered and/or licensed occupational therapist.
5. Completion of an OT program achievement summary, detailing accomplishments that reflect the core content and goals of the program. Additional education, leadership, scholarly, volunteer, or professional activities are valued and should be documented (form available with admission application). A minimum of 8 points total must be attained.
6. The prerequisite plan form must be completed in full and submitted.
7. International student applicants should be able to communicate well in English. Minimum scores of TOEFL 610 or computer-based TOEFL 253 are expected.
8. Appropriate progress in completion of prerequisite coursework, which must be less than 5 years old unless currently working in health care and includes:
 - BMS 202 - Anatomy and Physiology Credits: 4
 - BMS 208 - Human Anatomy Credits: 3
 - BMS 309 - Laboratory in Human Anatomy Credits: 1
 - OR BMS 250 and BMS 251 - Anatomy & Physiology I & II (in place of BMS 202, 208 and 309)
 - MOV 300 - Kinesiology Credits: 3
 - PSY 430 - Physiological Psychology Credits: 3
 - or PSY 431 - Introduction to Neuropsychology Credits: 3
 - or BMS 427 - Neuroanatomy Credits: 1
 - PSY 303 - Psychopathology Credits: 3
 - PSY 364 - Life Span Developmental Psychology Credits: 3
 - One elective from Psychology, Sociology, Anthropology, Public Health, or related field (200-level or higher)

Degree Requirements

Completion of 80 to 81 credits in the professional curriculum is required for completion of 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.

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/grad/ot

Requirements for the M.S. in Occupational Therapy

Completion of 77 to 80 credits in the professional curriculum is required for completion of 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.

Professional Program Requirements

The program requires that students attain a minimum of 84% competency in each course and in each module of each course. This requirement is reflected in each course syllabus across the professional curriculum.

- HPR 688 - Health Professions Research I Credits: 1 to 3
- **OR** HPR 690 - Master's Thesis Proposal Credits: 1 to 3
- HPR 689 - Health Professions Research II Credits: 2
- **OR** HPR 695 - Master's Thesis Credits: 3
- OT 550 - Foundational Perspectives in OT Credits: 2
- OT 551 - Meaningful Living Through Occupation Credits: 3
- OT 552 - Meaningful Living Laboratory Credits: 2
- OT 553 - Level I Fieldwork (Part 1) Credits: 2
- OT 555 - Professional Socialization in Occupational Therapy Credits: 3
- OT 560 - Foundations of Child & Adolescent Practice Credits: 2
- OT 561 - Child & Adolescent Practice Credits: 3
- OT 562 - Child and Adolescent Laboratory Credits: 2
- OT 563 - Level I Fieldwork (Part 2) Credits: 2
- OT 564 - Occupational Therapy Research Methods Credits: 4
- OT 565 - Occupational Therapy Services Administration Credits: 3
- OT 570 - Foundations of Adult Practice Credits: 2
- OT 571 - Adult Practice Credits: 3
- OT 572 - Adult Laboratory Credits: 2
- OT 573 - Level I Fieldwork (Part 3) Credits: 2
- OT 650 - Foundations of Older Adult Practice Credits: 3
- OT 651 - Older Adult Practice Credits: 3
- OT 652 - Older Adult Laboratory Credits: 2
- OT 653 - Level I Fieldwork (Part 4) Credits: 2
- OT 660 - Level II Fieldwork (Part 1) Credits: 9 (Must be completed within 24 months of completion of academic program.)
- OT 661 - Level II Fieldwork (Part 2) Credits: 9 (Must be completed within 24 months of completion of academic program.)
- PA 535 - Grant Writing Credits: 3
- STA 610 - Applied Statistics for Health Professions Credits: 3
- and one Elective

Philosophy

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Parker. Professors: Castelo-Lawless, Kindschi, Ni, Pestana, Rowe; Associate Professors: Cimitile, DeWilde, Fitzpatrick, Moes, Parker, Shang, Vandenberg, Whipps; Assistant Professors: Loeffler, Rudolph, Spear, Tunstall, Uglietta, Vessey.

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. Thus 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

Career Opportunities

There are close connections between aspects of philosophy and most careers. For example, the study of ethics is essential for medicine, law, engineering, teaching, counseling, and business. Legal and political philosophies are essential to law and public service. The philosophy of science has a bearing on the social and natural sciences. The philosophy of art, literature, and film relates to journalism, television, and the performing arts. Just as philosophy was the ancient mother of all the liberal arts and sciences, so today the arts, sciences, and professional practices — specialized as they are — still lead us back to the questions of philosophy. Knowledge of the history of ideas, familiarity with logical thinking and creative problem-solving, and skills of abstraction and judgment are assets in any career.

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 Prelaw 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 & 376) 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.

Student Organizations

Philosophy Club

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.

All of the above 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.

Cognate 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 - Eastern Great Philosophers 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. cognate

Second through Fourth Years:

- Additional Required PHI Courses
- PHI Electives
- Intermediate Language (201) for B.A. cognate; 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 concentration 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.

Photography

For additional information about opportunities your college offers, please refer to the School of Communications website.

School of Communications Director: Thompson
Professor Rathbun; Associate Professors Thompson, Veenstra; Assistant Professor Smith.

Website: 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 School of Communications 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.

Physical Therapy

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 39 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, 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 150 2D Design 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 35 mm 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).

Career Opportunities

The B.A. and B.S. degrees prepare students to engage graduate studies in fine art programs, begin careers as professional artists, work creatively in commercial advertising and portrait studios, produce compelling work as photojournalists and editorial photographers, apply their expertise in museums and galleries, or combine a knowledge of image-making with another field for a variety of interests and functions.

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 - Theories of Communication Credits: 3

And one of the following:

- COM 201 - Speech Credits: 3
- 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. Cognates

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. cognate or the B.S. cognate that is intended for a particular undergraduate program.

B.A. Cognate

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

1. The B.S. cognate for the Photography Program requires:

- CIS 150 - Introduction to Computing Credits: 3
- OR PHI 103 - Logic Credits: 3 (for the photography program)

- SS 300 - Research Methods in the Social Sciences Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

2. Photography Core (nine courses, for a minimum of 30 credits)

- ART 149 - Introduction to Visual Composition Credits: 3
- CPH 171 - Photography I Credits: 4
- CPH 172 - Photography II Credits: 4
- CPH 266 - History of Photography I Credits: 3
- CPH 273 - Classic 4 x 5 Photography Credits: 3
- CPH 279 - Color Printing Credits: 4
- CPH 366 - History of Photography II Credits: 3
- CPH 372 - Computer Photo I Credits: 3
- CPH 498 - Senior Thesis/Project Credits: 1 to 6

3. Electives Credits: Minimum of 9

- CPH 371 - Experimental Black and White Photography Credits: 3
- CPH 373 - Computer Photo II Credits: 3
- CPH 374 - Color Photography Credits: 3
- CPH 375 - Studio Photography Credits: 3
- CPH 377 - The Social Eye Credits: 4 (offered in F of even years)
- CPH 380 - Special Topics in Photography Credits: 3
- CPH 399 - Independent Study Credits: 1 to 6
- CPH 490 - Internship Credits: 1 to 6
- CPH 280/480 Special Topics (TBA) Credits: 3

Physical Therapy

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

Director: Peck. Professors: Peck, Stevenson, Toot; Associate Professors: Alderink, Hoogenboom, Vaughn; Assistant Professors: Baker, Green, Hadley, Harro, Ozga, Ritch, Shoemaker, Sobek, Stickler; Clinical Faculty: Barr, Chapin, Uglietta.

Website: www.gvsu.edu/pt

Physical therapy is the care and services provided by or under the direction and supervision of all 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) alleviating impairments and functional limitations by designing, implementing, and modifying therapeutic interventions; (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 increased functional independence and decreased functional impairment. Physical therapists interact and practice in collaboration with a variety of health professionals. They 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.

Career Opportunities

Physical therapy provides excellent employment potential. The field continues to show growth in clinical responsibilities and in new areas of clinical practice. Some examples of settings in which physical therapists are employed include acute care hospitals, rehabilitation settings, private offices, sports medicine clinics, athletic teams, school systems, centers for the disabled, geriatric settings, home health care, industry, research centers, and universities.

Physical Therapy at Grand Valley

Incoming freshmen should select a major and work with an academic advisor in that department, as well as with the Student Services pre-physical therapy advisor. Suggested majors include but are not limited to health professions, biology, biomedical science, biopsychology, movement science, and athletic training. All of the physical therapy prerequisite curriculum course requirements must be taken for a letter grade.

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
- Life-Long Learning
- Excellence in Teaching, Scholarship, Practice
- Appreciation of Personal Well-Being
- Collegiality and Collaboration
- Social Responsibility
- Evidence-Based Practice
- Reflective Practice
- Advocacy
- Leadership

Accreditation

The Physical Therapy curriculum is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

Degree offered

Doctor of Physical Therapy (DPT).

DPT Requirements

Demonstration of completion of the 120 credits in the professional curriculum is required for completion of the Doctor of Physical Therapy.

Admission Requirements

Physical therapy applicants: Applications, recommendation forms, and supplementary materials for the Doctor of Physical Therapy program may be obtained from the Admissions office and website of Grand Valley State University or online at the PT program website www.gvsu.edu/pt/. For first consideration for admission, the application and all supplementary materials must be returned to the Admissions office by October 15 of the calendar year preceding the year in which the student wishes to begin the professional curriculum. Later applications also will be considered if the prospective class is not full. An annual class of 48 students is admitted. Students are accepted for fall entrance only and will be informed of the Admissions Committee's decision by a mailing.

Admission to the Doctor of Physical Therapy program is competitive. The criteria for acceptance include the following:

1. Receipt by October 15 of official transcripts from all community colleges, 4-year colleges, universities, and other institutions of higher education attended.
2. Completion of the following prerequisite coursework. All prerequisites must be taken for letter grades; each prerequisite must be completed with a letter grade of "C" or better. The prerequisites and the undergraduate degree must be completed by the first day of class of the professional program. Students in process of completing these must submit a written plan (include course name, number, credit hours, semester, and university) outlining courses and degree completion.
 - One course that includes cellular structure and function, with lab. BIO 120.
 - One course in physiology with lab. BMS 290 and 291 (and prerequisites for physiology; e.g., chemistry).

- One course in anatomy with lab. BMS 208 and 309.
 - One course in exercise physiology. MOV 304.
 - One course in college algebra or college trigonometry or calculus. MTH 122 or 123 or 125.
 - Two sequential courses in general physics with labs. PHY 220 and 221.
 - One course in statistics. STA 215.
 - One course in introductory psychology. PSY 101.
 - One course in life-span developmental psychology. PSY 364.
 - One course in introductory sociology, social problems or introduction to cultural anthropology. SOC 201 or 280, or ANT 204.
3. Academic achievement. All applicants must have a minimum cumulative GPA of 3.0 overall and 3.0 average in prerequisite course requirements to be considered for admission.
 4. Acceptable GRE scores submitted prior to October 15.
 5. Recommendations. Two recommendations must be submitted on university forms prior to October 15. One must be from a licensed physical therapist. These forms may be printed from the website www.gvsu.edu/pt/.
 6. Abbreviated resume. Educational, scholarly, volunteer, leadership, and work experiences/activities must be documented on GVSU PT forms (available on the PT website) and submitted prior to October 15.
 7. Observational experience. A minimum of 50 hours of self-documented experience is required at the time of application and must be recorded on the abbreviated resume under volunteer and/or work (paid) experience. Experiences in a variety of clinical settings are valued. Examples of clinical settings include in-patient, out-patient, extended care, and school.
 8. Communication and interpersonal skills. On-site interviewing and essay writing are required. Practice interviews are available by contacting Career Services at (616) 331-3311.
 9. Technical standards. Individuals must be able to perform all technical standards of the Physical Therapy program. This is available for view on the website www.gvsu.edu/pt/.
 10. Foreign born student applicants should be able to communicate well in English. The following minimal scores are expected: TOEFL 610 or computer based TOEFL 253.

Professional Conduct

The physical therapy program 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.

General Degree Requirements

General graduate academic policies and regulations can be found in the Grand Valley Undergraduate and Graduate Catalog.

Because the College of Health Professions prepares students to practice in a variety of health professions, we assume 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.

We require that students attain a minimum of 80 percent competency in each learning module. These modules are defined by faculty and are reflected in each course syllabus across the professional curricula. Specific physical therapy academic policies will be provided upon entry into the program.

Criminal background and drug screen checks may be required prior to participation in certain clinical experiences. The cost of this evaluation may be the responsibility of the student.

Physical Therapy

Reasons to Attend PT at GVSU

- Faculty credentials include 5 with PhD, EdD, JD and 7 with clinical specialization in orthopedics, neurology, geriatrics, and manual therapy.
- 35+ Adjunct faculty.
- Completely revised curriculum that includes research experience for all students.
- Three advanced electives (sports PT, spinal manual therapy, and neurologic PT).
- Thirty-eight weeks of full-time clinical internship in 5 settings across the United States.
- State of the art facility and equipment.
- Four major hospitals close by to provide educational experiences.
- 100% Pass-rate on licensure examination.
- Graduate assistantships are available to work with faculty and staff.

Retention and Termination

Grounds for Probation

1. A final course grade below a 2.7 (B-) in a 500 or 600 level HPR, PSY, PT or STA course.
2. A final grade below a 2.0 (C) in a 400 level BMS course.
3. A final grade of “no credit” in PT 636, PT 656, PT 675, PT 677, or PT 696.
4. A cumulative graduate level GPA less than 3.0 (B) after completion of nine hours of graduate level course work (i.e., at the end of semester one).
5. Evidence of unethical or illegal behavior while matriculating as a student in the PT program.

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 which 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 abilities 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.

Dismissal from the Program

Grounds for Dismissal: 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,” per IB1b.
5. Evidence of unethical or illegal behavior while matriculating as a student in the PT program.

Program Location

Semester 1 is at Pew campus Cook-DeVos Center for Health Sciences and Allendale campus.

Semester 2-6 and 8 are at Pew Campus Cook-DeVos Center for Health Sciences.

Clinical experiences are in Michigan and other selected states during semesters 3, 5, 7, and 9.

Graduate Outcomes

Students graduate in 36 months, then take the national licensing exam. 90%+ pass the exam on the first attempt. 100% pass with subsequent

attempts. 100% are successful at job placement in Michigan and across the United States.

Doctor of Physical Therapy

Website: www.gvsu.edu/grad/dpt

Requirements for the D.P.T.

Demonstration of completion of the 120 credits in the professional curriculum is required for completion of the Doctor of Physical Therapy.

Professional Program Requirements for the D.P.T.

- BMS 427 - Neuroanatomy Credits: 1
- BMS 428 - Neurosciences Credits: 3
- BMS 461 - Prosected Regional Anatomy Credits: 4
- HPR 510 - Introduction to Health Professions Research Credits: 1
- HPR 610 - Research in the Health Professions Credits: 2
- HPR 657 - Role of Education in Health Professions Credits: 2
- HPR 688 - Health Professions Research I Credits: 1 to 3 Total; 1 credit for 2 semesters
- HPR 689 - Health Professions Research II Credits: 2
- 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 513 - Clinical Science I Credits: 2
- PT 515 - Professional Topics I Credits: 1
- PT 517 - Clinical Kinesiology 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 - Clinical Biomechanics Credits: 3
- 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 652 - Geriatric Practice Management Credits: 2
- PT 655 - Professional Topics II Credits: 1
- PT 656 - Clinical Education II Credits: 5
- 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 684 - Advanced Topics: Sports Physical Therapy Credits: 3
- PT 685 - Professional Topics IV Credits: 2
- PT 687 - Advanced Topics: Spinal Manual Therapy Credits: 3
- PT 688 - Advanced Topics: Neurologic Physical Therapy Credits: 3
- PT 696 - Clinical Education V Credits: 6
- STA 610 - Applied Statistics for Health Professions Credits: 3

Curriculum for Doctor of Physical Therapy

First Year

Fall Credits: 17

- BMS 427 - Neuroanatomy Credits: 1
- BMS 461 - Prosected Regional Anatomy Credits: 4
- HPR 510 - Introduction to Health Professions Research Credits: 1
- PT 511 - Foundations in Physical Therapy Examination Credits: 3
- PT 513 - Clinical Science I Credits: 2
- PT 515 - Professional Topics I Credits: 1
- PT 517 - Clinical Kinesiology 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 - Clinical Biomechanics Credits: 3

Spring/Summer Credits: 18**First five weeks:**

- PT 636 - Clinical Education I Credits: 4

Next eight weeks:

- BMS 428 - Neurosciences 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**

- HPR 610 - Research in the Health Professions 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:

- HPR 657 - Role of Education in Health Professions Credits: 2
- HPR 688 - Health Professions Research I Credits: 1 to 3 (1 Credit)
- PT 652 - Geriatric Practice Management Credits: 2
- PT 655 - Professional Topics II Credits: 1
- PT 661 - Exam and Intervention for Rehabilitation Credits: 4

Spring/Summer Credits: 13

- HPR 688 - Health Professions Research I Credits: 1 to 3 (1 credit)
- 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

Third Year**Fall Credits: 12**

- PT 675 - Clinical Education III Credits: 6
- PT 677 - Clinical Education IV Credits: 6

Winter Credits: 9

- HPR 689 - Health Professions Research II Credits: 2
- PT 681 - Advanced Clinical Decision Making Credits: 2
- PT 682 - Health and Wellness Credits: 3
- PT 685 - Professional Topics IV Credits: 2

Winter -Optional:

- PT 684 - Advanced Topics: Sports Physical Therapy Credits: 3
- PT 687 - Advanced Topics: Spinal Manual Therapy Credits: 3
- PT 688 - Advanced Topics: Neurologic Physical Therapy Credits: 3

Spring/Summer Required 6

- PT 696 - Clinical Education V Credits: 6

Physician Assistant Studies

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

Program Director: Boeve; Professor: Bacon-Baguley; Associate Professors: Boeve, DuBose; Assistant Professors: Booth, Gillette, Libra, Piersma; Visiting Faculty: Bolenz-Geesin.

Website: www.gvsu.edu/pas

Degree Offered: M.P.A.S. (Master's in Physician Assistant Studies)
Physician assistants (PAs) are valued members of the health care team. PAs are currently licensed in all 50 of the United States by delegation or regulatory authority. Working under the supervision of 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 that authorize PAs to prescribe medication or transmit orders for dispensing medication including controlled substances. Close working relationships between PAs and their supervising physicians allow PAs to be educated in the medical model and expands the capabilities of physicians. As such, 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 PAs practice. These factors all comprise a physician assistant's scope of practice.

Career Opportunities

The growth of the physician assistant profession has been exponential over the past several years. The job market remains strong in most areas of the United States. Physician assistant was listed as number five for "Best Job in America" profiled in a release by CNN and Money Magazine in 2006. In 2005, the U.S. Bureau of Labor Statistics ranked PAS as the 4th fastest-growing occupation from 2004-2014. Physician assistants are employed in a wide variety of health care facilities from academic to administrative, or hospitals, clinics, and private practice settings. They work in HMOs, clinics, nursing homes, hospitals, emergency departments, practice offices, industrial and occupational medicine, research, correctional medicine, military, education, and Veteran's Administration and Public Health Services Centers.

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 the degree Master of Physician Assistant Studies (M.P.A.S.) following completion of a 28-month (seven semesters) curriculum of professional studies.

An equal number of applicants to the program are derived from those who possess a baccalaureate degree from either Grand Valley or another institution of higher learning and/or those who have pursued careers other than being a physician assistant. All applicants must meet the prerequisites and criteria for application to the program, realizing that some bring with them a wealth of life and career experience that enriches the diversity of the program.

Students begin the professional curriculum after they have been admitted into the program (see "Application Procedures"). During the PAS professional curriculum, students take coursework including human anatomy, medical physiology, clinical applications, clinical medicine, pathophysiology, practical therapeutics, PA 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 and clinical acumen to sit for their 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 West Michigan, other Michigan communities, and even some out of state or international communities. As part of the master's curriculum, students must complete a research project, thesis, or in-depth case studies.

Physician Assistant Studies

Accreditation Statement

The Grand Valley State University Physician Assistant Program is fully accredited by the Accreditation Review Commission on Education for the Physician Assistant (www.ARC-PA.net). This accreditation allows program graduates to take the required certification examination after graduation through the National Commission on Certification for Physician Assistants (www.NCCPA.net).

The Grand Valley State University Physician Assistant Studies Program is a member of the Physician Assistant Education Association (www.PAEAonline.org), the national organization representing educational programs for physician assistant faculty members.

The American Academy of Physician Assistants (www.AAPA.org) and the Michigan Academy of Physician Assistants (MAPA, www.michiganpa.org) recognize the Grand Valley State University Physician Assistant Studies Program, its students, and its graduates as an official PA program.

Application Procedures

Admission to the PAS program is competitive. Please contact the Program at (616) 331-3356 to obtain an application or visit the website at www.gvsu.edu/pas for additional information. Students must be in the process of completing all of their preprofessional and undergraduate degree requirements **by the month of May** before starting the professional program.

High school seniors interested in physician assistant studies must complete an undergraduate application to Grand Valley State University. During their freshman year they will begin their preprofessional studies and declare a major. The most common majors for students admitted to the program from Grand Valley are health professions and biomedical sciences.

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 Grand Valley by the beginning of their junior year to ensure completion of their undergraduate degree and preprofessional 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.

Students who have completed or are near completion of a baccalaureate degree fall into one of two categories: (1) those who have not completed all the preprofessional courses but intend to complete them at Grand Valley before applying to the physician assistant program must submit an undergraduate application; and (2) those who have completed the preprofessional coursework and an undergraduate degree must complete a graduate application. Students should meet with a faculty member of the PAS program or the College of Health Professions Student Services Director regarding the preprofessional courses.

Students must be in the process of completing all of their preprofessional and undergraduate degree requirements to be considered for admission. All preprofessional requirements and undergraduate degree must be completed *by the month of May prior to fall semester* before the start of the professional phase of the curriculum unless a rare extension has been granted by appeal to the PA Studies program director. Students who have not completed all prerequisites are encouraged to apply, provided they have a definite plan to complete the preprofessional courses **by the month of May prior to fall semester** before the start of the professional phase of the curriculum. Application information may be obtained by calling the College of Health Professions office at (616) 331-3356. The application deadline is October 1 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 October 1 for the application to be considered for the class to enter the following August. The admissions committee for the program will begin to review completed applications

and grant interviews beginning in November preceding the applicants anticipated matriculation into the program in August. Beginning in December, positions in the program will be offered to applicants the committee deems exceptional candidates. The new PAS class should be filled before February 1 of each year.

Professional Level Curriculum Admission Criteria

Admission to the physician assistant program is competitive. The criteria for consideration for admission, acceptance, and matriculation are as follows:

1. 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, their last 60 hours of coursework, and overall college coursework to be considered for admission. A 3.0 is the minimum to apply, but does not mean it is competitive enough for interview or matriculation into the program. All prerequisite coursework and a bachelor’s degree are required **by the month of May prior to fall semester** before beginning the professional curriculum.
2. Two recommendations from health professionals, submitted on university forms are required. We recommend, but do not require, that at least one letter be from a practicing physician assistant or physician.
3. Satisfactory individual and group interviews are required of all final pool applicants.
4. Writing samples, required as a portion of the interview process for all final pool applicants.
5. Experience. Applicants should show evidence of **500-plus** hours of significant volunteer, work, or observational experience in a health care environment. This experience must be hands on patient care activities.
6. Due to the highly complex medical terminology within the U.S. health care system, international student applicants should be able to communicate well in English. The following minimal scores are expected: TOEFL 600.

International Students must have the last 30 hours of higher education coursework taken at an established and accredited U.S. institution. For students from English speaking countries, the 30 hours of higher education coursework will be evaluated on a case-by-case basis at the request of the applicant.

The rare student who feels they have unusual circumstances that impact their ability to meet the above criteria must appeal in writing to the PAS admissions committee as a whole asking for a decision in their case.

Students are accepted for fall entrance only. Students will be informed of admission decisions no later than February 1. Applicants may be placed on an alternate list to be offered positions in the entering class should a vacancy occur. Every year is a new cycle of applicants, there is no waiting list that carries over from year to year.

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. Applicants must meet certain 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/.

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 Grand Valley State University graduate bulletin.

In addition, for each PAS course or a discrete unit of instruction in the professional curriculum, a minimum proficiency level of 80 percent on all evaluation as described in course syllabus is required. A minimum of a grade "C" is required for passing all "non-PAS" courses, however, the GPA must never drop below the 3.0 or "B" minimum in any semester or the student may be placed on academic probation or dismissed from the PAS 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. A complete copy of these abilities is available from the program and may also be viewed on the program ebsite under core competencies 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 is available from the program and may also be viewed on the program website under PA profession, 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 second 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

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 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 461 - Prosected Regional Anatomy Credits: 4
- HPR 510 - Introduction to Health Professions Research Credits: 1
- HPR 610 - Research in the Health Professions Credits: 2
- HPR 688 - Health Professions Research I Credits: 1 to 3
- HPR 689 - Health Professions Research II Credits: 2
- PAS 501 - Clinical Applications I Credits: 4
- PAS 502 - Clinical Applications II Credits: 3
- PAS 503 - Clinical Applications III Credits: 3
- PAS 504 - Clinical Applications IV Credits: 3
- PAS 511 - Foundations of Clinical Medicine Credits: 3
- 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 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: 16**

- BMS 461 - Prosected Regional Anatomy Credits: 4
- HPR 510 - Introduction to Health Professions Research Credits: 1
- PAS 501 - Clinical Applications I Credits: 4
- PAS 511 - Foundations of Clinical Medicine Credits: 3
- PAS 521 - Medical Physiology Credits: 3
- PAS 551 - Physician Assistant Profession Issues I Credits: 1

Winter — Semester Two Credits: 15

- HPR 610 - Research in the Health Professions Credits: 2
- PAS 502 - Clinical Applications II Credits: 3
- 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

Spring/Summer — Semester Three Credits: 16

- PAS 503 - Clinical Applications III Credits: 3
- 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
- STA 610 - Applied Statistics for Health Professions Credits: 3

Second Professional Year**Fall — Semester Four Credits: 16**

- PAS 504 - Clinical Applications IV Credits: 3
- PAS 514 - Clinical Medicine III Credits: 6
- PAS 524 - Clinical Pathophysiology III Credits: 3

Physics

- 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

Winter — Semester Five Credits: 13

- PAS 610 - Clinical Rotations I Credits: 12
- HPR 688 - Health Professions Research I Credits: 1 to 3

Spring/Summer — Semester Six Credits: 12

- PAS 620 - Clinical Rotations II Credits: 12

Third Professional Year

Fall — Semester Seven Credits: 15

- PAS 630 - Clinical Rotations III Credits: 12
- HPR 689 - Health Professions Research II Credits: 3

Total Professional Curriculum

103 Credits.

Physics

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Gipson. Professors: Estrada, Reynolds; Associate Professors: Ambrose, Furton, Gipson, Krcmar, Lenters, Oliver, Rakovic, Schnyders; Assistant Professors: Bolen, Majumdar, Vallery; Affiliate: Vreugdenhil.

Website: 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 Department of Physics 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 Department of Physics 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.

Career Opportunities

Problem-solving skills mastered by the physics major make physics an excellent background for many professions in science, engineering, medicine, business and law. Employment opportunities for physics baccalaureates exist in education, industry, and research. Physics graduates are commonly employed in industry, private institutions and government, often working as part of a team of scientists and engineers. There is also an enormous need for properly prepared secondary school physics teachers.

Graduate School Opportunities

Physics majors traditionally pursue graduate studies in physics, medical physics, or engineering, but may also elect to pursue graduate studies in mathematics, chemistry or related fields. (Note: Physics majors intending to go to graduate school in physics should take MTH 227 and MTH 304 rather than the MTH 302 option and should also take as many upper level physics electives as possible, particularly PHY 430, 440, and 450.)

With such advanced degrees, more responsible positions in research are available, as are teaching opportunities in colleges and universities. A physics degree is also an excellent background for further education in other professional fields. Medical and law schools are enthusiastic about well-prepared applicants who hold physics degrees. Physics graduates are also especially well-qualified to pursue advanced degrees in patent law or business, both of which offer excellent employment opportunities.

Participating Programs:

M.Ed with emphasis in Physics

Student Organizations

Society of Physics Students (SPS): SPS is a national organization, which exists to promote the study and enjoyment of physics. Our local chapter serves as the departmental physics club and is very active in both outreach and professional activities.

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

Cognate Degree Requirements: Completion of the B.S. in physics completion of the general university degree requirements as identified in the General Academic Policies section of the catalog. The following courses fulfill the B.S. cognate: MTH 201, MTH 202 and PHY 230.

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 - Intermediate Modern Physics 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: 5
- CIS 261 - Structured Programming in C Credits: 3
- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4
- MTH 203 - Calculus III Credits: 4
- MTH 227 - Linear Algebra I Credits: 3
- MTH 300 - Applied Analysis I Credits: 3
- MTH 302 - Linear Algebra and Differential Equations Credits: 4
- OR MTH 304 - Analysis of Differential Equations Credits: 3

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:

- PHY 105 - Descriptive Astronomy Credits: 3
- Any 300 level physics elective, excluding PHY 303, 306, and 307
- Any 400 level physics elective

- CHM 351 - Introduction to Physical Chemistry Credits: 3
- CHM 352 - Applied Physical Chemistry Credits: 1
- CHM 356 - Physical Chemistry I Credits: 3
- CHM 358 - Physical Chemistry II Credits: 3

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: 5 (NS/A) (F)
- MTH 201 - Calculus I Credits: 5 (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)
- MTH 227 - Linear Algebra I Credits: 3 (F) **AND** MTH 302 - Linear Algebra and Differential Equations Credits: 4 (W)

OR

- 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

- Three General Education courses (Begin Theme)
- One Science elective
- Elective
- MTH 300 - Applied Analysis I 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

- Two general education courses (Finish Theme)
- One science electives
- Electives
- PHY 350 - Intermediate Modern Physics 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 noted above, 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
- A course in ethics 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 student 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 pre-service 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.

The required courses are:

- 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 - Intermediate Modern Physics 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.

Master of Education Advanced Content Specialization in Physics

The M.Ed. Advanced Content Specialization degree with a Concentration in Physics is offered by the College of Education in cooperation with the Department of Physics. The purpose of the degree is to provide high school and middle school teachers with opportunities to expand their knowledge in the area of physics pedagogy and deepen their understanding of the subject.

Admission

Admission to the M.Ed. program requires teaching certification with either a major or a minor in physics, or a major in chemistry, mathematics, or integrated science. A demonstrated proficiency of physics at the one-year introductory level (PHY 220/221 or PHY 230/231 or equivalent) is required. Students must submit three letters of recommendation,

Political Science

transcripts of all previous coursework and copies of teaching certificates. Students must have at least a 3.0 cumulative GPA. For additional details, see the College of Education section of this catalog.

Curriculum Overview

The program requires completion of 33 graduate credits, 18 credits in education and 15 in physics. The specific degree requirements can be found in the Graduate Program section of the College of Education section in this catalog.

Upon admission to the program, the students will meet with a College of Education advisor and an advisor from the Department of Physics who will evaluate all previous coursework taken in physics. A curricular plan reflecting the student's needs, interests, and goals will be agreed upon. Each student must complete a minimum of 15 credits from the following list of approved courses. At least 12 credits (normally four courses) must be taken at the 600 level.

- PHY 555 - Physics Content Enhancement Credits: 3
- PHY 601 - Physics by Inquiry I Credits: 3
- PHY 605 - General Astronomy Credits: 3
- PHY 610 - Measurement and Instrumentation in the Physics Lab Credits: 3
- PHY 620 - Methods and Materials for Physics Demonstrations Credits: 3
- PHY 630 - Teaching Conceptual Physics Credits: 3
- PHY 650 - Software and Interactive Physics Credits: 3
- PHY 660 - Readings in Physics Education Research Credits: 3
- PHY 670 - Modern Physics with Computer Visualization Credits: 3
- PHY 680 - Special Topics in Physics Credits: 1 to 4

Political Science

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Richards. Professors: Constantelos, Diven, King; Associate Professors: Cornish, den Dulk, Richards, Walhof; Assistant Professors: Kilburn, Mangala, Miller-Adams, Schlewitz, Schneider, Tafel, Walker, Zhao, Zinman.

Website: <http://www.gvsu.edu/polisci>

The central aim of the political science program is to achieve a well-rounded undergraduate knowledge of the discipline. Political science is a liberal education major. 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 many courses that deal specifically with the U.S. government. These include Congress and the presidency, state politics, American election campaigns, mass media, political parties and interest groups, judicial politics, and constitutional law. The department also offers courses in international and comparative politics, including international relations, European politics, Chinese politics, African politics, U.S. foreign policy, 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 a great deal of individual attention.

Career Opportunities

The career goals of political science majors include professions directly related to public policy making and administration at all levels of government, business and consulting, teaching of political science, diplomacy and foreign affairs, and leadership in issue advocacy, mass communication and public opinion. Students also go on to graduate or professional study in law, political science, international relations, and business. Political science is not a professional degree program.

The department coordinates closely with GVSU Career Services to provide seminars, events, and advising related to careers. The department

also coordinates with the Laker Jobs website to list employment and internship opportunities. Students are highly recommended to perform an internship as part of their career preparation.

For a detailed career guide, see <http://www.gvsu.edu/polisci/>.

Graduate School Opportunities

Students go on to graduate or professional study in law, political science, public administration, international relations, education and business.

For information on law school see www.gvsu.edu/prelaw/.

For information on graduate school, see the career guide at www.gvsu.edu/polisci/.

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 nonprofit 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, click on the internships link at www.gvsu.edu/polisci/.

For information on the GV in DC program see: www.gvsu.edu/gvdc/.

Scholarship Opportunities

The John T. Batchelder Political Science Scholarship honors John Thayer Batchelder who served as Grand Valley State University professor until his retirement in 1997. The scholarship goes to a junior in political science and is renewable for an additional year.

Every year the Department of Political Science runs the Henry Internship competition. The Henry Internship places a GVSU student — the Henry Scholar — in the Washington, D.C., office of one of Michigan's Representatives or Senators during the spring/summer academic session. The Paul. B. Henry Foundation pays a stipend of at least \$2,000 to defray the costs of travel and living expenses, and interns get academic credit for their work. The GVSU Alumni Association's DC Chapter adds a special dimension to the program through mentorship and support of GVSU interns.

For more information see the scholarships page at www.gvsu.edu/polisci/.

Student Organizations

GVSU student organizations related to political science and/or advised by political science faculty include:

- Student Senate
- College Democrats
- College Republicans
- International Relations Organization
- Law Society
- Amnesty International

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.apsanet.org/~psa/.

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.

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 comparative politics, one in political thought, and one in international relations. Please see a list of elective courses by category below. At least four of these courses must be at the 300 level; independent studies, internships, PLS 495 and the B.S. cognate courses 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 degree cognate sequence: STA 215, PLS 300, and PLS 315 or 341. When taken as part of the B.S. cognate, PLS 300, 315 and 341 do not count toward the 36 required credits for the major.

Political Science Elective Courses by Category:

American Politics

- 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 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

- PLS 212 - Great Decisions Credits: 3
- PLS 311 - International Conflict and Conflict Resolution Credits: 3
- PLS 312 - US 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

- 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 US-China Relations Credits: 3
- PLS 284 - Latin American Politics Credits: 3
- PLS 319 - African Politics Credits: 3
- PLS 327 - Politics of Developing Countries Credits: 3
- PLS 339 - Comparative Democratization Credits: 3
- PLS 382 - Politics of Post-Communist Europe Credits: 3
- PLS 385 - Russian and Post-Soviet Politics Credits: 3

Political Thought

- 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
- 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.

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 below]
- 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 prerequisites for PLS 315 - International Political Economy)

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 (themes, and WRT 305 or pass junior year writing exam)
- Electives
- Political science internship
- If choosing B.S. (and upon completion of STA 215 and PLS 300), take PLS 315 - International Political Economy
OR PLS 341 - Elections and Voting Behavior

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

Premedical and Pre dental Studies

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 Department of Political Science 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 BS/BA 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 3.5 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
- SS 300 - Research Methods in the Social Sciences SS 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 Minor

Requirements for a Minor in Political Science

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. cognate 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.

Political Science and Law

The Department of Political Science 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 section of this catalog.

Premedical and Pre dental Studies

Program Advisor: Amanda Cuevas

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, pre dental, 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.

Prelaw

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 below) 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), or refer to www.gvsu.edu/prelaw/.

Website: 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.

Prelaw Education Residence Living (PERL)

The PERL program is an academic learning and living community open to students of any major who are interested in prelaw. The mission of the PERL program is to provide advising and support to students of any major who are interested in attending law school and pursuing a career in law (also known as pre-law students) after completing their undergraduate degree. For more information, check with faculty director Dr. Mark Richards (see below), or go to www.gvsu.edu/perl/.

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.

Student Organization

Law Society

Grand Valley pre-law and legal studies students are invited to join our Law Society. Members will have opportunities to:

- Hear scholars, judges, and lawyers speak on current legal issues
- Meet with law school admissions officials
- Contribute to the community through charitable work
- Receive advice on LSAT preparation and admission to law school

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 pre-law 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 287 - Roman Law
- PHI 330 - Legal Philosophy
- 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 408 - White-Collar and Corporate Crime
- CJ 444 - Forensic Behavior and Law
- CJ 463 - Corrections Administration and Legal Issues
- 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 - Labor and Employment Law
- MGT 355 - The Diversified Workforce
- MGT 432 - Grievance Administration, Arbitration, and Collective Bargaining

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
- MGT 637 - Employment and Labor Law

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,

Professional Science

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 pre-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

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section of this catalog.

Coordinator: Elrod. Biostatistics Program Director: Downer; Cell and Molecular Biology: Biotechnology Emphasis Program Director: Staves; Medical and Bioinformatics Program Director: Leidig. Faculty drawn from the Departments of Biology, Biomedical Sciences, Cell and Molecular Biology, Chemistry, Statistics, and the School of Computing and Information Systems.

Website: www.gvsu.edu/psm

Degrees Offered

Master of Science in Medical and Bioinformatics; Master of Science in Cell and Molecular Biology: Biotechnology Emphasis; Master of Science in Biostatistics.

The Professional Science Master's (PSM) degree is characterized as post-graduate 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 United States and Canada (www.sciencemasters.com).

The professional science master's (PSM) degree is an innovative new 2-year graduate degree that offers advanced technical training while developing workplace skills - business, communications, teamwork, ethics - that employers are demanding.

A Professional Science Masters 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.

Career Opportunities

Graduates of GVSU's three PSM programs are currently working in biotechnology companies, research institutes, non-profit organizations, pharmaceutical companies, university research centers and research institutes, medical school research groups, hospitals, contact research organizations, consulting companies and in government. The employers of GVSU's PSM graduates work for Fortune 100 companies and for startups in Michigan and from Maryland to Tennessee to Illinois to Washington state.

Professional Science Masters 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

In addition to the requirements listed in the Graduate Admission section of the Grand Valley State University Catalog, and specific requirements listed in the corresponding departmental listings, candidates must satisfy all of the following admissions criteria:

- Grade point average of 3.0 (B) from all undergraduate coursework and 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

2 common seminar courses Credits: 2

- PSM 661 - Seminar in Professional Science Practice I Credits: 1
- PSM 662 - Seminar in Professional Science Practice II Credits: 1

Internship Credits: 4

- PSM 691 - Internship Credits: 1 to 9

Psychology

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section of this catalog.

Chair: Hendersen. Professors: Adamopoulos, Burns, Hendersen, D. Henderson-King, Herzog, Lakey, Portko, Smith, Xu; Associate Professors: Bowdle, Bower Russa, Chen, Cornelius, Dueker, W. Friedlmeier, Gale n, Gross, E. Henderson-King, Lou, Matthews, McGhee, Morris, Owen-DeSchryver, Paszek, Rodriguez-Charbonier, Rogers, Sá, Shupe, Wolfe; Assistant Professors: Campbell, Dean, Deaner, Dillard, M. Friedlmeier, Kurby, Maouene, Nichols-Whitehead, Quamme, Swets, Valdez, Williams.

Website: www.gvsu.edu/psychology

Students major in psychology for various reasons, and different sets of courses are likely to be appropriate for students with different goals. Students should plan their studies in consultation with an academic advisor early in and throughout their college career. Psychology programs cannot be completed by students who take only evening courses. Psychology covers such a broad range of topics that psychologists 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.

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, 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.

Psychology-special education can serve as a major for obtaining teaching certification at the elementary 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 (Capstone) Credits: 3

Category Requirements

In addition, one course must be taken from each of the six following categories:

I. Biological:

- PSY 375 - Comparative Psychology Credits: 3
- PSY 430 - Physiological Psychology Credits: 3
- PSY 431 - Introduction to Neuropsychology Credits: 3
- PSY 432 - Psychopharmacology Credits: 3

II. Developmental:

- PSY 301 - Child Development Credits: 1 to 3
- PSY 305 - Infant and Early Childhood Development Credits: 3
- PSY 331 - Adolescent Development Credits: 3

Public and Nonprofit Administration

- PSY 332 - Adult Development and Aging 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 363 - Learning Credits: 3
- PSY 365 - Cognition Credits: 3

VI. General:

- PSY 311 - Controversial Issues in Psychology Credits: 3
- PSY 362 - Environmental Psychology 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. Students have the option of using one of the following as an elective:

- SS 351 - Family & Gender in the Developing World Credits: 3
- SS 381 - Death and Dying Credits: 3

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.

SS 300 does not count toward the major in psychology.

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 cognate requirement is:

- 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, SS 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 375 - Comparative Psychology Credits: 3
- PSY 430 - Physiological Psychology Credits: 3
- PSY 431 - Introduction to Neuropsychology Credits: 3
- PSY 432 - Psychopharmacology Credits: 3

II. Developmental:

- PSY 301 - Child Development Credits: 1-3
- PSY 305 - Infant and Early Childhood Development Credits: 3
- PSY 331 - Adolescent Development Credits: 3
- PSY 332 - Adult Development and Aging 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 363 - Learning Credits: 3
- PSY 365 - Cognition Credits: 3

VI. General:

- PSY 311 - Controversial Issues in Psychology Credits: 3
- PSY 362 - Environmental Psychology 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. Students have the option of using one of the following as an elective:

- SS 351 - Family & Gender in the Developing World Credits: 3
- SS 381 - Death and Dying Credits: 3

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.

Public and Nonprofit Administration

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section in this catalog.

Director: Hoffman. Professors: Balfour, Jelier, Mast, Payne; Associate Professors: Agard, Borders, Hoffman, Robbins, Schulte; Assistant Professors: Alaimo, Cline, Kimoto, Moon, Ramanath.

Website: www.gvsu.edu/spna

Grand Valley State University offers both baccalaureate and master's programs in public administration. The programs are housed in the College of Community and Public Service.

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.

Career Opportunities

Public administration graduates find employment in government, health administration, criminal justice, and nonprofit and private organizations.

Advancement into executive-level positions usually requires previous experience and/or a master's degree.

Examples of positions in public and nonprofit administration include city manager, village manager, county administrator, assistant city manager, executive director, development director, membership coordinator, event planner, grants manager, donor services director, community organizer, department head, city planner, downtown development manager, program manager, environmental iMPAct analyst, historic preservationist, zoning administrator, building inspector, program evaluator, policy manager, budget officer, human resource manager, program evaluator, public information officer, equal opportunity officer, and management consultant. Graduates may qualify for similar positions in business, higher education, journalism, consulting firms, nursing homes and hospitals.

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 and graduate students without responsible degree-related experience or those seeking new careers 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 intern's field service is evaluated by the agency supervisor, while the academic component (written reports, a paper, or both) is evaluated by the academic coordinator.

Student Organizations

The American Humanics Student Association (AHSA) provides students of Grand Valley State University with an opportunity to connect with other students interested in the field of nonprofit/youth agency administration. AHSA provides its members with cultural, social, and educational co-curricular opportunities with the intent of enriching the student's professional leadership potential in the important service field.

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 on 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: PLS 490 - Internship Credits: 2 to 6

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
- AND PA 495 - Community Analysis (capstone) Credits: 3
- PA 495 - Community Analysis (capstone) Credits: 3

Students must also complete three credit hours of elective 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 cognate sequence:

- STA 215 - Introductory Applied Statistics Credits: 3
- PA 300 - Research Methods Credits: 3
- PA 449 - Public Policy 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 Computer Mapping/Geographic Information Systems Credits: 3
- GPY 309 - Introduction to City and Regional Planning Credits: 3
- HST 327 - History of American Urban History Credits: 3
- PA 390 - Leadership Dynamics Credits: 3
- PLS 338 - Citizenship Credits: 3
- SOC 382 - Race and Ethnicity Credits: 3
- Also Required: The B.S. cognate course, PA 449 - Public Policy Credits: 3

Public Personnel Management

- LIB 331 - Person and Profession Credits: 3
- MGT 334 - Labor and Employment 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

Public and Nonprofit Administration

- GPY 307 - Introduction to Computer Mapping/Geographic Information Systems Credits: 3
- GPY 407 - Advanced GIS Credits: 4
- MGT 268 - Introduction to 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
- ECO 435 - Urban Economics Credits: 3
- ECO 436 - Real Estate Economics Credits: 3
- HTM 101 - Fundamentals Credits: 4
- MGT 339 - Business and Society Credits: 3

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
- HPR 220 - Health Care Delivery Credits: 2
- HPR 340 - Health Care Management Credits: 2
- 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.

Director: Hoffman. Professors: Balfour, Jelier, Mast, Payne; Associate Professors: Agard, Borders, Hoffman, Robbins, Schulte; Assistant Professors: Alaimo, Cline, Kimoto, Moon, Ramanath.

Website: 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: 96

Admission

Admission to the M.P.A. program requires:

1. A completed graduate application.
2. A \$30 non-refundable 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. An undergraduate grade point average of 3.0 or higher.
5. Three letters of reference from informed sources.
6. An essay on career and educational objectives.
7. Scores from either the TOEFL (Test of English as a Foreign Language) or equivalent examination for international students whose native language is not English.

Applicants must have a minimum undergraduate GPA of 3.0 or higher calculated on the last two years of undergraduate work. In addition, applicants must submit an application essay and three letters of recommendation.

Applicants with less than a 3.0 grade point average may be admissible if other indicators predict a likelihood of academic success. These may include five or more years of professional work experience since receiving the baccalaureate degree; a personal interview; and/or a GRE or GMAT score. Decision of the admissions committee is final.

Completed applications are thoroughly reviewed by the school's admissions committee. To ensure full consideration for fall admission, all application materials should be received by May 1. Early application is strongly encouraged. The committee reserves the right to require additional information it deems appropriate and necessary. The majority of students admitted to the school will begin their studies in the fall semester. Late applicants will be admitted on the basis of remaining vacancies. January applications should be received by November 1.

Students who do not meet all requirements but whose experience, achievement, etc., may warrant an exception will be invited for a personal interview to discuss admission and further explore the program. Final admission decisions are promptly communicated in writing to each applicant.

Students in the process of applying for admission may enroll in PA 520 in a non-degree status.

Workshop

The M.P.A. program offers workshops on a credit or no-credit basis. The format and scheduling of the workshops as well as other coursework are flexible and may include weekend meetings. Students are admitted to the workshops with advisor approval. No more than three credits of workshops may be applied to fulfill degree requirements.

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 3 credit hours of internship in addition to the 39 required hours of course work 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 Management 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 also select one concentration specialization of 15 credit hours.**Concentrations (15 credit hours)****Public Management**

- PA 615 - Public Financial Administration Credits: 3
- PA 620 - Metropolitan Politics and Administration Credits: 3
- PA 643 - Strategic Management and Planning Credits: 3

And select two of the following:

- PA 616 - Public Policy Analysis Credits: 3
- PA 621 - Administrative and Regulatory Law Credits: 3
- PA 641 - Economic and Community Development Credits: 3
- PA 642 - Conflict Management Credits: 3
- PA 644 - GIS in the Public Service 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

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
- PA 633 - Health Economics Credits: 3
- PA 634 - Health Care Law and Ethics Credits: 3

Nonprofit Management and Leadership

- PA 660 - The Nonprofit Sector: History and Ethics Credits: 3
- PA 661 - Nonprofit Management: Practices Credits: 3
- PA 662 - Nonprofit Resource and Financial Management Credits: 3
- PA 663 - Nonprofit Organizations and Public Policy Credits: 3

AND EITHER

- PA 641 - Economic and Community Development Credits: 3
- OR PA 665 - Nonprofit and Foundation Boards, Trustees, and Governance Credits: 3

Criminal Justice

- PA 615 - Public Financial Administration Credits: 3
- CJ 601 - Criminal Justice Leadership Credits: 3
- CJ 604 - Criminal Justice Policy & Program Evaluation Credits: 3
- CJ 607 - Criminology Credits: 3
- CJ 602 - Legal and Ethical Issues Credits: 3

Electives

- PA 535 - Grant Writing Credits: 3
- PA 610 - Economic Analysis for Public Administrators 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 640 - Marketing Health and Human Services Credits: 3
- PA 680 - Special Topics in Public and Nonprofit Administration Credits: 1 to 3

Workshop Electives

At least 9 credits may be selected from other concentration areas or other graduate courses, including the following one-credit workshops (a maximum of three workshop credits may be applied to the degree):

- PA 550 - Public Administration Workshop Credits: 1 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

Internship

All pre-career students are required to take at least three internship credits (in addition to 39 hours of course work) from:

- PA 690 - Public Administration Internship I Credits: 3
- PA 691 - Public Administration Internship II Credits: 3

Thesis

Students are not required to submit a thesis, but those pursuing policy expertise or those considering going on in a doctoral studies are strongly encouraged to take up to six hours of:

- PA 693 - Research Project Credits: 3 or 6
- PA 695 - Master's Thesis Credits: 3 or 6

M.S.W. and M.P.A. Degree Programs

The Schools of Social Work and Public, Nonprofit and Health Administration offer prospective students the option to pursue both graduate degrees offered by these units (M.S.W. and M.P.A.). This entails taking coursework in both disciplines in order to be well prepared to seek middle- and upper-level management position is either public or private human service organizations. Those earning the two degrees will attain the knowledge, skills and values of the social work profession with the advanced administrative and technical expertise developed through the study of public administration to become leaders in their organizations and communities. Currently, Grand Valley State University policies enable a student to pursue the M.S.W. degree as the first masters degree and the M.P.A. degree as a second masters degree by completing 21 credits in the M.P.A. program.

Applicants must submit the following items to the Grand Valley State University Admissions Office in Allendale, Michigan:

- Completed graduate application for admission to both the M.S.W. program and M.P.A. program
- \$30 nonrefundable application fee
- Official copies of transcripts from all institutions of higher education attended, other than Grand Valley
- Three letters of recommendation from individuals able to attest to the candidate's qualifications for graduate work and professional practice
- Current resume detailing work and volunteer experience
- A 2 to 3 page essay about life experiences that have led to an interest in administrative practice in a social agency, including assessment of personal strengths and areas for growth
- A 2 page essay articulating how pursuing the M.S.W. and M.P.A. degrees will help achieve educational and professional career goals

No further action on candidacy will be taken until all requested materials have been received by the Admissions Office. Applications may be obtained through the University or either school. Completed application files will be reviewed by the M.S.W. program and the M.P.A. program. Students must meet the basic requirements for graduate study as defined by each School. Either program may also request additional information from an applicant before granting full admissions status and a personal interview may be required.

M.S.W. and M.P.A. Requirements

For students who are not seeking or do not qualify for Advanced Standing, 78 credit hours of study are required. For Advanced Standing students, 63 credits are required. Students must be willing to take a minimum of two courses per semester, including spring/summer, and are expected to complete coursework within four calendar years. A three-semester practicum is required; students will spend a major portion of the time applying the knowledge learned in the classroom regarding macro practice. Students must complete a minimum of 21 credits of Public Administration courses along with the courses necessary to earn the M.S.W.

Required Courses — 72 credits

Note: Advanced Standing students are exempt from SW 600, SW 601, SW 603, SW 610 and SW 620. All other courses listed are required.

- PA 520 - Foundations of Public Management Credits: 3
- PA 612 - Human Resources in Organizations Credits: 3

Public and Nonprofit Administration

- PA 614 - Organization Theory Credits: 3
- PA 660 - The Nonprofit Sector: History and Ethics Credits: 3
- PA 662 - Nonprofit Resource and Financial Management Credits: 3
- SW 600 - Cultural Competency for Social Work Credits: 3
- SW 601 - Foundations of Social Work Practice Credits: 3
- 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 622 - Psychopathology and Social Deviance Credits: 3
- SW 640 - Seminar in Advanced Generalist Practice (capstone) Credits: 3
- OR PA 619 - Public Management Seminar Credits: 3
- SW 690 - Social Research I Credits: 3
- SW 693 - Social Research II Credits: 3
- OR PA 611 - Research Methods Credits: 3

Advanced Policy Course

- PA 663 - Nonprofit Organizations and Public Policy Credits: 3

Field Education

- 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 Practice Courses

- SW 660 - Grant Writing and Resource Development Credits: 3
- OR PA 535 - Grant Writing Credits: 3
- Group D
- SW 662 - Substance Abuse and Social Work Practice Credits: 3
- Group B
- SW 672 - Social Work Practice: Groups Credits: 3
- Group A
- SW 678 - Human Services Administration Credits: 3
- OR PA 661 - Nonprofit Management: Practices Credits: 3
- Group C
- SW 679 - Program Planning, Monitoring & Evaluation Credits: 3
- Group D

Choice of 2 Electives (Note: One elective must be a PA course)

— 6 credits

- PA 642 - Conflict Management Credits: 3
- PA 643 - Strategic Management and Planning Credits: 3
- PA 644 - GIS in the Public Service Credits: 3
- SW 616 - Law, Ethics, and Social Welfare Credits: 3
- SW 619 - Comparative Social Welfare Policy Credits: 3
- SW 630 - Social Work: Global Service-Learning 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

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 are:

- 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 - Public Policy Credits: 3
- PA 491 - Public Administration Internship II 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: 1 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 Resource and Financial Management Credits: 3
- PA 663 - Nonprofit Organizations and Public Policy Credits: 3
- PA 665 - Nonprofit and Foundation Boards, Trustees, and Governance Credits: 3

Radiologic and Imaging Sciences

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

Director and Associate Professor: Carlton; Assistant Professors: Carlton, Pawloski; Instructors: Hollenbeck, Raaymakers, VanderPoel.

Website: www.gvsu.edu/rad

Admission to Radiologic and Imaging Sciences

The Radiologic and Imaging Sciences majors have a competitive selection process for each major that requires completion of a secondary application. Please contact the College of Health Professions for secondary application packages. Applications are due February 1 of the sophomore year for the Radiation Therapy and Diagnostic Medical Sonography majors. There is no deadline for Radiologic and Imaging Sciences majors enrolling in the upper division baccalaureate degree completion major. Applicants are invited to enroll based on the following criteria:

- Academic grade point average from completed prerequisite courses or equivalents (40%).
 - HPR 100 - Medical Terminology
 - BMS 250- Anatomy and Physiology I
 - BMS 251- Anatomy and Physiology II
 - BMS 309 - Laboratory in Human Anatomy
 - MTH 122 - College Algebra
 - PHY 220 - General Physics I
 - PHY 221 - General Physics II
 - PSY 101 - Introductory Psychology
 - SOC 280 - Social Problems
 - STA 215 - Statistics

One research methods course (HPR 301 - Inquiry Into Evidence Based Practice is suggested although BMS 301, SS 300 or PSY 300 are available options.)

WRT 150 - Strategies in Writing

- 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 (15%).
- Evaluation from a professional writing sample (15%).
- Evaluation from a personal interview (15%).
- Completion of 16 hours of documented work or volunteer time in a health field (5%).
- 2 letters of recommendation on university forms (5%).
- Additional considerations: Additional educational, leadership, scholarly, work experience and/or volunteer activities are valued and may iMPAct selection decisions (5%).

Admission to the RIS upper division baccalaureate degree completion major requires additional criteria of:

- National registration in a radiologic or imaging sciences profession

AND EITHER:

- 2.5 GPA from previous 2 calendar years

OR

- 45 semester hour credits from an accredited institution of higher education with a GPA of 2.5.

Program major class size limit is based on clinical availability.

A grade of B- or better is required on all major RIS courses to continue in the program.

Two SWS courses are required for graduation. It is the responsibility of the student to select courses which will fulfill all writing requirements. RIS Program capstone courses meet one SWS requirement. Satisfactory scores on the junior-level assessment essay or the WRT 305 course is also required.

RIS Courses are defined as courses with prefixes of RIS, RIT, RIU, RIE, RIR, and RI.

100% of the mandatory laboratory procedures established by faculty and in the first laboratory procedures course in each major must be completed at master level as a prerequisite to attending any clinical education course.

Radiation Therapy, Diagnostic Medical Sonography, and Radiologic and Imaging Sciences majors may repeat a total of two RIS courses.

Any single RIS course may be repeated only once.

Independent study courses in clinical education will be scheduled only when clinical positions are available at sites with university clinical education agreements.

Independent study courses are offered at the discretion of the RIS faculty as a whole.

Radiation Therapy Major

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 4 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 supervision of registered Radiation Therapists 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.

Clinical experiences are available in both existing and emerging radiation therapy practices and procedures, including treatment planning, computed tomography simulation, conventional simulation, quality assurance, brachytherapy, external beam therapy, stereotactic radiosurgery, intraoperative procedures, intensity modulated radiation therapy, and total body irradiation.

Students who receive a B.S., degree in Radiologic and Imaging Sciences with a major in radiation therapy from GVSU are eligible for the American Registry of Radiologic Technologists (ARRT) examination in radiation therapy. Granting of the baccalaureate degree is not contingent on passing the ARRT examination.

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 ARRT. Because this certification is available to graduates of the radiation therapy program as part of preparation for clinical practice, students to whom this may apply are strongly advised to work with the ARRT for pre-application review of eligibility for certification from the website at www.rrt.org (Ethics, Pre-Application Process). The ARRT may be contacted by phone at 651-687-0048 for more information.

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.

Radiation therapy students are encouraged to consider Theme 14, although students may choose any theme to meet the General Education Theme requirements.

Diagnostic Medical Sonography Major

Diagnostic Medical Sonography is a Radiologic and Imaging Sciences specialty with eight sub specialties. Grand Valley State University offers

Radiologic and Imaging Sciences

six of these sub specialties. 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 4 years. Students are required to choose a concentration in either general sonography (abdominal and obstetric-gynecology) or echocardiography and vascular sonography. Students choosing echocardiography and vascular sonography spend their 3rd year in adult echocardiography and then are assigned to either pediatric echocardiography or vascular sonography for their 4th 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 1680 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 (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 (JRCDS). The program adheres to JRCDS standards. Upon accreditation, students have the right to notify the JRCDS if they believe the university is not adhering to these standards. The JRCDS is at 2025 Woodlane Drive, St. Paul, MN 55125-2998, phone 651-731-1582.

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 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.

Diagnostic Medical Sonography Echocardiography and Vascular Sonography Emphasis Adult Echocardiography and either Pediatric Echocardiography or Vascular Sonography concentrations

The Adult Echocardiography and Pediatric Echocardiography/Vascular Sonography concentrations in the Diagnostic and Medical Sonography general emphasis prepare students for clinical practice in adult echocardiography and either pediatric echocardiography or vascular sonography.

Echocardiographers practice a form of medical imaging that uses complex computerized high frequency sound wave and Doppler signal equipment to visualize cardiovascular anatomy and function. They are responsible for delineating subtle differences between healthy and pathological cardiac and vascular structure and function, evaluate vascular flow information, and document pathologic and other conditions. The echocardiographer must acquire excellent knowledge of cardiac and vascular anatomy, clinical medicine, pathology, and the use of sonographic instrumentation. Echocardiographers work collaboratively with cardiologists in medical center, hospital, or private practices to produce differential diagnoses. Vascular sonographers perform patient examinations, assessments, acquire and analyze data using ultrasound and related technologies, provide a summary of findings to aid in patient diagnosis and management, and use independent judgment and systematic problem solving to produce high quality diagnostic information and optimize the complete patient study. Vascular sonographers often work collaboratively with vascular surgeons but also work in radiology and cardiology departments in hospitals and private practices to discuss differential diagnoses.

Radiologic and Imaging Sciences Major

Radiologic and Imaging Sciences are specialties that are self standing professions using either ionizing, sound, or radio radiations to produce diagnostic images and guide invasive and non-invasive procedures of the body. The Concentrations included in this major are designed to form the basis for the completion of a clinical baccalaureate degree. These specialties are considered advanced or post-primary level professions in that students are eligible for admission to the major only after acquiring a national registration in a primary radiologic or imaging sciences field (i.e., ARRT, ARDMS, or NMTCB). Eligibility for these registrations requires completion of a primary professional program from a recognized national registration organization as specified above. Although two of these programs are available at GVSU (i.e., radiation therapy and diagnostic medical sonography), this major is intended for graduates of associate degree programs that meet these professional program requirements (i.e., radiography programs).

This major is specifically designed for practicing Radiologic and Imaging Sciences professionals who wish to complete a bachelor's degree while meeting their continuing education requirements while adding a post-primary specialty (to include national board examination eligibility). The ARRT and ARDMS currently accept college credit for CE requirements at the rate of 1 semester hour equal to 8-16 continuing education credit hours. The university offers the following concentrations with most classes meeting one night per week:

- vascular sonography
- breast sonography
- computed tomography
- magnetic resonance imaging
- mammography and bone densitometry
- cardiac interventional imaging (cardiac catheterization)
- vascular interventional imaging
- advanced radiologic sciences
- quality management
- clinical instruction
- clinical supervision

Students receive didactic, laboratory (depending on the concentration) and clinical experiences in the university's energized laboratories and through a clinical education system that allows students to schedule individually tailored and mutually agreed upon time for clinical practice under appropriate supervision 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.

Clinical experiences are available in all specialties.

Students who complete a Radiologic and Imaging Sciences concentration from GVSU may become eligible for the American Registry of Radiologic Technologists (ARRT) or American Registry of Diagnostic Medical Sonographers (ARDMS) examinations in the specialty that matches the concentration areas of study that have been completed, 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. GVSU provides opportunities for additional clinical education experiences to help students meet these requirements. Granting of the baccalaureate degree is not contingent on passing ARRT or 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 ARRT or ARDMS. Students to whom this may apply are strongly advised to work with the ARRT for pre-application review of eligibility for certification from their website at www.arrt.org (Ethics, Pre-Application Process). The ARRT may be contacted by phone at 651-687-0048 for more information.

Students are strongly advised to work with the ARDMS for pre-application review of eligibility for certification from their website at www.ardms.org (Credentials and Examinations, Application Process and Resources). The ARDMS may be contacted by phone at 301-738-8401 for more information.

Bachelor of Science in Radiologic and Imaging Sciences

Requirements for a Major in Radiologic and Imaging Sciences

Radiologic and Imaging Sciences Prerequisites

- HPR 100 - Medical Terminology Credits: 2
- BMS 202 - Anatomy and Physiology Credits: 4
- BMS 208 - Human Anatomy Credits: 3
- BMS 309 - Laboratory in Human Anatomy Credits: 1
- MTH 123 - Trigonometry Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- PSY 101 - Introductory Psychology Credits: 3
- SOC 280 - Special Topics in Sociology Credits: 3

Basic Skills (10 to 13 credits)

- MTH 123 - Trigonometry
- WRT 150 - Strategies in Writing Credits: 4
- SWS Course (may include hours in gen ed Credits: 3)
- Junior writing assessment (or WRT 305) Credits: 3

General Education Requirements (33 credits)

Recommended General Education courses:

- SOC 280 - Special Topics in Sociology
- PSY 101 - Introductory Psychology
- BMS 202 - Anatomy and Physiology
- MTH 123 - Trigonometry

B.S. Cognate (10 credits)

- STA 215 - Introductory Applied Statistics Credits: 3
- BMS 202 - Anatomy and Physiology Credits: 4
- SS 300 - Research Methods in the Social Sciences Credits: 3

OR

- PSY 300 - Research Methods in Psychology Credits: 3

OR

- HPR 301 - Inquiry Into Evidence Based Practice Credits: 3

OR

- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3

(Note: STA 215 is a pre-requisite for these 4 research courses)

Prerequisite Courses (12 credits)

- HPR 100 - Medical Terminology Credits: 2
- BMS 208 - Human Anatomy Credits: 3
- BMS 309 - Laboratory in Human Anatomy Credits: 1
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5

Radiologic and Imaging Sciences Core Courses (13 credits)

- RIS 441 - Gross Human Sectional Anatomy Credits: 4
- RI 401 - Computer Applications Credits: 3
- RIS 310 - Radiologic & Imaging Sciences Management Credits: 3
- RIS 320 - Principles of Radiologic Imaging Sciences Credits: 3

Concentration Areas

All concentration series courses are clinical education offerings and can be repeated until the necessary quantity of clinical contact hours have been achieved. Therefore all series courses listed below have the academic credit given as the total number of semester hours required for that concentration. Individual course proposals are given as 1 to not more than 5 semester hour credits because five is the maximum number of clinical semester hours permitted by accreditation agencies.

Breast Ultrasound Concentration Courses (17 credits)

- RIS 458 - Neoplastic Clinical RIS Credits: 3
- RIU 320 - Applied Ultrasound Physics Instruction I Credits: 2
- RIU 321 - Applied Ultrasound Physics Instruction I Lab Credits: 1
- RIU 420 - Applied Ultrasound Physics Instruction II Credits: 2
- RIU 434 - Breast Sonography Procedures Credits: 2
- RIU 464 - Breast Sonography Clinical Education Credits: 1-5

Computed Tomography Concentration Courses (19 credits)

- RIS 450 - Head & Brain Clinical RIS Credits: 3
- RIS 451 - Musculoskeletal Clinical RIS Credits: 3
- RIS 456 - Chest Clinical RIS Credits: 3
- RIS 458 - Neoplastic Clinical RIS Credits: 3
- RIS 424 - Computed Tomography Instrumentation Credits: 2
- RIS 434 - Computed Tomography Procedures Credits: 2
- RIS 464 - Computed Tomography Clinical Ed Credits: 1-5

Magnetic Resonance Imaging Concentration Courses (19 credits)

- RIS 450 - Head & Brain Clinical RIS Credits: 3
- RIS 456 - Chest Clinical RIS Credits: 3
- RIS 457 - Neurologic Clinical RIS Credits: 3
- RIS 415 - Magnetic Resonance Imaging Physics Credits: 2
- RIS 425 - MRI Instrumentation Credits: 2
- RIS 435 - MRI Procedures Credits: 2
- RIS 465 - MRI Clinical Education Credits: 1-5

Radiologic and Imaging Sciences

Mammography and Bone Densitometry Concentration Courses (12 credits)

- RIS 458 - Neoplastic Clinical RIS Credits: 3
- RIS 421 - Mammary Bone Density Instrumentation Credits: 2
- RIS 431 - Mammography and Bone Densitometry Procedures Credits: 2
- RIS 331 - Mam Bone Densitometry Procedures Lab Credits: 1
- RIS 436 - Quality Management Administration Credits: 2
- RIS 461 - Mammary Bone Densitometry Clinical Education Credits: 1-5

Cardiac Interventional Technology (Cardiac Catheterization) Concentration Courses (17 credits)

- RIS 455 - Cardiac Clinical RIS Credits: 3
- RIS 459 - Vascular Clinical RIS Credits: 3
- RIE 340 - Cardiac and Vascular Hemodynamics Credits: 2
- RIE 341 - ECG in Radiologic and Imaging Sciences Credits: 2
- RIS 422 - Cardiac Inter Tech Instrumentation Credits: 2
- RIS 432 - Cardiac Interventional Tech Procedures Credits: 2
- RIS 462 - Cardiac Interventional Technology Clinical Education Credits: 1-5

Vascular Interventional Technology Concentration Courses (17 credits)

- RIS 455 - Cardiac Clinical RIS Credits: 3
- RIS 459 - Vascular Clinical RIS Credits: 3
- RIE 340 - Cardiac and Vascular Hemodynamics Credits: 2
- RIE 341 - ECG in Radiologic and Imaging Sciences Credits: 2
- RIS 423 - Vascular Intervention Tech Instrumentation Credits: 2
- RIS 433 - Vascular Intervention Tech Procedures Credits: 2
- RIS 463 - Vascular Intervention Technology Clinical Education Credits: 1-5

Advanced Radiographic Sciences Concentration Courses (18 credits)

- RIS 451 - Musculoskeletal Clinical RIS Credits: 3
- RIS 452 - GI-GU Clinical Radiologic and Imaging Sciences Credits: 3
- RIS 456 - Chest Clinical RIS Credits: 3
- RIR 320 - Computed Radiography Systems Credits: 2
- RIR 321 - Computed Radiography Systems Lab Credits: 1
- RIR 420 - Advanced Radiologic Dosimetry Credits: 2
- RIR 330 - Adaptive Radiographic and Orthopedic Procedures Credits: 2
- RIR 461 - Advanced Radiography Clinical Education Credits: 1-5

Quality Management Concentration Courses (7 credits)

- RIS 426 - Quality Management Instrumentation Lab Credits: 1
- RIS 436 - Quality Management Administration Credits: 2
- RIR 420 - Advanced Radiologic Dosimetry Credits: 2
- RIS 466 - Quality Management Clinical Education Credits: 1

Clinical Instruction Concentration Courses (8 credits)

- RIS 477 - Radiation and Imaging Sciences Comprehensive Evaluation Credits: 2
- RIS 317 - Radiologic and Imaging Sciences Instructional Methodologies Credits: 3
- RIS 417 - Radiologic and Imaging Sciences Performance Assessment Credits: 3

Clinical Supervision Concentration Courses (8 Credits)

- RIS 477 - Radiation and Imaging Sciences Comprehensive Evaluation Credits: 2
- RIS 308 - Radiologic and Imaging Sciences Facilities Management Credits: 3
- RIS 478 - Organizational Behavior Credits: 3

Suggested Order of Coursework for a Major in Radiologic and Imaging Sciences

Radiologic and Imaging Sciences major with transferred associate degree in Radiography meeting MACRAO requirements:

Junior Fall Semester

- General Education (Cultural Emphasis) Credits: 3
- General Education (Theme) Credits: 3
- MTH 123 - Trigonometry Credits: 3
- HPR 100 - Medical Terminology Credits: 2
- RI 401 - Computer Applications Credits: 3
- BMS 202 - Anatomy and Physiology Credits: 4

Junior Winter Semester

- General Education (Theme) Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- BMS 208 - Human Anatomy Credits: 3
- PHY 201 - Inquiry: The Mechanical and Thermal World Credits: 4
- RIS 320 - Principles of Radiologic Imaging Sciences Credits: 3
- RIS 42x - Concentration (Instrumentation) Credits: 2

Junior Spring/Summer Semester

- General Education (Cultural Emphasis) Credits: 3

Senior Fall Semester

- General Education (Theme) Credits: 3
- RIS 45x - Clinical Radiologic and Imaging Sciences Course Credits: 3
- RIS 46x - Concentration Clinical Education Course Credits: 1
- BMS 309 - Laboratory in Human Anatomy Credits: 1
- Research Methods Course Credits: 3
- PHY 221 - General Physics II Credits: 5
- RIS 43x - Concentration (Procedures) Credits: 2

Senior Winter Semester

- RIS 441 - Gross Human Sectional Anatomy Credits: 4
- RIS 310 - Radiologic & Imaging Sciences Management Credits: 3
- RIS 45x - Clinical Radiologic and Imaging Sciences Course Credits: 3
- RIS 46x - Concentration clinical Education Course Credits: 2
- RIS 495 - Advanced Clinical Problems in RIS Credits: 3

Bachelor of Science in Radiation Therapy

Requirements for a Major in Radiation Therapy

Radiologic and Imaging Sciences Prerequisites

- HPR 100 - Medical Terminology Credits: 2
- BMS 202 - Anatomy and Physiology Credits: 4
- BMS 208 - Human Anatomy Credits: 3
- BMS 309 - Laboratory in Human Anatomy Credits: 1
- MTH 123 - Trigonometry Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- PSY 101 - Introductory Psychology Credits: 3
- SOC 280 - Special Topics in Sociology Credits: 3

Basic Skills (10 to 13 credits)

- MTH 122 - College Algebra Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- SWS Course (may include hours in gen ed) Credits: 3
- Junior writing assessment (or WRT 305) Credits: 3

General Education Requirements (33 credits)

Recommended General Education courses:

- SOC 280 - Special Topics in Sociology
- PSY 101 - Introductory Psychology
- BMS 202 - Anatomy and Physiology
- MTH 122 - College Algebra

B.S. Cognate (10 credits)

- STA 215 - Introductory Applied Statistics Credits: 3
- BMS 202 - Anatomy and Physiology Credits: 4
- SS 300 - Research Methods in the Social Sciences Credits: 3

OR

- PSY 300 - Research Methods in Psychology Credits: 3

OR

- HPR 301 - Inquiry Into Evidence Based Practice Credits: 3

OR

- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3

(Note: STA 215 is a pre-requisite for these 4 research courses)

Radiologic and Imaging Sciences Core Courses (13 credits)

- RIS 441 - Gross Human Sectional Anatomy Credits: 4
- RI 401 - Computer Applications Credits: 3
- RIS 310 - Radiologic & Imaging Sciences Management Credits: 3
- RIS 320 - Principles of Radiologic Imaging Sciences Credits: 3

Radiation Therapy Major Courses (54 credits)

- RIS 322 - Radiation Protection Physics Credits: 2
- RIT 330 - Radiation Therapy Principles and Practices I Credits: 4
- RIT 331 - Radiation Therapy Principles and Practices I Lab Credits: 1
- RIT 420 - Radiation Therapy Physics I Credits: 2
- RIT 332 - Radiation Therapy Principles and Practices II Credits: 3
- RIT 333 - Radiation Therapy Principles and Practices II Lab Credits: 1
- RIT 361 - Radiation Therapy Clinical Ed I Credits: 2
- RIT 362 - Radiation Therapy Clinical Education II Credits: 4
- 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
- RIS 424 - Computed Tomography Instrumentation Credits: 2
- 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
- RIS 458 - Neoplastic Clinical RIS Credits: 3
- RIS 452 - GI-GU Clinical Radiologic and Imaging Sciences Credits: 3

Suggested Order of Coursework for a Major in Radiation Therapy**Freshman Fall Semester**

- HPR 100 - Medical Terminology Credits: 2
- MTH 122 - College Algebra Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- General Education Theme Elective Credits: 3
- General Education Elective (Historical Perspectives) Credits: 3

Freshman Winter Semester

- BMS 202 - Anatomy and Physiology Credits: 4
- MTH 123 - Trigonometry Credits: 3 (If needed for GVSU Physics)
- PSY 101 - Introductory Psychology Credits: 3
- SOC 280 - Special Topics in Sociology Credits: 3
- General Education (World Perspectives) Credits: 3

Sophomore Fall Semester

- STA 215 - Introductory Applied Statistics Credits: 3
- BMS 208 - Human Anatomy Credits: 3
- PHY 220 - General Physics I Credits: 5
- General Education (Theme) Credits: 3

Sophomore Winter Semester

One of the following:

- SS 300 - Research Methods in the Social Sciences Credits: 3
- PSY 300 - Research Methods in Psychology Credits: 3

- HPR 301 - Inquiry Into Evidence Based Practice Credits: 3
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3

AND

- BMS 309 - Laboratory in Human Anatomy Credits: 1
- General Education (Theme) Credits: 3
- General Education (Philosophy & Lit) Credits: 3
- General Education Elective (Arts) Credits: 3

Junior Fall Semester

- RI 401 - Computer Applications Credits: 3
- RIS 322 - Radiation Protection Physics Credits: 2
- RIS 458 - Neoplastic Clinical RIS Credits: 3
- RIT 330 - Radiation Therapy Principles and Practices I Credits: 4
- RIT 331 - Radiation Therapy Principles and Practices I Lab Credits: 1

Junior Winter Semester

- RIS 320 - Principles of Radiologic Imaging Sciences Credits: 3
- RIS 441 - Gross Human Sectional Anatomy Credits: 4
- RIT 420 - Radiation Therapy Physics I Credits: 2
- RIT 332 - Radiation Therapy Principles and Practices II Credits: 3
- RIT 333 - Radiation Therapy Principles and Practices II Lab Credits: 1
- RIT 361 - Radiation Therapy Clinical Ed I Credits: 2

Junior Spring/Summer Semester

- RIT 362 - Radiation Therapy Clinical Education II Credits: 4

Senior Fall Semester

- RIS 452 - GI-GU Clinical Radiologic and Imaging Sciences 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
- RIS 424 - Computed Tomography Instrumentation Credits: 2

Senior Winter Semester

- RIS 310 - Radiologic & Imaging Sciences 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

Bachelor of Science in Diagnostic Medical Sonography**Requirements for a Major in Diagnostic Medical Sonography****Radiologic and Imaging Sciences Prerequisites**

- HPR 100 - Medical Terminology Credits: 2
- BMS 202 - Anatomy and Physiology Credits: 4
- BMS 208 - Human Anatomy Credits: 3
- BMS 309 - Laboratory in Human Anatomy Credits: 1
- MTH 123 - Trigonometry Credits: 3
- PHY 220 - General Physics I Credits: 5
- PHY 221 - General Physics II Credits: 5
- PSY 101 - Introductory Psychology Credits: 3
- SOC 280 - Special Topics in Sociology Credits: 3

Radiologic and Imaging Sciences

Basic Skills (10 to 13 credits)

- MTH 122 - College Algebra Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- SWS Course (may include hours in gen ed) Credits: 3
- Junior writing assessment (or WRT 305) Credits: 3

General Education Requirements (33 credits)

Recommended General Education courses:

- SOC 280 - Special Topics in Sociology
- PSY 101 - Introductory Psychology
- BMS 202 - Anatomy and Physiology
- MTH 122 - College Algebra

B.S. Cognate (10 credits)

- STA 215 - Introductory Applied Statistics Credits: 3
- BMS 202 - Anatomy and Physiology Credits: 4

AND:

- SS 300 - Research Methods in the Social Sciences Credits: 3

OR

- PSY 300 - Research Methods in Psychology Credits: 3

OR

- HPR 301 - Inquiry Into Evidence Based Practice Credits: 3

OR

- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3

(Note: STA 215 is a pre-requisite for these 4 research courses)

Radiologic and Imaging Sciences Core Courses (13 credits)

- RIS 441 - Gross Human Sectional Anatomy Credits: 4
- RI 401 - Computer Applications Credits: 3
- RIS 310 - Radiologic & Imaging Sciences Management Credits: 3
- RIS 320 - Principles of Radiologic Imaging Sciences Credits: 3

Diagnostic Medical Sonography Foundations Courses (7 credits)

- 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

Emphases

Students must choose one of the following options:

1. General (Abdomen and Obstetrics-Gynecology)
2. Adult Echocardiography and Pediatric Echocardiography
3. Adult Echocardiography and Vascular Sonography

Diagnostic Medical Sonography — General (Abdomen and Obstetrics-Gynecology)

Concentration/Emphasis Courses (48 credits)

- RIU 330 - Abdominal Sonography I Credits: 4
- RIU 331 - Abdominal Sonography I Lab Credits: 2
- RIU 360 - Introduction to Clinical Ultrasound Credits: 2
- RIU 301 - DMS Image Evaluation I Credits: 1
- RIU 332 - Obstetrics-Gynecology Sonography Credits: 4
- RIU 333 - Obstetrics-Gynecology Sonography Lab Credits: 1
- RIU 361 - Clinical Ultrasound Education I Credits: 2
- RIU 362 - Clinical Ultrasound Education II Credits: 4
- RIU 302 - DMS Image Evaluation II Credits: 1
- RIU 430 - Abdominal Sonography II Credits: 2
- RIU 431 - Abdominal Sonography II Lab Credits: 1
- RIU 460 - Clinical Ultrasound Education III Credits: 3
- RIE 432 - Vascular Sonography Procedures I Credits: 2
- RIE 433 - Vascular Sonography Procedures I Laboratory Credits: 2
- RIU 461 - Clinical Ultrasound Education IV Credits: 3
- RIU 495 - Advanced Clinical Problems in Ultrasound Credits: 3
- RIE 436 - Vascular Sonography Procedures II Credits: 2
- RIE 437 - Vascular Sonography Procedures II Lab Credits: 2
- RIS 454 - Obstetric-Gynecologic RIS Credits: 3
- RIS 458 - Neoplastic Clinical RIS Credits: 3

Diagnostic Medical Sonography — Adult Echocardiography

Concentration/Emphasis Courses (31 credits)

- RIE 330 - Echocardiography I Credits: 3
- RIE 331 - Echocardiography I 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 332 - Echocardiography II Credits: 3
- RIE 333 - Echocardiography II Laboratory Credits: 2
- RIE 361 - Echocardiography Clinical Education I Credits: 2
- RIE 362 - Echocardiography Clinical Education II Credits: 3
- RIE 495 - Advanced Clinical Problems in Echo and Vascular Sonography Credits: 3
- RIS 455 - Cardiac Clinical RIS Credits: 3
- RIS 459 - Vascular Clinical RIS Credits: 3

Diagnostic Medical Sonography — Pediatric Echocardiography

Concentration/Emphasis Courses (24 credits)

- RIE 434 - Pediatric Echocardiography I Credits: 3
- RIE 435 - Pediatric Echocardiography I Laboratory Credits: 1
- RIE 363 - Pediatric Echo Clinical Education I Credits: 2
- RIE 463 - Pediatric Echocardiography Clinical Education II Credits: 3
- RIE 438 - Pediatric Echocardiography II Credits: 3
- RIE 464 - Pediatric Echocardiography Clinical Education III Credits: 3
- RIE 495 - Advanced Clinical Problems in Echo and Vascular Sonography Credits: 3
- RIS 455 - Cardiac Clinical RIS Credits: 3
- RIS 459 - Vascular Clinical RIS Credits: 3

Diagnostic Medical Sonography — Vascular Sonography

Concentration/Emphasis Courses (25 credits)

- RIE 366 - Vascular Sonography Clinical Education I Credits: 2
- RIE 432 - Vascular Sonography Procedures I Credits: 2
- RIE 433 - Vascular Sonography Procedures I Laboratory Credits: 2
- RIE 436 - Vascular Sonography Procedures II Credits: 2
- RIE 437 - Vascular Sonography Procedures II Lab Credits: 2
- RIE 466 - Vascular Sonography Clinical Education II Credits: 3
- RIE 467 - Vascular Sonography Clinical Education III Credits: 3
- RIE 495 - Advanced Clinical Problems in Echo and Vascular Sonography Credits: 3
- RIS 455 - Cardiac Clinical RIS Credits: 3
- RIS 459 - Vascular Clinical RIS Credits: 3

Suggested Order of Coursework for a Major in Diagnostic Medical Sonography

Freshman Fall Semester

- HPR 100 - Medical Terminology Credits: 2
- MTH 123 - Trigonometry Credits: 3
- WRT 150 - Strategies in Writing Credits: 4
- General Education (Theme) Credits: 3
- General Education (Historical Perspectives) Credits: 3

Freshman Winter Semester

- BMS 202 - Anatomy and Physiology Credits: 4
- PHY 220 - General Physics I Credits: 5
- PSY 101 - Introductory Psychology Credits: 3
- SOC 280 - Special Topics in Sociology Credits: 3

Sophomore Fall Semester

- STA 215 - Introductory Applied Statistics Credits: 3
- BMS 208 - Human Anatomy Credits: 3
- PHY 221 - General Physics II Credits: 5
- General Education (Theme) Credits: 3

Sophomore Winter Semester

One of the following:

- SS 300 - Research Methods in the Social Sciences Credits: 3

- PSY 300 - Research Methods in Psychology Credits: 3
- HPR 301 - Inquiry Into Evidence Based Practice Credits: 3
- BMS 301 - Introduction to Research in the Biomedical Sciences Credits: 3

AND:

- BMS 309 - Laboratory in Human Anatomy Credits: 1
- General Education (Theme) Credits: 3
- General Education (World Perspective) Credits: 3
- General Education (Philosophy & Literature) Credits: 3
- General Education (Arts) Credits: 3

Junior Fall Semester

- RIS 441 - Gross Human Sectional Anatomy Credits: 4
- RI 401 - Computer Applications Credits: 3
- 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

Junior Winter Semester

- RIS 320 - Principles of Radiologic Imaging Sciences Credits: 3
- RIU 301 - DMS Image Evaluation I Credits: 1
- RIU 324 - Applied Doppler Ultrasound Physics Credits: 2
- RIS 454 - Obstetric-Gynecologic RIS Credits: 3
- RIU 332 - Obstetrics-Gynecology Sonography Credits: 4
- RIU 333 - Obstetrics-Gynecology Sonography Lab Credits: 1
- RIU 361 - Clinical Ultrasound Education I Credits: 2

Junior Spring/Summer Semester

- RIU 362 - Clinical Ultrasound Education II Credits: 4

Senior Fall Semester

- RIU 302 - DMS Image Evaluation II Credits: 1
- RIS 458 - Neoplastic Clinical RIS Credits: 3
- 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 460 - Clinical Ultrasound Education III Credits: 3
- RIE 432 - Vascular Sonography Procedures I Credits: 2
- RIE 433 - Vascular Sonography Procedures I Laboratory Credits: 2

Senior Winter Semester

- RIS 310 - Radiologic & Imaging Sciences Management Credits: 3
- RIU 461 - Clinical Ultrasound Education IV Credits: 3
- RIU 495 - Advanced Clinical Problems in Ultrasound Credits: 3
- RIE 436 - Vascular Sonography Procedures II Credits: 2
- RIE 437 - Vascular Sonography Procedures II Lab Credits: 2

Russian Minor

Requirements for Minor Program

Students choosing Russian as a minor program must complete 20 hours of Russian language beyond RUS 102. Recommended courses for students interested in acquiring a good background on Russia are the following. Please note that these courses are not included in the minor programs.

Students interested in pursuing a major or minor in Russian area studies should refer to the courses listed under the Russian Studies program.

- HST 389 - Russian History Credits: 3
- HST 390 - Soviet History Credits: 3
- HST 391 - Russian Thought-Ninth to Twentieth Centuries Credits: 3
- RST 225 - Introduction to Russian Culture Credits: 3
- RST 331 - Russian Literature in Translation, 1800-1880 Credits: 3
- RST 332 - Russian Literature in Translation, 1880-1932 Credits: 3
- RST 333 - Russian Literature in Translation, 1932 to the Present Credits: 3

Russian Studies

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Coordinator: Rydel.

Website: www.gvsu.edu/ml/index.cfm

A major in Russian Studies leads to a Bachelor of Arts degree. Because proficiency in the Russian language forms the most crucial component of the program, the major requires completion of third-year Russian (RUS 301, 302, or equivalent) with a grade of "B" or at least three years of Russian language study to be able to grasp basic grammar skills and begin to gain oral proficiency. Students may enhance their language skills by participating in approved summer intensive language programs both in Russian and the United States.

Career Opportunities

Employment opportunities for persons with training in Russian Studies include jobs as translators, interpreters, journalists officers in government agencies, the diplomatic corps, or business. Although language proficiency remains the most important requirement for a majority of jobs, many organizations insist that their employees know Russian literature, history, politics, economic, civilization, and culture as well. Because an undergraduate degree in Russian Studies may not be sufficient for a number of jobs, the main purpose of the Russian studies program is to prepare students for graduate work in specific areas of Russian culture. Although our students traditionally continue their studies on the graduate level, usually on the university fellowships and assistantships at major centers of Slavic scholarship, a number of them have pursued successful careers in international banking, government agencies in Washington D.C., and the diplomatic service in Moscow. Some of our graduates have worked for the Voice of America, the Library of Congress, the State Department, and in social and religious agencies that help Russian immigrants adjust to life in the United States.

Study Abroad

Students interested in pursuing careers that entail working in Russia might consider combining the Russian Studies program with a second major in communications, computer science, economics, international relations, or business with an emphasis on the areas of management, marketing, or finance.

Bachelor of Arts in Russian Studies

Requirements for a Major in Russian Studies

Majoring in Russian Studies requires at least three years of Russian as follows and a total of 36 hours.

- RUS 101 - Elementary Russian I Credits: 4
- RUS 102 - Elementary Russian II Credits: 4
- RUS 201 - Intermediate Russian I Credits: 4
- RUS 202 - Intermediate Russian II Credits: 4
- RUS 301 - Advanced Russian Grammar I Credits: 3
- RUS 302 - Advanced Russian Grammar II Credits: 3

Must include the following:

- HST 389 - Russian History Credits: 3
- HST 390 - Soviet History Credits: 3
- HST 391 - Russian Thought-Ninth to Twentieth Centuries Credits: 3
- RST 331 - Russian Literature in Translation, 1800-1880 Credits: 3
- RST 332 - Russian Literature in Translation, 1880-1932 Credits: 3
- RST 333 - Russian Literature in Translation, 1932 to the Present Credits: 3
- RST 495 - Russia in Context (capstone) Credits: 3
- RUS 301 - Advanced Russian Grammar I Credits: 3
- RUS 302 - Advanced Russian Grammar II Credits: 3

And three courses to be chosen from among the following:

These three may not all be Russian Studies courses but must include at least one from among geography, political science, or economics.

- ECO 365 - Comparative Economic Systems Credits: 3

Social Studies

- GPY 350 - Geography of Russia and Its Neighbors Credits: 3
- PLS 282 - Government and Politics of Russia and Eastern Europe Credits: 3
- RST 225 - Introduction to Russian Culture Credits: 3
- RST 380 - Special Topics in Russian Studies Credits: 1 to 3
- RST 499 - Independent Study and Research Credits: 1 to 4

Senior Thesis

Students must also complete a senior thesis and pass a comprehensive oral examination, both of which are components of the following course.

- RST 495 - Russia in Context (capstone) Credits: 3

Russian Studies Minor

Requirements for a Minor in Russian Studies

Requirements for a minor in Russian studies include two years of Russian (RUS 101, 102, 201, 202) and a total of 20 hours, which must include eight hours of RUS above 102 (201 and 202); six hours to be chosen from among HST 389, 390, and 391; RST 331, 332, 333, or 380 (when the topic deals with Russian literature); PLS 282; GPY 350; or ECO 365; and three hours of RST 380 or RST 225; and three hours of RST 399 (to be in the area of the student's major interest).

Social Studies

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Coordinator: Galbraith. Professor: O'Neill; Associate Professor: Cooley; Assistant Professors: Andrews, Stabler.

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.

All 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 STA 215, SS 300, and ED 205. Students who decide not to seek teacher certification may complete the 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 2.7 provided they meet the university's minimum requirements.

Transfer and post-graduate students seeking a teachable major in social studies should consult Janet Robinson, Arts and Humanities Teacher Certification Advisor, 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 Social Studies

Coordinator: Galbraith. Professor: O'Neill; Associate Professor: Cooley; Assistant Professors: Andrews, Stabler.

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. 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 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 STA 215, SS 300, and ED 205. Students who decide not to seek teacher certification may complete the 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 2.7 provided they meet the university's minimum requirements.

Transfer and post-graduate students seeking a teachable major in social studies should consult Janet Robinson, Arts and Humanities Teacher Certification Advisor, 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.

Requirements for a Major in Social Studies

Core:

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- GPY 100 - Physical Geography Credits: 3
- GPY 235 - World Regional Geography 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
- SST 310 - Strategies 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

Concentration:

Students take a total of six courses (at least 18 credits) in the area of concentration. Students may select any of the four disciplines as their area of concentration; core courses may be included among the six

required for the concentration. In order to meet State Teacher 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.

Requirements for each concentration follow:

Geography:

Core plus four geography courses numbered between GPY 345 and 370.

History:

Core plus two history courses numbered between HST 301 and 391; at least one course must be in European or non-Western history (see Categories 2 and 3 in the History Major section of the catalog).

Political Science:

Core plus four courses, including:

- PLS 203 - State Politics Credits: 3

OR

- PLS 304 - Political Parties and Interest Groups Credits: 3

OR

- PLS 305 - Congress and the Presidency Credits: 3

AND EITHER:

- PLS 221 - Government and Politics of Western Europe Credits: 3

OR

- PLS 327 - Politics of Developing Countries Credits: 3

AND:

- Two additional PLS courses.

Note: At least two of the four courses must be at the 300-level.

Economics: (for secondary candidates only):

Core plus two economics courses and

- ECO 312 - Applied Microeconomics Credits: 3
- ECO 313 - Business Cycles and Growth Credits: 3

Social Work

For additional information about opportunities your college offers, please refer to the College of Community and Public Service section of this catalog.

Director: Adam. Professors: Chung, Mulder, R., Schott; Associate Professors: Bolea, Borst, Green-Smith, Hayes, Johnson, Smith-Colton; Assistant Professors: Berlin, Edwards, Epple, Lopez-Arias, Mulder, C., Schuurman, Smith; Affiliate Professors: Gabrielse.

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 emphasizes on social justice and on meeting the significant professional workforce needs of an expansive West Michigan social services sector remain strong. A third 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 are:

- The School of Social Work provides a generalist social work curriculum in a high quality learning environment that prepares BSW 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 within, but not limited to, West Michigan and the state of Michigan.
- The School of Social Work provides an M.S.W. foundation curriculum in a high quality learning environment that prepares students for success in the advanced generalist community social work concentration.
- 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 within, but 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 one or more of the profession's *Code of Ethics*, incorporating diversity into their practice, and advancing the profession's reputation and knowledge base.
- Graduates of all programs of the School have the knowledge, skills and values they need to create and/or identify and acquire new information about professional social work practice as such information becomes available throughout the course of 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, and they are committed to remaining professionally and technologically proficient throughout the course of their careers in the social work profession.

The Bachelor of Social Work Program

Director: Bolea.

The Bachelor of Social Work program is accredited by the Council on Social Work Education.

www.gvsu.edu/ssw/bachelor-of-social-work-program-bsw-12.htm

The overarching goals of the BSW Program are:

1. Prepare students for entry into the social work profession as generalist practitioners.
2. Prepare students for continued professional development opportunities.

Admission

All social work majors must formally apply to the School of Social Work during the first semester of the junior year and when they are enrolled in SW 317, SW 319, SW 340, SW 348. Application procedures are explicated in the first class session of SW 348 and materials must be completed and submitted by September 30.

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: US Diversity
 - c. Basic Skills Categories: WRT 150 and MTH 110
3. School of Social Work Prerequisite Course Requirements (See chart below right)

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4. Earned a minimum grade of B- (2.7) and not have repeated the following courses more than once: PLS 102; PSY 303; PSY or SOC 360; SOC 280; SOC 382 or SW 300; SOC 384; SOC 385; and SW 150.
5. Though it is recommended that PSY 3203, PSY/SOC 360, and SOC 382/SW 300 be completed prior to candidacy, you may complete these courses concurrent with SW courses outlined in the 3rd year. These courses must be satisfied to continue in the 4th 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 BSW 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/.

Field Practicum

Director: Lehker

Field practicum 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 Field Practicum Laboratory. In this course students are required to complete and submit the Combined Application for Candidacy/Field Practicum in Social Work. The minimum requirements for entering practicum are:

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 practicum in the fall of their senior year and must follow course sequence. Students must simultaneously enroll in field practicum and field seminar. The field practicum 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 practicum students will receive and are expected to become familiar with the *Manual for Field Practicum: Policies and Procedures*. Elective social work practice courses and field seminars are taken in conjunction with a practicum. Students entering a practicum must arrange or provide their own transportation.

The Master of Social Work Program

Director: Borst.

The Master of Social Work program is accredited by the Council on Social Work Education.

The goals of for 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 advanced generalist serves a dual purpose. First the model integrates the advanced practice skills concentration curriculum to equip graduates to meet the diverse demands presented by unique social service delivery system and second it provides the context for students in which the program achieves its goals.

Features of the Advanced Generalist Model are designed to:

- Enhance the depth and breadth of practice in a multi-method, multi-level 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
- Expand and enhance the foundation of generalist social work core competencies with advanced knowledge and practice behaviors
- Acquire advanced skills in leadership, collaboration, administration, advocacy, assessment, problem solving, intervention, cultural competency, communication, collaboration, 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 & Pierce, 2006).

Admission and Academic Requirements

Director of Recruitment and Admissions: Owens

For general requirements, see the Admission section of the Grand Valley State University Undergraduate and Graduate Catalog.

Admission Policies for Regular M.S.W. and M.S.W. Advanced Standing

GVSU School of Social Work welcomes applications to the Master's program. There are two distinct admission dates that guarantee review:

- **February 1** for students applying for "advanced standing"
- **March 15** for students applying for "regular admission"
- Applications received later than these dates are not guaranteed review.
- The following standards are requirements for admissions:

I. Admission Requirements for Advanced Standing Students: Policies and Procedures for Advanced Standing

As described on the University website and in the University Catalog (2009, p. 718), 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. Advanced standing students are exempted from 15 hours of their first-year-core or foundation courses and may therefore accelerate their graduate study by completing only the remaining 45 hours of degree requirements in one calendar year.

Specific courses exempted are SW 600, SW 601, SW 603, SW 610, and SW 620. All Advanced Standing students may take a 100-item diagnostic proficiency examination in research methods. A score of 75% or higher

on the test will qualify the student for exemption from SW 690 Research Methods I. This reduces to 42 hours the degree requirements remaining for completion.

- Applicants must have an overall GPA no lower than 3.0 in their undergraduate coursework
- Official transcripts must note that the BSW degree has been awarded from a CSWE accredited program
- All BSW foundation coursework must have 3.0 or higher to receive credit
- Three professional letters of recommendation
- Applicants must submit a copy of the most recently completed field practicum evaluation
- Must demonstrate successful (3.0 GPA) performance across ALL areas of field with no major concerns
- If student cannot access a copy of their Field Evaluation, they must submit a letter from their most recent Field Instructor highlighting competency across EPAS standards
- EPAS Competency Question Response

Advanced Standing Graduate Eligibility Degrees

Advanced standing is awarded only to graduates holding degrees from baccalaureate social work programs:

- Accredited by CSWE
- Recognized by its International Social Work Degree Recognition and Evaluation Service
- Covered under a memorandum of understanding with international social work accreditors

II. Admission Requirements for Regular Degree-Seeking

M.S.W. Applicants

Degree-Seeking M.S.W. Applicants

Students who meet the following University requirements and the additional requirements of their chosen program are granted degree-seeking status.

- Submit the appropriate application for admission, including a recent resume, and a personal statement.
- Possess the baccalaureate degree from an accredited college or university.
- Have a cumulative undergraduate grade point average of 3.0 on a 4.0 scale.
- Have a broad liberal arts background, as well as a minimum of 18 credit hours in social or behavioral science courses.
- Official transcripts sent from each undergraduate and graduate institution attended.
- Enclose a non-refundable \$30.00 application fee.

Admission Policies for Regular M.S.W. and M.S.W. Advanced Standing

Applicants for regular admission must demonstrate 18 hours of social science coursework and complete the social sciences checklist to indicate the courses that meet this requirement.

Undergraduate academic work must reflect a liberal arts foundation.

If the applicants does not meet requirements but believes there are circumstances or conditions that strengthen their application, they are invited to follow the appeal process as indicated below.

III. Appeal Review Process

The application review process includes the following 3 phases:

1. Applicants submit all required application materials.
2. All applications are reviewed by teams made up of 3 faculty members using a standard rating checklist. Three “yes votes” result in admission, 2 “no votes” is an automatic decline, and 1 “no vote” and all appeal applicants are reviewed in phase 3.
3. Applicants in phase 3 are required to submit a written response to a social justice scenario and are evaluated on 2 criteria; critical thinking and writing performance. Three “yes votes” at this phase result in admission, 2 “no votes” result in an automatic decline, and 1 no vote results in the faculty team then recommending to the Director

of Admissions a complete application file review and an applicant interview.

4. Applicants are informed in writing of their admission status in no more than 30 days after the beginning of the application review process.

Appeal Admission:

- If do not meet basic requirements please complete "Appeal Admission Form" at the time of application.
- Highlight the areas that do not meet admissions criteria.
- Take this opportunity to provide a rationale regarding alternative criteria that strengthens your application.

Please see the GVSU School of Social Work website B.S.W. and M.S.W. program sites for application forms and further information: www.gvsu.edu/ssw/.

Non-Degree Seeking Students

Applicants who are not seeking the M.S.W. degree or have not completed all of the admissions requirements are considered to be Non-Degree seeking. These students may earn up to six social work credits in the School of Social Work by selecting up to two of the following courses: SW 600, SW 601, SW 610, and SW 620.

Students who meet the following university requirements and the additional requirements of their chosen program are granted degree-seeking status:

1. A baccalaureate degree from an accredited institution of higher education.
2. Submission of all required admission materials.

Field Education

Director: Alpert.

The fieldwork 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 attitudes. Placements are made in a wide variety of human service settings in the public and private sectors.

Twelve of the 60 credit hours required for the M.S.W. degree are granted for field education. Admitted students will participate in three 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 core competencies provided by the Council of Social Work Education (2008). Prior to entering field practice each student must attend a scheduled mandatory field orientation seminar.

In order to be assigned a field placement and remain in the practicum setting, a student must:

1. Have completed all prerequisites and other requirements for field placement.
2. Possess and maintain the minimum 3.0 GPA.
3. Have no more than one incomplete grade.

Students who would like a practicum 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 students will begin practicum spring/summer semester.

Advanced Standing: Full Time or Part Time

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 Grand Valley State University M.S.W. Program. A minimum GPA of 3.0 in social work courses from a CSWE accredited baccalaureate program may qualify

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prospective students for advanced standing. Advanced Standing students are exempted from 15 hours of first-year core or foundation courses and may therefore accelerate their graduate study by completing the remaining 45 hours of degree requirements in one calendar year. The courses exempted are SW 600, SW 601, SW 603, SW 610, and SW 620. 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 42 hours the degree requirements remaining for completion. Students admitted to the full time Advanced Standing program must begin their studies during the summer session and continue full time during the subsequent fall and winter semesters. Students admitted as part time Advanced Standing students may begin any 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. All Advanced Standing applicants are interviewed prior to admission.

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 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 practicum agency. Because field practicum 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.

Non-degree Seeking

Students who are not seeking a graduate degree or who have not completed all of the admissions requirements of their chosen program may be granted non-degree seeking status. A maximum of six semester credits earned at Grand Valley State University as a non-degree seeking student may be considered for transfer to degree seeking status. Enrollment as a non-degree seeking student does *not* guarantee formal admission to the M.S.W. program. Non-degree status students are limited to SW 600, SW 601, SW 610, and SW 620.

Changing Status from Non-degree to Degree Seeking

Students who seek a change in status must:

1. Submit all required admission materials.
2. Submit a degree seeking 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 30 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

Requirements for a Major in Social Work

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, compliment, and supplement the 44 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 Practicum Sequences.

Required courses in the Major are:

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.

- Six credits from the list of Social Work Electives
- Three credits from the list of International Program Courses
- SW 150 - Human Needs in Complex Societies 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 - Field Education Preparation Credits: 2
- 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 - Field Practicum in Social Work Seminar II Credits: 1
- SW 495 - Social Work Capstone Credits: 3

Cognate requirements include:

- PLS 102 - American Government and Politics Credits: 3
- PSY 101 - Introductory Psychology Credits: 3
- PSY 303 - Psychopathology Credits: 3
- PSY 360 - Social Psychology: Psychology's View Credits: 3
- SOC 201 - Introduction to Sociology Credits: 3

Plus

- ECO 210 - Introductory Macroeconomics Credits: 3
- ECO 211 - Introductory Microeconomics Credits: 3
- SOC 385 - Social Class Inequality Credits: 3

Plus

- SOC 280 - Special Topics in Sociology Credits: 3
- SOC 384 - Sociology of Drug Use and Abuse Credits: 3

Plus

- SOC 382 - Race and Ethnicity Credits: 3
- SW 300 - Pluralism in American Society Credits: 3

Additional Degree Requirements

In order to ensure the fulfillment of all Grand Valley State University B.S.W. degree requirements, students are urged to follow the schedule of courses indicated in the following four-year curriculum:

Suggested Order of Coursework for a Social Work Major

Fall Semester - Year One (13 Credits)

- WRT 150 - Basic Skills Credits: 4
- SW 150 - General Education SS & SW Core Course Credits 3
- SOC 201 - General Education SS & SW Core Course Credits: 3
- General Education Course (Choose from The Arts, Philosophy & Literature, or Historical Perspectives) Credits: 3

Winter Semester - Year One (16 Credits)

- MTH 110 (Basic Skills) Credits: 4
- PSY 101 (General Education SS & SW Cognate) Credits: 3
- General Education Course (Choose a U.S. Diversity) Credits: 3
- General Education Course (Choose from The Arts, Philosophy & Literature, or Historical Perspectives) Credits: 3
- General Education Course (Physical Science Non-lab) Credits: 3

Fall Semester - Year Two (16 credits)

- BIO 103 (General Education LS/Lab & SW Cognate) Credits: 4
- General Education Course (Choose a World Perspective) Credits: 3
- General Education Course (Choose from The Arts, Philosophy & Literature, or Historical Perspectives) Credits 3

- PSY or SOC 360 (SW Cognate) Credits 3
- PLS 102 (General Education SS & SW Cognate) Credits: 3

Winter Semester - Year Two (15 Credits)

- PSY 303 (SW Cognate) Credits: 3
- SOC 280 or SOC 384 (SW Cognate) Credits: 3
- SOC 382 or SW 300 (SW Cognate) Credits: 3
- ECO 210 or ECO 211 or SOC 385 (SW Cognate) Credits: 3
- General Education Theme Course Credits: 3

Fall Semester - Year Three (15 Credits)

- SW 317 (SW Core Course) Credits: 3
- SW 319 (SW Core Course) Credits: 3
- SW 340 (SW Core Course) Credits: 3
- SW 348 (SW Core Course) Credits: 2
- International Relations Program Course Credits: 3
- General Elective Credits: 1

Winter Semester - Year Three (15 Credits)

- STA 215 (General Education Mathematical Sciences and SW Cognate) Credits: 3
- SW 316 (SW Core Course) Credits: 3
- SW 318 (SW Core Course) Credits: 3
- SW 341 (SW Core Course) Credits: 3
- General Education Theme Course/General Elective Credits: 3

Fall Semester - Year Four (14 credits)

- SW 430 (SW Core Course) Credits: 4
- SW 490 (SW Core Course) Credits: 3
- SW 492 (SW Core Course) Credits: 1
- Social Work Elective Course Credits: 3
- General Elective or WRT 305 (Basic Skills) in necessary Credits: 3

Winter Semester - Year Four (16 Credits)

- SW 491 (SW Core Course) Credits: 3
- SW 493 (SW Core Course) Credits: 1
- SW 495 (SW Core Course) Credits: 3
- Social Work Elective Course: Credits: 3
- General Education Theme Course: Credits: 3
- General Elective Credits: 3

Sample Curriculum Guide

(It may not be applicable for every student and is not a replacement for meetings with an academic advisor.)

Course Lists:**Social Work Electives (six credits required)**

- SW 300 - Pluralism in American Society Credits: 3
- SW 320 - Children and Child Welfare Services Credits: 3
- SW 322 - Health Care and Social Services Credits: 3
- SW 354 - Social Work: International Service Credits: 3 to 4
- SW 461 - Multicultural Issues in Social Work Practice Credits: 3
- SW 499 - Independent Study in Social Work Credits: 1 to 4

International Relations Program (three credits required)

- GPY 235 - World Regional Geography Credits: 3
- HST 210 - Empire, Culture, and Conflict 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 - Europe since World War II Credits: 3
- LAS 374 - Revolution in the Americas Credits: 3
- PLS 211 - International Relations Credits: 3
- PLS 313 - International Organization Credits: 3
- PLS 327 - Politics of Developing Countries Credits: 3
- SS 351 - Family & 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 - Introduction to Cultural Anthropology Credits: 3

- PA 270 - Public and Nonprofit Administration Credits: 3
- PA 449 - Public Policy 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 - Love, Sex, and Gender Credits: 3
- SOC 383 - Sociology of Women Credits: 3
- SOC 390 - Advanced Seminar on Social Issues Credits: 3
- SS 381 - Death and Dying Credits: 3
- WGS 200 - Introduction to Gender Studies Credits: 3
- WGS 360 - Foundations of Feminism Credits: 3
- WGS 380 - Special Topics in Women and Gender Studies Credits: 1 to 4

Master of Social Work

Website: 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 below.

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
- 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

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

(Choose 1 of 4):

- 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 Practicum (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

(Choose 1 of 2):

- SW 672 - Social Work Practice: Groups Credits: 3
- SW 674 - Social Work Practice: Families and Children Credits: 3

(Choose 2 of 4):

- SW 660 - Grant Writing and Resource Development Credits: 3
- SW 676 - Community and Social Planning Credits: 3
- SW 678 - Human Services Administration Credits: 3
- SW 679 - Program Planning, Monitoring & Evaluation Credits: 3

Social Work

Electives (choose one course of at least 3 credits):

- SW 613 - Human Rights and Social Work Credits: 3
- SW 630 - Social Work: Global Service-Learning Credits: 3
- SW 631 - Cross Cultural Service Learning Credits: 3
- SW 660 - Grant Writing and Resource Development Credits: 3
- SW 665 - Aging in Contemporary Society Credits: 3
- SW 667 - Holistic Practices in Social Work 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 679 - Program Planning, Monitoring & Evaluation 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

M.S.W. and M.P.A. Degree Programs

The Schools of Social Work and Public and Nonprofit Administration offer prospective students the option to pursue both graduate degrees offered by these units (M.S.W. and M.P.A.). This entails taking coursework in both disciplines in order to be well prepared to seek middle- and upper-level management position in either public or private human service organizations. Those earning the two degrees will attain the knowledge, skills and values of the social work profession with the advanced administrative and technical expertise developed through the study of public administration to become leaders in their organizations and communities. Currently, Grand Valley State University policies enable a student to pursue the M.S.W. degree as the first masters degree and the M.P.A. degree as a second masters degree by completing 21 credits in the M.P.A. program.

Applicants must submit the following items to the Grand Valley State University Admissions Office in Allendale, Michigan:

- Completed graduate application for admission to both the M.S.W. program and M.P.A. program
- \$30 nonrefundable application fee
- Official copies of transcripts from all institutions of higher education attended, other than Grand Valley
- Three letters of recommendation from individuals able to attest to the candidate's qualifications for graduate work and professional practice
- Current resume detailing work and volunteer experience
- A 2 to 3 page essay about life experiences that have led to an interest in administrative practice in a social agency, including assessment of personal strengths and areas for growth
- A 2 page essay articulating how pursuing the M.S.W. and M.P.A. degrees will help achieve educational and professional career goals

No further action on candidacy will be taken until all requested materials have been received by the Admissions Office. Applications may be obtained through the University or either school. Completed application files will be reviewed by the M.S.W. program and the M.P.A. program. Students must meet the basic requirements for graduate study as defined by each School. Either program may also request additional information from an applicant before granting full admissions status and a personal interview may be required.

M.S.W. and M.P.A. Requirements

For students who are not seeking or do not qualify for Advanced Standing, 78 credit hours of study are required. For Advanced Standing students, 63 credits are required. Students must be willing to take a minimum of two courses per semester, including spring/summer, and are expected to complete coursework within four calendar years. A three-semester practicum is required; students will spend a major portion of the time applying the knowledge learned in the classroom regarding macro practice. Students must complete a minimum of 21 credits of Public Administration courses along with the courses necessary to earn the M.S.W.

Foundation Core (all required*)

- SW 600 - Cultural Competency for Social Work Credits: 3 *
- SW 601 - Foundations of Social Work Practice Credits: 3 *
- 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

* See your advisor - not required for students with a CSWE accredited BSW or Child Welfare Training Certification.

Advanced Generalist Concentration (all required with 2 noted PA/SW options)

- SW 622 - Psychopathology and Social Deviance Credits: 3
- SW 640 - Seminar in Advanced Generalist Practice (capstone) Credits: 3 OR PA 619 - Public Management Seminar 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 OR PA 611 - Research Methods Credits: 3

Public Administration Core (all required):

- PA 520 - Foundations of Public Management Credits: 3
- PA 612 - Human Resources in Organizations Credits: 3
- PA 614 - Organization Theory Credits: 3
- PA 660 - The Nonprofit Sector: History and Ethics Credits: 3
- PA 662 - Nonprofit Resource and Financial Management Credits: 3

Advanced Policy (required)

- PA 663 - Nonprofit Organizations and Public Policy Credits: 3

Field Practicum (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 macro (all required with 2-noted PA/SW)

- SW 660 - Grant Writing and Resource Development Credits: 3 OR PA 535 - Grant Writing Credits: 3
- SW 678 - Human Services Administration Credits: 3 OR PA 661 - Nonprofit Management: Practices Credits: 3
- SW 679 - Program Planning, Monitoring & Evaluation Credits: 3

Social Work Electives (choose 1 of 4):

- SW 672 - Social Work Practice: Groups Credits: 3
- SW 674 - Social Work Practice: Families and Children Credits: 3
- SW 630 - Social Work: Global Service-Learning Credits: 3
- SW 631 - Cross Cultural Service Learning Credits: 3

Public Administration Electives (choose 1 of 4):

- PA 642 - Conflict Management Credits: 3
- PA 643 - Strategic Management and Planning Credits: 3
- PA 644 - GIS in the Public Service Credits: 3
- PA 665 - Nonprofit and Foundation Boards, Trustees, and Governance 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 courses, the advanced practice courses must include:

- SW 612 - Social Policy: Families and Children Credits: 3
- SW 677 - Principles of Supervision Credits: 3
- SW 678 - Human Services Administration Credits: 3

One of the following:

- SW 660 - Grant Writing and Resource Development Credits: 3
- SW 662 - Substance Abuse and Social Work Practice Credits: 3

Two of the following:

- SW 672 - Social Work Practice: Groups Credits: 3
- SW 673 - Social Work Practice with Children and Adolescents Credits: 3
- SW 674 - Social Work Practice: Families and Children Credits: 3

Sociology

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Battani. Professors: deYoung, Kennedy; Associate Professors: Battani, Kurthen, Lundskow, Malaret, Ott, Phillips, Stewart, Stillerman, Rynbrandt, Yu; Assistant Professors: Boudreaux, Campbell, Hickman, Rothstein, Westbrook, Wheatley, Yidana.

Website: 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; 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.

Career Opportunities

Students majoring in sociology have a wide range of career options. The discipline emphasizes an understanding of social organization and diversity, as well as the function of institutions and motivations of individual behavior. This prepares students for careers in a variety of settings, including human services, human resources, social work, business, government agencies, and community organizations. Schools, religious organizations, hospitals, courts, prisons, mental health agencies, and substance abuse programs provide specific locations for student internships and career employment.

Graduate School Opportunities

Between ten and fifteen percent of sociology majors pursue graduate studies after graduating from GVSU. Students with an interest in pursuing graduate school opportunities are highly recommended to consult with their academic advisor as early as possible.

Behavioral Science Major (Sociology Concentration)
Sociology and psychology cooperate to offer a major in behavioral science for students who want a broad background in the behavioral sciences. (See Behavioral Science section for description of requirements for major requirements.)

Minor in Aging and Adult Life

The sociology department participates in a multi-disciplinary minor in aging and adult life. See section, "Aging and Adult Life," for further information.

Student Organization

The sociology club meets regularly throughout the academic year. The club engages in fundraising, social, career, and graduate school planning activities, and provides a forum for discussing topics relevant to the discipline.

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 36 credit hours in the department, to satisfy the requirements of the B.A. or B.S. cognate and to produce a major portfolio. The 36 credit hours will include 15 hours of core credit and 21 credit hours of electives chosen from four different areas of sociology. The B.A. cognate is 3rd semester proficiency in a foreign language. The B.S. cognate consists of CS 150, STA 215, STA 216.

Core Courses: 15 credit hours

- SOC 201 - Introduction to Sociology
- SOC 304 - Quantitative Methods in Sociology
- SOC 305 - Qualitative Methods in Sociology Credits: 3
- SOC 400 - Classic Social Theory **OR** SOC 401 - Contemporary Sociological Theory
- SOC 495 - Senior Seminar in Sociology (capstone)

Electives: 21 credit hours

21 credit hours (seven courses) at least one from each category. No more than 6 credits at the 200 level. A second theory course (SOC 400 or 401) may count as an elective. SOC 399, SOC 499, and SOC 380 may fulfill an elective requirement.

Micro-Sociology

- SOC 250 - Perspectives on Madness Credits: 3
- SOC 251 - Criminology Credits: 3
- SOC 360 - Social Psychology: Sociology's View Credits: 3
- SOC 387 - Sociology of Childhood Credits: 3
- SOC 388 - Middle Age and Aging Credits: 3
- SOC 389 - Child Maltreatment Credits: 3
- SOC 392 - Social Deviance and Social Control Credits: 3
- SS 381 - Death and Dying Credits: 3

Macro-Sociology

- SOC 280 - Special Topics in Sociology Credits: 3
- SOC 333 - Sociology of The Civil Rights Movement Credits: 3
- SOC 351 - Urban Sociology Credits: 3
- SOC 382 - Race and Ethnicity Credits: 3
- SOC 381 - Class, Race, Gender, and Sexuality Credits: 3
- SOC 384 - Sociology of Drug Use and Abuse Credits: 3
- SOC 385 - Social Class Inequality Credits: 3
- SOC 420 - Sociology of Community Credits: 3

Organizations, Institutions, Occupations

- SOC 255 - Sociology of Work and Employment Credits: 3
- SOC 323 - Families in Society Credits: 3
- SOC 356 - Sociology of Health Care Credits: 3
- SOC 377 - Globalization: Structures and Movements Credits: 3
- SOC 490 - Practicum: Career-Service Credits: 1 to 9
- SS 351 - Family & Gender in the Developing World

Sociology

Culture

- SOC 288 - Sociology of Food Credits: 3
- SOC 345 - Cultural Sociology Credits: 3
- SOC 346 - Sociology of Art Credits: 3
- SOC 357 - Sociology of Religion Credits: 3
- SOC 366 - Sociology of Media Credits: 3
- SOC 375 - Perspectives on Masculinity Credits: 3
- SOC 379 - Love, Sex, and Gender Credits: 3
- SOC 383 - Sociology of Women Credits: 3

Cognate Degrees

B.A.

- Third-semester language proficiency.

B.S.

- CIS 150 - Introduction to Computing Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3

The Major Portfolio

Students majoring in Sociology assemble Portfolios of four papers that demonstrate their sociological understanding and skills at three points in their undergraduate study of Sociology: at the beginning, at about the middle, and at the completion of their major. Sociology faculty members depend on Portfolios to assess whether we, as a department, are meeting our curricular goals. These goals include student development of the following:

- Sociological imagination and critical thinking skills enabling students to analyze structures and the linkages between macro-structure, micro-structure and individuals;
- Ability to understand and analyze social institutions, processes, and behavior, and to apply sociological theory, concepts and methods;
- Disciplinary-based writing skills; and
- Library, quantitative, and qualitative research skills.

A student begins to assemble his/her Portfolio upon declaring Sociology as a major. The completed Portfolio contains the following papers, each with an appropriate cover letter:

- One paper written for SOC 201 - Introduction to Sociology
- One paper written for SOC 400 or 401 - Sociological Theory
- One paper from a 300 level sociology course
- One paper or report from a methods seminar
- The capstone statement

Each paper will have been submitted in a course and will show instructors comments and assessment. (Exceptions to this list will be made for transfer students so that they may submit papers from courses taken at GVSU.) A 300 word letter will accompany each of the first three papers. In each of these letters, the student explains why he or she picked this piece and what he/she considers to be its strengths and weaknesses in analyzing social life. A 3000 word capstone statement describes and assesses the student's development as a sociologist in relation to the four curricular goals outlined above.

Submit each paper and its cover letter to the Departmental Administrative Assistant, in 2130 AuSable Hall. Inform him or her that you are turning in a paper for your Sociology Portfolio. You should keep your own copies as well. At least every two years, the Sociology faculty reads a random sample of Sociology Portfolios to determine, through the kinds of skills demonstrated, if the Department of Sociology is meeting its curricular goals.

Portfolios are not graded. They are, however, a requirement for passing SOC 495 - The Capstone, and performance on the capstone statement is part of your grade in SOC 495. The Sociology Portfolio is important to you in both the short and the long term. In the short term the portfolio gives you the opportunity to take control and responsibility for the shape and direction of your own education as you reflect on your progress at important points in your academic career. The portfolio provides to you a tangible foundation as you prepare for life after graduation whether that be employment in the public or private sector, the pursuit of graduate

studies, or some other alternative you have not yet even considered! In the long term the portfolio is your contribution to improving and maintaining the quality of your major program, and to the continued accreditation of the University from which you will receive your Bachelor's Degree. We also hope that you will become more aware of your own development as a sociologist and thus better understand the knowledge and skills you have gained by participating in the portfolio system.

Suggested Order of Coursework for a Major in Sociology

First Year

- General education courses
- Electives (or foreign language)
- SOC Elective credits: 3
- MTH 110 - Algebra
- SOC 201 - Introduction to Sociology
- WRT 150 - Strategies in Writing

*201 and 200-level SOC electives without prerequisites will fulfill major and general education requirements.

Second Year

- General education courses
- Electives (or foreign language)
- STA 215 - Introductory Applied Statistics

AND

- SOC elective (6 credits)

OR

- SOC elective (3 credits)

WITH

- SOC 304 - Quantitative Methods in Sociology
OR SOC 305 - Qualitative Methods in Sociology
- OR
- SOC 400 - Classic Social Theory OR SOC 401 - Contemporary Sociological Theory

Third Year

- General Education Theme Courses
- Electives
- WRT 305 - Writing in the Disciplines
- SOC Electives Credits: 6

AND

- SOC 400 - Classic Social Theory OR SOC 401 - Contemporary Sociological Theory

OR

- SOC 304 - Quantitative Methods in Sociology OR SOC 305 - Qualitative Methods in Sociology
- SOC Electives Credits: 3

Fourth Year

- General Education Theme Courses
- Electives
- SOC Electives Credits: 6
- SOC 495 - Senior Seminar in Sociology (capstone)

Sociology Minor

Students minoring in sociology are required to complete 21 credit hours in the department. The 21 credit hours will include:

- SOC 201 - Introduction to Sociology Credits: 3
OR SOC 280 - Special Topics in Sociology Credits: 3
- SOC 304 - Quantitative Methods in Sociology Credits: 3
OR SOC 305 - Qualitative Methods in Sociology Credits: 3
- SOC 400 - Classic Social Theory Credits: 3
OR SOC 401 - Contemporary Sociological Theory Credits: 3

AND

- 12 credits (four courses) at least one from each of the sociology elective areas (see above.) No more than six (two courses) of these 12 credits may be at the 200 level.

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). In addition, students seeking secondary certification must take a second civilization and culture course, SPA 314, and SPA 335, for a total of 36 credits. 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 300 - Reading and Telling Stories Credits: 3
- SPA 308 - Spanish Phonetics Credits: 3
- SPA 321 - Composition and Conversation I Credits: 3

Second Semester:

- SPA 300 - Reading and Telling Stories Credits: 3
- SPA 308 - Spanish Phonetics Credits: 3
- SPA 322 - Composition and Conversation II 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 from 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 choose one from:
SPA 300 - Reading and Telling Stories Credits: 3
SPA 309 - Advanced Spanish Grammar Credits: 3
SPA 308 - Spanish Phonetics Credits: 3

Teaching Majors

Teaching majors should take:

- A second Civilization and Culture course
- SPA 314 - Teaching Methods Credits: 3

Senior Year

First Semester:

- Two 400-level literature courses
- One Civilization and Culture course
- One Survey Course
AND one of the following:

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

Teaching Majors

At this point, teaching majors should take the following course:

- SPA 335 - Introduction to Spanish Linguistics Credits: 3

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.

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.

Statistics

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: P. Stephenson. Professors: Hong, Jinn, Rogness, Stephenson; Associate Professors: Anderson, Curtiss, Downer, Gabrosek, Otieno, Reischman, Richardson, Zeitler; Assistant Professors: Frobish, Shoultz; Affiliate Faculty: Hahn, Twing.

Website: www.gvsu.edu/stat

Degrees Offered: Master of Science in Biostatistics; Bachelor of Science or Bachelor of Arts in Statistics; Minors in Applied Statistics and Mathematical Statistics. 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:

Statistics

- Faculty that are dedicated to expanding the discipline of statistics, improving the pedagogy of statistics, and broadening the application of statistics and
- Students that 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, life-long learners and responsible citizens.

Career Opportunities

Statisticians look for patterns in data to help make decisions in business, industry, and the biological, psychological, physical and social sciences. Statisticians help make important advances in scientific research by using their quantitative abilities, statistical knowledge, and computing and communication skills to collaborate with other scientists to work on challenging problems, including:

- Evaluating the environmental iMPact of air, water, and soil pollution;
- Designing and analyzing studies to determine the safety and effectiveness of a new drug;
- Estimating the unemployment rate for the United States;
- Analyzing consumer demand for a new product or service; and
- Planning studies for and analyzing the results of an agricultural experiment.

Employers are eagerly seeking men and women who have these types of skills. Grand Valley State University's statistics programs will equip graduates with the skills needed to meet the increasing demands of business and industry for people who can provide leadership in making decisions based on disciplined data collection and statistical analysis.

Graduates will learn the theoretical foundations of the field and how to apply statistical methods to a variety of subject areas such as business, computer science, economics, engineering, psychology, and the biological, physical, and social sciences. They may use this knowledge to predict population growth, to forecast economic and business trends, or to analyze market research data on the viability of a new product. Statistical techniques are increasingly used to evaluate new teaching methods in education and cause and effect in the behavioral sciences. Medical and pharmaceutical research depends heavily on statistical methodology to evaluate the effectiveness of a drug or treatment. It is necessary to use statistics to evaluate sample surveys that measure public opinions or the extent of social problems in our society.

Another exciting area that requires the use of statistics is actuarial science. At this time, the majority of actuaries work in careers related to insurance, though the numbers of jobs are steadily growing in other industries.

Actuaries are statisticians who use their quantitative skills to analyze and plan for future financial situations. For example, they estimate the iMPact of seat belt and airbag laws in automobile losses and determine appropriate rate discounts, they calculate the price to charge for insuring a satellite launch, and they project what the AIDS epidemic will cost life and health insurance companies in 5, 10, and 20 years. The demand for college graduates with these specialized skills is ever increasing. The major in statistics prepares students for such a career.

Many other applications exist, such as monitoring and controlling quality in manufacturing, determining the effects of environmental pollution, and aiding business managers and government officials in their decision-making process. In fact, any area that uses the scientific method in the decision-making process is a candidate for the application of statistics.

Not only will students receive an understanding of the theory and the application of statistical methods, but they will receive hands-on experience in the analysis of real-life data. Our program also gives training in oral and written communication skills, which are essential in today's society. Finally, students majoring in statistics will be highly skilled in the operation of statistical computer packages such as SAS, SPSS, and JMP.

Scholarship Opportunities

The Department of Statistics awards an endowed scholarship(s) each year. These scholarships are given to a statistics major to honor the student for outstanding performance and to encourage that student to continue their studies in Statistics. Contact the Statistics Department for details regarding the application process.

Student Organizations

Math and Stats Club

Honors Organizations

Mu Sigma Rho

Bachelor of Arts or Bachelor of Science in Statistics

Requirements for a Major in Statistics

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

All majors must complete the following statistics core courses

Credits: 23

- STA 215 - Introductory Applied Statistics Credits: 3
OR STA 312 - Probability and Statistics Credits: 3
- STA 216 - Intermediate Applied Statistics Credits: 3
- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 315 - Design of Experiments Credits: 3
- STA 319 - Statistics Project Credits: 3
- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (capstone) Credits: 4

All majors must complete two of the following statistics elective courses Credits: 6

- 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 321 - Applied Regression Analysis Credits: 3
- STA 416 - Multivariate Data Analysis Credits: 3
- STA 421 - Bayesian Data Analysis Credits: 3

3. Cognate Requirements Credits: 16

Completion of MTH 201, MTH 202, and CS 162 satisfies the B.S. degree cognate for statistics majors. Completion of these courses plus the foreign language requirement for a B.A. satisfies the B.A. degree cognate for statistics majors.

The following cognates are required of all students majoring in statistics:

- CIS 162 - Computer Science I Credits: 4
- MTH 201 - Calculus I Credits: 5
- MTH 202 - Calculus II Credits: 4
- MTH 227 - Linear Algebra I Credits: 3

4. Application Cognates (a minimum of 6 credits)

Each major in statistics must select an area of application consisting of at least six credits from outside statistics. Students must meet with their statistics advisor to develop specific plans for their application cognates. Students are strongly encouraged to meet with their advisor as soon as their major in statistics is declared.

Suggested Order of Coursework for a Major in Statistics

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 1 assumes students take MTH 201 in the fall of their first year; suggested order of coursework 2 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 1

First Year

- MTH 201 - Calculus I Credits: 5
- 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

- STA 315 - Design of Experiments Credits: 3
- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 319 - Statistics Project Credits: 3

Fourth Year

- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (capstone) Credits: 4

Suggested Order of Coursework 2

First Year

- STA 215 - Introductory Applied Statistics Credits: 3

Second Year

- CIS 162 - Computer Science I Credits: 4
- MTH 201 - Calculus I Credits: 5
- STA 216 - Intermediate Applied Statistics Credits: 3
- MTH 202 - Calculus II Credits: 4

Third Year

- MTH 227 - Linear Algebra I Credits: 3
- STA 315 - Design of Experiments Credits: 3
- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 319 - Statistics Project Credits: 3

Fourth Year

- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (capstone) Credits: 4

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 five courses may be courses outside of statistics that apply statistical methodology. In this situation students must meet with a member of the statistics faculty to develop specific plans for the courses outside of statistics. Students are strongly encouraged to meet with a statistics faculty member as soon as they decide to minor in applied statistics.

All minors must complete the following Statistics core courses Credits: 6

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 complete five additional courses (at least 15 credits)

At least three of the courses must come from the following list:

- STA 310 - Introduction to Biostatistics Credits: 3
- STA 311 - Introduction to Survey Sampling Credits: 3
- STA 313 - Probability and Stochastic Processes 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 319 - Statistics Project Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3
- STA 412 - Mathematical Statistics I Credits: 4
- STA 415 - Mathematical Statistics II (capstone) Credits: 4
- STA 416 - 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: 5
- 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 313 - Probability and Stochastic Processes 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 319 - Statistics Project Credits: 3
- STA 321 - Applied Regression Analysis Credits: 3
- STA 415 - Mathematical Statistics II (capstone) Credits: 4
- STA 416 - Multivariate Data Analysis Credits: 3

Supply Chain Management

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.

Cognate Degree Requirements

- CIS 150 - Introduction to Computing 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
- STA 215 - Introductory Applied Statistics Credits: 3

Taxation

- Quantitative Group — choose one:
 - MTH 122 - College Algebra Credits: 3
 - MTH 125 - Survey of Calculus Credits: 3
 - MTH 201 - Calculus I Credits: 5
 - PHI 103 - Logic Credits: 3
 - MGT 361 - Management Science Credits: 3

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
- FIN 320 - Managerial Finance Credits: 3
- MGT 268 - Introduction to 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, minor, or cognates 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 - Business, Social Change and Ethics Credits: 3
- MGT 438 - Business Ethics Credits: 3
- MKT 375 - Marketing Ethics Credits: 3

Required Business Electives

Three upper-division Seidman courses not applied to the major, minor, or cognate (9 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. However, at least 60 hours of the total program must be in nonbusiness courses. 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 or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the B.B.A. cognate are counted as nonbusiness credit.

Requirements for a Major in Supply Chain Management

Required Courses

- 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 and Planning and Control Credits: 3
- MGT 467 - Advanced Topics in Operations and Supply Chain Management 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
- MKT 353 - Marketing Negotiations Credits: 3
- MKT 356 - Professional Selling Credits: 3
- MKT 357 - Retailing Credits: 3
- MKT 359 - Multinational Marketing 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
- MKT 455 - Business to Business Marketing Credits: 3
- MGT 466 - International Management and Multinational Corporations Credits: 3

Master of Science in Taxation

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.

Website: 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 Campus DeVos Center in downtown Grand Rapids, Michigan.

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

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 635 - Advanced Tax Subjects Credits: 3
- ACC 639 - Federal Tax Practice and Procedure Credits: 3
- ACC 640 - S Corp & 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 students 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)
Information Systems	MGT 510 - Principles of Mgt Information Systems	MGT 268 (3 credits)
Accounting	ACC 511 - Financial and Managerial Accounting Concepts	ACC 212 & 213 (6 credits)
Statistics	FIN 521 - Data Analysis in Business	STA 215 (3 credits)
Finance	FIN 522 - Finance Principles for Managers	FIN 320 (3 credits)
Legal Environment	BUS 531 - Legal Environment of Business	BUS 201 (3 credits)
Economics	ECO 542 - Economic Reasoning	ECO 210 & 211 (6 credits)
Marketing	MKT 551 - Marketing Management: Principles and Institutions	MKT 350 (3 credits)

Students who have completed GVSU undergraduate courses listed above 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 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 course work.

Certificate in Graduate Tax Studies

A certificate in graduate tax studies is comprised of four graduate tax courses (ACC 622, ACC 624, ACC 627, and ACC 630), conducted in a combination of interactive video, online and traditional classroom formats. Other graduate tax courses may be substituted based on a student's interests and prior academic work and/or work experience as evaluated and approved by the student's faculty advisor. The certificate can normally be completed within an eighteen-month time frame (or less with approved substitutions).

A student desiring to take the certificate in graduate tax studies must meet the same admission criteria applicable to the M.S.T. Program, including an acceptable score on the GMAT exam; and must have taken a basic income tax course within five years prior to starting the program. All certificate courses qualify for Michigan State CPA CPE requirements.

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 course work 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 course work 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

For additional information about opportunities your college offers, please refer to the School of Communications website.

School of Communications Director: Thompson
Professor: Ellis; Associate Professors: Libman, Sheffield; Assistant Professor: Bell.

Website: www.gvsu.edu/theatre

The Theatre major provides a professional orientation and background within a broad liberal arts framework. 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 and national internships as managers,

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publicists, technicians, and production assistants with major professional theatres and arts organizations. Theatre courses from overseas schools can substitute for GVSU Theatre requirements for those students pursuing international studies.

Career and Graduate Opportunities

Versatility in a number of areas is the single most important factor in obtaining work as a graduate of the drama program. Grand Valley theatre students have successfully completed programs in graduate schools and professional conservatories. They have found work in schools and recreation departments, repertory theatre companies, modern dance companies, and arts organizations as performers, technicians, teachers, designers, directors, and administrators. In addition, the combination of critical and problem-solving communications skills with the self-confidence and responsibility coming from performance experience provides excellent training for many non-entertainment fields.

The Major in Theatre prepares students for careers that require skills in communications, creativity, and problem-solving, or for careers in the entertainment industry. A complete list of placement and careers of recent theatre graduates is available from the GVSU Theatre website: www.gvsu.edu/theatre/.

Note: The theatre program requires COM 201 in the School of Communications core. 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

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 - Theories of Communication Credits: 3

And one of the following:

- COM 201 - Speech Credits: 3
- 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. Cognates

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. cognate or the B.S. cognate that is intended for a particular undergraduate program.

B.A. Cognate

The B.A. degree requires a third-semester proficiency in a foreign language of the student's choice.

The B.S. cognate for the Theatre Program is:

- CIS 150 - Introduction to Computing Credits: 3 **OR** PHI 103 - Logic Credits: 3
- SS 300 - Research Methods in the Social Sciences Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

2. Theatre Core Credits: 35

- CTH 151 - Acting Process Credits: 3
- CTH 161 - Theatre Production Credits: 3
- CTH 162 - Play Analysis Credits: 3
- CTH 252 - Acting Characterization Credits: 3
- CTH 261 - Stagecraft I Credits: 3
- CTH 262 - Costume Construction Credits: 3
- CTH 365 - Directing I Credits: 3

- CTH 371 - Theatre History I Credits: 3
- CTH 372 - Theatre History II Credits: 3

Two of the following

These two courses cannot also count for electives below.

- CTH 367 - Scenography Credits: 3
- CTH 368 - Lighting Design Credits: 3
- CTH 369 - Costume Design Credits: 3
- CTH 465 - Directing II Credits: 3
- CTH 490 - Internship Credits: 1 to 6

3. Electives Credits: 9

- CTH 152 - Voice for the Actor Credits: 3
- CTH 198 - Rehearsal and Performance Credits: 1 to 3
- CTH 250 - Theatre Management Credits: 3
- CTH 263 - Makeup Credits: 2
- CTH 298 - Applied Theatre Practice Credits: 1 to 3
- CTH 356 - Acting for the Camera 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 373 - Global Arts Performance Credits: 3
- CTH 380 - Special Topics in Theatre 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 479 - Classical Theatre Workshop Credits: 3
- CTH 490 - Internship Credits: 1 to 6
- CTH 499 - Independent Research Credits: 1 to 3
- MUS 357 - Opera Theatre Credits: 1

4. Capstone Credits: 3

- COM 495 - Issues in Communication (capstone) Credits: 3

Suggested Order of Coursework for a Major in Theatre

A general theatre curriculum (check specific major requirements with your advisor) working toward a B.S. or B.A. degree.

Freshman Year

General Education Foundations* — ENG 212 and Historical Perspectives

- COM 101 - Concepts of Communication Credits: 3
- COM 295 - Theories of Communication Credits: 3
- CTH 151 - Acting Process Credits: 3
- CTH 161 - Theatre Production Credits: 3
- CTH 162 - Play Analysis Credits: 3
- MTH 110 - Algebra Credits: 4
- WRT 150 - Strategies in Writing Credits: 4

*CTH 161 fulfills the General Education Foundations Arts category and is required for the Theatre major.

Sophomore Year

General Education Foundations* — Math Sciences and Physical Sciences. Begin foreign language sequence or B.S. Cognate.

- COM 201 - Speech Credits: 3
- CTH 250 - Theatre Management Credits: 3
- CTH 252 - Acting Characterization Credits: 3
- CTH 261 - Stagecraft I Credits: 3
- CTH 262 - Costume Construction Credits: 3

*CTH 161 fulfills the General Education Foundations Arts category and is required for the Theatre major.

Junior and Senior Year

General Education Foundations* — Life Sciences and Social Sciences, General Education World Perspectives and U.S. Diversity, General Education Themes

- CTH 365 - Directing I Credits: 3
- CTH 367 - Scenography Credits: 3

- CTH 368 - Lighting Design Credits: 3
- CTH 369 - Costume Design Credits: 3
- CTH 371 - Theatre History I Credits: 3
- CTH 372 - Theatre History II Credits: 3
- CTH 465 - Directing II Credits: 3
- CTH 490 - Internship Credits: 1 to 6

Theatre majors should register for either **COM 498 Senior Project** or **CTH 490 Internship** during their senior year.

- COM 495 - Issues in Communication (capstone) Credits: 3

*CTH 161 fulfills the General Education Foundations Arts category and is required for the Theatre major.

Theatre Minor

Requirements for the Minor in Theatre

Minors must complete 20 hours of theatre coursework in any area. Students who are interested in completing a minor must meet with a faculty advisor in the School of Communications.

Therapeutic Recreation

For additional information about opportunities your college offers, please refer to the College of Health Professions section in this catalog.

Director: Beck. Professor: Beck; Assistant Professor: Kensinger, Wyble.

Degree offered: Bachelor of Science in Therapeutic Recreation.

Website: www.gvsu.edu/tr

Therapeutic recreation/recreation therapy is an allied health profession involved in the care of patients/clients with a variety of diagnoses and functional limitations. Recreation therapy uses a continuum of care service model (Van Andel, 2003), which provides response to diagnoses, treatment/rehabilitation, remediation, leisure education, recreation participation, and prevention/health promotion.

Career Opportunities

The field of therapeutic recreation has continued to grow and offers diverse opportunities for employment. Recreation therapists may serve as counselors, community educators and organizers, administrators, supervisors, consultants, and researchers. Professionals might find themselves in any of the following settings: hospitals, physical medicine and rehabilitation, psychiatric hospitals, community mental health clinics, substance abuse centers, respite day programs, hospice, school systems, schools or residential centers for those with specific disabilities, special schools or treatment clinics, child protective agencies, sheltered workshops, programs operated by public recreation, and park departments.

Therapeutic Recreation/Recreation Therapy at Grand Valley

Therapeutic recreation/recreational therapy is a four-year program, plus one semester of internship, which leads to a B.S. degree. The program offers a highly articulated and sequenced curriculum. All students must seek advising from a department faculty member before embarking on the program. The baccalaureate curriculum provides educational opportunities that prepare students for entry level positions in therapeutic recreation/recreation therapy. Students are prepared to meet consumer 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 health-related programs at Grand Valley register as prehealth majors for their freshman year and complete core courses that are required of prehealth majors and that are pertinent to therapeutic recreation.

The admission process for Therapeutic Recreation consists of three phases. These phases are outlined below.

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 semester entry (applications available in the College of Health Professions office). Late applications will be considered assuming requirements are met and there is space in the program.

- 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, 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 will be notified of provisional admission into the program and will be asked to set up an advising appointment with the Director of Therapeutic Recreation. Students will be given a permit to register for REC 110 and 111 for the fall semester. Upon successful completion of these two 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 above process and meet the same criteria. Students should note that it is best to complete only one year at another institution (i.e., community college). This would facilitate completing the therapeutic recreation program at Grand Valley within the three-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 Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. Therapeutic Recreation Core:

- REC 110 - Foundations of Recreation and Leisure Credits: 3
- REC 111 - Foundations of Therapeutic Recreation Credits: 3
- REC 200 - Leisure Education Credits: 3
- REC 253 - Diagnostic Groups in Therapeutic Recreation Credits: 3
- REC 256 - Therapeutic Recreation Programming Credits: 3
- REC 308 - Recreation Leadership Credits: 3
- REC 310 - Interventions in Therapeutic Recreation Credits: 3
- REC 318 - Fieldwork in Therapeutic Recreation Credits: 3
- REC 404 - Issues in Recreation and Leisure (capstone) Credits: 3
- REC 405 - Administration of Therapeutic Recreation Credits: 3
- REC 407 - Assessment and Evaluation in Therapeutic Recreation Credits: 3
- REC 490 - Internship in Therapeutic Recreation Credits: 12

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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
- REC 318 - Fieldwork in Therapeutic Recreation Credits: 3
- REC 380 - Special Topics in Therapeutic Recreation Credits: 1 to 4

4. Cognates:

- BIO 120 - General Biology I Credits: 4
- BMS 208 - Human Anatomy Credits: 3
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- CHM 109 - Introductory Chemistry Credits: 4
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- HPR 220 - Health Care Delivery Credits: 2
- MOV 300 - Kinesiology Credits: 3
- MOV 304 - Physiology of Activity Credits: 3
- PSY 101 - Introductory Psychology Credits: 3
- PSY 303 - Psychopathology 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 experience, students must show academic competence. The criterion for competence is 80 percent in each REC designated course.

6. Certifications

- a. First aid/CPR certification must be current before registering for REC 318, Fieldwork, or REC 490, Internship.
- b. 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. 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.

Suggested Order of Coursework for a Major in Therapeutic Recreation

First Year

Fall Credits: 15

- General education course Credits: 3
- CHM 109 - Introductory Chemistry Credits: 4
- MTH 110 - Algebra Credits: 4
- PSY 101 - Introductory Psychology Credits: 3

Winter Credits: 14

- General education course Credits: 3
- General education Credits: 3
- BIO 120 - General Biology I Credits: 4
- WRT 150 - Strategies in Writing Credits: 4

Second Year

Fall Credits: 16

- General education course Credits: 3
- CHM 230 - Introduction to Organic and Biochemistry Credits: 4
- HPR 220 - Health Care Delivery Credits: 2

- REC 110 - Foundations of Recreation and Leisure Credits: 3
- REC 111 - Foundations of Therapeutic Recreation Credits: 3

Winter Credits: 14

- BMS 208 - Human Anatomy Credits: 3
- PSY 364 - Life Span Developmental Psychology Credits: 3
- REC 200 - Leisure Education Credits: 3
- REC 253 - Diagnostic Groups in Therapeutic Recreation Credits: 3

Third Year

Fall Credits: 13

- General education course Credits: 3
- BMS 290 - Human Physiology Credits: 3
- BMS 291 - Laboratory in Human Physiology Credits: 1
- REC 256 - Therapeutic Recreation Programming Credits: 3
- REC 308 - Recreation Leadership Credits: 3

Winter Credits: 12/15

- ENG 305/General education course Credits: 3
- Theme Course Credits: 3
- REC 310 - Interventions in Therapeutic Recreation Credits: 3
- REC 313 - Therapeutic Recreation for Physical Disability Credits: 3
- STA 215 - Introductory Applied Statistics Credits: 3

Summer

- REC 318 - Fieldwork in Therapeutic Recreation Credits: 3

Fourth Year

Fall Credits: 9/15

- MOV 300 - Kinesiology Credits: 3
- PSY 303 - Psychopathology Credits: 3
- REC 315 - Therapeutic Recreation for Mental Health Credits: 3
- REC 316 - Therapeutic Recreation with the Elderly Credits: 3
- REC 407 - Assessment and Evaluation in Therapeutic Recreation Credits: 3

Winter Credits: 12/15

- Theme Course Credits: 3
- MOV 304 - Physiology of Activity Credits: 3
- REC 317 - Therapeutic Recreation for Pediatrics Credits: 3
- REC 404 - Issues in Recreation and Leisure (capstone) Credits: 3
- REC 405 - Administration of Therapeutic Recreation Credits: 3

Summer

- REC 490 - Internship in Therapeutic Recreation Credits: 12

Women and Gender Studies

For additional information about opportunities your college offers, please refer to the Brooks College of Interdisciplinary Studies section in this catalog.

Program Director: Underwood. Assistant Professors: DeMuth, Mason, Weekley.

Website: www.gvsu.edu/wgs

Women and Gender Studies focuses on diversity and the integration of theory and practice. Liberal education is central to WGS and the program 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, dialogue, and expression so central to the University's vision for undergraduate success.

The Women and Gender Studies program at GVSU offers an interdisciplinary curriculum that acquaints students with the scholarship on women and gender; 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.

Career Opportunities

WGS graduates find careers in nonprofit agencies and global non-governmental organizations; in elementary and secondary education as teachers, counselors, and administrators; in women's health organizations and public health programs; and in public and private corporations, human resources, labor unions, and the law firms.

Students interested in attending graduate school in Women and Gender Studies have many degree options. Students interested in exploring graduate school opportunities are encouraged to consult the online, searchable database available on the National Women's Studies Association (NWSA) website: www.nwsa.org/.

Possible graduate degrees include: Ph.D. or M.A. in Women and Gender Studies, joint M.A. degrees in Women and Gender Studies and Social Work, Teaching, Communications Management, Public Policy, or Information Studies are also available at several universities. Students interested in a law degree may pursue a joint M.A. and J.D. program. Students earning an M.A. or a Ph.D. in another discipline may also have opportunities to earn a graduate minors or certificate in Women and Gender Studies.

Participating Programs

The program contributes to the experience of all students on campus by working in collaboration with the Women's Center, student organizations and academic programs and departments across the university to sponsor speakers and events that contribute to understanding women and gender in the contemporary world. Most significantly, each March in conjunction with the GVSU Women's Center, WGS celebrates Women's 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.

Honors Organizations

Iota Iota Iota is the academic honor society for the field of Women and Gender Studies. The organization recognizes the academic achievements of students and encourages and supports scholarship and excellence in Women and Gender Studies.

Scholarship Opportunities

The Jean Enright Scholarship provides financial assistance to students who are Women and Gender Studies majors or minors. Students must be making satisfactory academic progress and must demonstrate significant participation in community and/or campus service that is centered on women and/or girls.

Bachelor of Arts or Bachelor of Science in Women and Gender Studies

Requirements for a Major in Women and Gender Studies

Students majoring in Women and Gender 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 Seminar. Students must also take five electives at the 200 level or higher. The required courses are:

- WGS 200 - Introduction to Gender Studies Credits: 3
- WGS 300 - Women/Gender Studies Research Methods Credits: 3
- WGS 360 - Foundations of Feminism Credits: 3
- WGS 450 - Global Feminisms Credits: 3
- WGS 495 - Capstone 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 236 - Introduction to Writing by Women Credits: 3
- WGS 280 - Special Topics in Women and Gender Studies Credits: 3
- WGS 310 - Sexual Orientation and the Law Credits: 3
- WGS 315 - Psychology of Sex Differences Credits: 3
- WGS 316 - Human Intimacy & Sexuality Credits: 3
- WGS 320 - Crimes Against Women Credits: 3
- WGS 324 - Introduction to Lesbian and Gay Studies Credits: 3
- WGS 335 - Women, Health & Environment Credits: 3
- WGS 351 - Family & 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 373 - Women and Minorities in Film and Television Credits: 3
- WGS 375 - Perspectives on Masculinity Credits: 3
- WGS 380 - Special Topics in Women and Gender Studies Credits: 1 to 4
- WGS 399 - Independent Readings Credits: 1 to 3
- WGS 460 - Spanish Women Authors Credits: 3
- WGS 461 - Language and Gender Credits: 3
- WGS 490 - Women's Community Collaborative Credits: 3
- WGS 491 - Contemporary Theory and Practicum 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
- CLA 320 - Women in the Classical World Credits: 3
- ECO 350 - Gender and Economics Credits: 3
- ENG 436 - Women and Literature Credits: 3
- HST 312 - History of American Women Credits: 3
- HST 371 - History of Gender, Family, Sexuality Credits: 3
- PHI 370 - Feminist Philosophy Credits: 3
- PSY 316 - The Psychology of Human Intimacy and Sexuality Credits: 3
- SOC 323 - Families in Society Credits: 3
- SOC 379 - Love, Sex, and Gender Credits: 3
- SOC 381 - Class, Race, Gender, and Sexuality Credits: 3
- SOC 383 - Sociology of Women Credits: 3
- SOC 389 - Child Maltreatment Credits: 3

Other courses that have a significant amount of the course devoted to the study of women and/or gender 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 the following cognate sequence:

- STA 215 - Introductory Applied Statistics Credits: 3
- WGS 300 - Women/Gender Studies Research Methods Credits: 3

AND one of the following:

- ECO 350 - Gender and Economics Credits: 3
- PHI 103 - Logic Credits: 3
- CIS 150 - Introduction to Computing Credits: 3

Double Major

A double major in Women and Gender Studies and a disciplinary area of study carries many advantages for students with interests in particular departmental majors and gender issues.

Study Abroad

Students interested in women and gender studies are encouraged to seek study-abroad experience in programs that examine issues of gender

Writing

and its relationship to economics, political movements, society, and empowerment.

For more information about opportunities to study women and/or gender abroad, students should contact the Women and Gender Studies Program and the Barbara H. Padnos International Center.

Suggested Order of Coursework for a Major in Women and Gender Studies

First Year

- Three General Education Foundation Courses
- Two foreign language courses (B.A. Candidates)
- STA 215 - Introductory Applied Statistics (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 Foundation Courses
- One foreign language course (B.A. candidates)
- WGS 360 - Foundations of Feminism Credits: 3
- WGS 450 - Global Feminisms Credits: 3
- ECO 350 - Gender and Economics Credits: 3
- WGS elective

Third Year

- Four General Education Foundation Courses
- Two General Education Theme Courses
- WGS 300 - Women/Gender Studies Research Methods Credits: 3
- WGS 360 - Foundations of Feminism Credits: 3

Fourth Year

- Four General Education Foundation Courses
- One General Education Theme Course
- WGS 495 - Capstone Credits: 3

Women and Gender Studies Minor

Requirements for a Minor in Women and Gender Studies

Students who minor in Women and Gender Studies must complete at least 21 credit hours including:

- WGS 200 - Introduction to Gender Studies Credits: 3
- WGS 360 - Foundations of Feminism Credits: 3
- WGS 491 - Contemporary Theory and Practicum Credits: 3

The remaining four courses must be selected from the electives listed under the Women and Gender Studies Major; 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 and/or gender during a particular semester may also be counted toward the minor on an *individual case basis with coordinator approval*.

Writing

For additional information about opportunities your college offers, please refer to the College of Liberal Arts and Sciences section in this catalog.

Chair: Royer. Professors: Clark, Frerichs, Gilles, Losey; Associate Professors: Dwell, Haven, Royer, Schaub, Schendel; Assistant Professors: Bunn, Horrocks, José, Lowe, Prentiss, Rhodes, Toth. Affiliate Professors: Dickerson, Donovan, Easter, Gibbons, Hecksel, Hulst, Iadonisi, Kaitany, Kelly-Lafata, Kierzek, Laidlaw, Lotz, Lubic, Mulally, Ramey, Treanor, Van Sickle, White.

Website: www.gvsu.edu/writing

The Department of Writing offers instruction in academic, creative, and professional writing. Academic writing courses, which are designed for all students in the university community, include first-year composition and junior-level writing. For students who choose to major in writing, the department offers emphasis areas in creative and professional writing. The department also offers a minor in writing for students wishing to enhance their writing abilities for personal or professional reasons.

Academic writing, creative writing, and professional writing all belong to the liberal arts. As disciplines, they seek to sensitize student writers to the values and practices of particular genres of writing. The overall goal is to develop in students the ability to write well in a variety of contexts. Students develop this ability by reading and analyzing models and by drafting and revising original work in a workshop setting. Academic writing explores the art of writing well in specific disciplinary contexts. Creative writing explores the art of writing literary fiction, poetry, drama, and nonfiction. Professional writing explores the art of writing nonfiction and workplace writing.

Academic Writing Program

All Grand Valley students, regardless of major, must satisfy both the freshman and junior-level writing requirements (see Basic Skills Requirements under the General Academic Policies section more information on university writing requirements). 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. WRT 150 students draw on personal experience and opinions, use library resources, conduct research, integrate sources into their writing, and become familiar with the Grand Valley Writing Center 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 reaching the junior level (55–80 credits) demonstrate their developing writing abilities to faculty in their academic school or division. Students who need or want additional work on their writing 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.

Creative Writing Program

Creative writing students learn to create original works of poetry, drama, fiction, and nonfiction. Writing majors in the creative writing track learn to recognize and describe various poetic and prose forms, to analyze the creative work of others, including both professional writers and fellow students, and to reflect on their own developing personal aesthetic. Creative writing students also develop their editing and professional writing abilities in coursework and extracurricular activities. This emphasis is designed for students seeking to develop their creative writing abilities with a desire to pursue graduate education, to enhance a love and appreciation of literature, to write independently, or to improve their writing skills for any career in which writing may play a part. Many students combine their study of creative writing with a minor in another academic area, such as art, English, history, liberal studies, philosophy, or theater. Creative writing students typically find careers as teachers, editors, grant writers, program administrators, freelance journalists, or authors.

Professional Writing Program

Professional writing students are taught to generate a wide range of nonfiction prose appropriate for a wide range of rhetorical situations. Writing majors in the professional writing track gain practice in literary writing, persuasive writing, and informational writing. Students become sophisticated analysts of communication situations and self-reflective about their own rhetorical skills. By graduation, professional writing students will feel confident writing and designing pamphlets, newsletters, magazines, Web pages, presentations, and a variety of other forms and genres.

This emphasis is designed for students seeking careers in writing, publishing, or other fields in which specialized skills in written communication are required. Many students combine the professional writing emphasis with a minor in a professional area such as advertising and public relations, business, computer science, English, information systems, or international relations. Students are encouraged to create a major-minor combination that suits their own interests and career

plans. Graduates typically find careers as editors, grant writers, program administrators, technical writers, freelance writers, teachers, and authors.

Extracurricular Activities

The writing department offers a rich community of writers and readers, including students, faculty, local professionals, and regional and national authors. For students, this community begins to take shape in the introductory courses and extends beyond the department itself to the Department of English, the School of Communications, and the university community as a whole. Beyond their courses, students have a number of opportunities to participate in the writing community on campus.

Writers Society. A student organization devoted to recognizing and promoting excellence among student writers. This group hosts various campus writing activities.

fishladder: A Student Journal of Art and Writing. The literary arts magazine publishes creative work of students twice yearly and is edited by students under the tutelage of a faculty adviser.

Oldenburg Writing Contest. An annual writing contest, cosponsored with the Department of English, carrying cash prizes for essays and creative writing in various categories.

Student Reading Series. A public series of evening readings of promising student work from intermediate and advanced writing courses. Works include drama, fiction, nonfiction, and poetry.

Grand Valley Writers Series. This annual series brings both regionally and nationally known writers to campus for public readings, class visits, and other appearances.

Vinette. An on line publication composed of the work of talented student writers. It features nonfiction writing, both creative and technical as well as print and Web designs.

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.

Bachelor of Arts in Writing

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. Writing majors must complete the core courses listed below and the capstone, WRT 495, and choose an emphasis within the major. The Writing major totals 42 credits.

Core Requirements for All Majors Credits: 12

- ENG 226 - American Literature II: from 1860 Credits: 3
- WRT 200 - Introduction to Professional Writing Credits: 3
- WRT 210 - Writing with Style Credits: 3
- WRT 219 - Introduction to Creative Writing Credits: 3

Creative Writing Track Requirements Credits: 27

Literature Credits: 9

Any three 200-level literature (ENG) courses.

Genre Studies Credits: 18

Take all three courses in two of the following four genre groups:

Poetry

- ENG 320 - Studies in Poetry Credits: 3
- WRT 320 - Intermediate Poetry Workshop Credits: 3
- WRT 420 - Advanced Poetry Workshop Credits: 3

Fiction

- ENG 330 - Studies in Fiction Credits: 3
- WRT 330 - Intermediate Fiction Workshop Credits: 3
- WRT 430 - Advanced Fiction Workshop Credits: 3

Nonfiction

- ENG 360 - Studies in Nonfiction Credits: 3
- WRT 360 - Intermediate Nonfiction Workshop Credits: 3
- WRT 460 - Advanced Nonfiction Workshop Credits: 3

Drama

- ENG 340 - Studies in Drama Credits: 3
- WRT 340 - Intermediate Drama Workshop Credits: 3
- WRT 440 - Advanced Drama Workshop Credits: 3

Professional Writing Track Requirements Credits: 27

Rhetoric and Design Credits: 6

- COM 203 - Argument and Analysis Credits: 3
- WRT 251 - Document Production and Design Credits: 3

Writing Internship Credits: 3

- WRT 490 - Internship Credits: 1 to 3

Professional Writing Credits: 9

- WRT 350 - Business Communication Credits: 3
- WRT 351 - Writing for the World Wide Web Credits: 3
- WRT 360 - Intermediate Nonfiction Workshop Credits: 3

Professional Emphasis Credits: 9

English

- ENG 225 - American Literature I: to 1860 Credits: 3
- ENG 261 - Foundations of Language Study Credits: 3
- ENG 313 - British Literature: Shakespeare Credits: 3

Or Journalism

- CJR 236 - News in Society Credits: 3
- CJR 256 - News Reporting I Credits: 3
- CJR 270 - News Reporting II Credits: 3

Or Public Relations

- CAP 220 - Fundamentals of Public Relations Credits: 3
- CAP 321 - Media Relations Writing Credits: 3
- CJR 256 - News Reporting I Credits: 3

Capstone Requirement for All Majors Credits: 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, 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 (18 Credits)

Core Requirements Credits: 9

- WRT 200 - Introduction to Professional Writing Credits: 3
- WRT 210 - Writing with Style Credits: 3
- WRT 320 - Intermediate Poetry Workshop Credits: 3
- OR WRT 330 - Intermediate Fiction Workshop Credits: 3
- OR WRT 340 - Intermediate Drama Workshop Credits: 3
- OR WRT 360 - Intermediate Nonfiction Workshop Credits: 3

Writing Electives Credits: 9

Choose any three courses:

- WRT 251 - Document Production and Design Credits: 3
- WRT 320 - Intermediate Poetry Workshop Credits: 3
- WRT 330 - Intermediate Fiction Workshop Credits: 3
- WRT 340 - Intermediate Drama Workshop Credits: 3
- WRT 350 - Business Communication Credits: 3
- WRT 351 - Writing for the World Wide Web Credits: 3
- WRT 360 - Intermediate Nonfiction Workshop Credits: 3

Course Listing 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. Satisfies Social Sciences. Satisfies 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 US Diversity. Fulfills Social Sciences Foundation. Credits: 3

AAA 202 - 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. Offered winter semester. 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. Fulfills World Perspective, and Philosophy and Literature Foundations requirements. Offered fall semester. Prerequisites: WRT 150 Credits: 3

AAA 232 - Modern African American Literature

Analysis and discussion of discourse by and about African Americans written primarily during the twentieth 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. Offered winter semester. Prerequisites: 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. Part of the Global Change: Integration and Fragmentation Theme. Satisfies World Perspectives. Offered every year. Credits: 3

AAA 301 - Perspectives on African/African American Studies

Traces the historical development and examines the scope, theories, discourses, and methodologies defining African American studies and critical responses to these studies. Surveys perspectives on African American history, religion, social organization, politics, economy, literature, and culture and ideology. Offered fall semester of even-numbered years. 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 World Perspectives. Part of the Marginality and Difference Theme. Credits: 3

AAA 305 - Perspectives on the Black Arts Movement

An analysis of the development and reception of shifts in Black American identity, ideals, and aspirations as articulated by Black artists and activists reacting to the integrationists ideals of the Civil Rights Movement. Part of the Civil and Human Rights Movements Theme. Offered winter semester. 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. Part of Cities Theme. Offered fall semester. Prerequisite: Junior standing. 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 World Perspectives. Prerequisites: PLS 103 or junior standing. Credits: 3

AAA 340 - African American Culture and Social Thought

Examines the cultural ties between Africans and African Americans, the historical and sociocultural context of African American cultural expression, and the defining dialogues, moments, and personages in African American culture and social thought. Part of American Mosaic Theme. Offered winter semester. Prerequisites: Sophomore standing. Credits: 3

AAA 341 - Civil Conflicts in Africa

The analysis of the nature and dynamics of both non-violent and violent conflicts - civil wars - in Africa, and the efforts to resolve them. The focus will be on selected case studies of African states. Part of the Making War and Peace theme. Offered every year. 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. Part of Gender, Society and Culture Theme. 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. A dual listing with WGS 352. Fulfills U.S. Diversity requirement. Part of Gender, Society, and Culture Theme. Offered fall semester. 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. Part of the Civil and Human Rights Movement theme, and fulfills US Diversity Cultural Emphasis. Offered spring semester. Prerequisites: 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 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 summer semesters. Prerequisites: 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 non-for-profit entities. Offered winter semester. Prerequisites: 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 theory and application of financial accounting. Topics include basic accounting for assets, liabilities, equity, convertible debt, deferred taxes, leases, pensions, accounting changes, and the cash flow statement. Offered every semester. Prerequisites: 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. Prerequisites: ACC 212. Credits: 3

ACC 318 - Entity Taxation

Introduction to tax characteristics of various type 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. Prerequisites: 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. Prerequisites: ACC 213. Credits: 3

ACC 322 - Cost Systems and Control Techniques

This course will examine cost accounting topics such as product cost determination, cost estimation using regression analysis, costing systems such as job costing, process costing, and standard costing, cost allocation techniques, joint cost allocations, and master budgets. May be offered any semester. Prerequisites: ACC 213 and STA 215. 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. Prerequisites: 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. Prerequisites: 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

Course Listing and Descriptions

systems and continuous auditing are introduced. Offered fall semester. Prerequisites: 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. Prerequisites: 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

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

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 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. Prerequisites: 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. Prerequisites: ACC 610 or ACC 310. Credits: 3

ACC 609 - Individual Income Taxation & Research

Fundamentals of Federal income taxation of individuals and applied tax research. Coverage includes the federal income tax system, gross income inclusions and exclusions, personal and business deductions and credits, property transactions (taxable and deferred), and basic retirement and tax planning for individuals and families. Fundamentals of tax research will be applied in the preparation of a formal tax memorandum. Course may not be taken for credit if student has received credit for ACC 317 or equivalent. Offered fall semester. Credits: 3

ACC 610 - Intermediate Financial Accounting

This course examines the conceptual and practical application of accounting theory. Course may not be taken for credit if student has received credit for ACC 310 or equivalent. Offered fall semester. Prerequisites: ACC 511 or ACC 212, or equivalent, and completion of MBA background equivalents. 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. Prerequisites: ACC 511 or equivalent, and completion of MBA 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. Prerequisites: ACC 511 and BUS 531, or equivalents. Credits: 3

ACC 613 - Financial Statement Analysis

Topics include the supply and demand for financial statement information. Emphasis is placed on the impact of accounting choice on financial statements, fundamental ratios, and decisions. ACC 310 or 610 recommended prior to this course. Prerequisites: ACC 511 or equivalent. Completion of MBA 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 610 and MGT 510, 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 618 or equivalent. Not available to MST students without permission of director of graduate programs. Prerequisites: ACC 212, 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. Prerequisites: ACC 511 and MGT 510, or equivalents. 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, and comparative financial reporting and corporate governance systems. Prerequisite: Completion of MBA core. Credits: 3

ACC 618 - Advanced Accounting

This course provides an in-depth study of 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 semester. Prerequisites: ACC 310 or ACC 610. 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. Prerequisites: ACC 321 or 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

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 non-liquidating 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 non-taxable acquisitive transactions including mergers and consolidations, and corporate divisions. Also judicial doctrines, affiliated corporations, and carryover of tax attributes. Prerequisites: 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: ACC 317, ACC 318, ACC 609 or ACC 615. 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 non-qualified 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 634 - Directed Study and Report

Preparation of an extensive tax research and writing assignment under the direction of a full-time faculty member. Offered all semesters and locations to person who has obtained permission of the director. Credits: 1 to 3

ACC 635 - Advanced Tax Subjects

Offers an in-depth study of an advanced tax topic. 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, 624, 627, and 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. Prerequisites: ACC 622 or permission of the graduate business programs director. Credits: 3

ACC 640 - S Corp & 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. Prerequisites: 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. Prerequisites: 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

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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 MSA 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

ANT 111 - Peoples of the World

A course in cultural diversity that examines world cultures through an ethnographic survey using an anthropological perspective. Emphasis on small scale, non-Western societies and village societies within nation states. Fulfills World Perspectives requirement. Offered fall and winter semesters. Credits: 3

ANT 204 - Introduction to Cultural Anthropology

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 non-Western culture. Comparisons are drawn with our own. Fulfills Social and Behavioral Sciences Foundation; fulfills World Perspectives requirement. 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 non-human primates, among other topics. Fulfills Life Sciences Foundation. 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. Offered winter semester of odd-numbered years. 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 Historical Perspective Foundation and World Perspectives requirement. Offered winter semester. 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 Social and Behavioral Sciences Foundation. Offered fall and winter semesters. Credits: 4

ANT 300 - Research Methods in Anthropology

An emphasis on anthropology as a way of knowing demonstrated through an understanding of the relationships between theory, formulating and testing hypotheses, research design, sampling, data collection and ethics. Anthropological research methods are introduced through a series of projects including a research proposal. Offered fall semester. Prerequisites: STA 215; 9 credits in anthropology. 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 and/or summer session. Prerequisites: Permission of instructor. Credits: 1 to 9

ANT 310 - Perspectives in Bioanthropology

The breadth of bioanthropology is investigated using a biocultural perspective. The lectures, discussions, and labs of the course explore evolutionary trends and changes in human variability, disease, growth and development, human skeletal biology, forensics, human paleontology, and primatology. Offered winter semester. Prerequisite: ANT 206. Credits: 4

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 U.S. Diversity requirement. Part of American Mosaic theme. Offered fall and winter semesters. 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 World Perspectives requirement; part of Religion theme. Offered fall and winter semesters. Credits: 3

ANT 316 - Death, Burial, and Culture

This course examines how different cultures approach issues and customs surrounding death. Drawing on evidence from biological and cultural anthropology and archaeology, students learn from the dead by exploring the experience of death and how it illuminates life in different cultures around the world and through time. Offered fall semester. Prerequisites: ANT 204, ANT 206, or ANT 220, or permission of instructor. Part of Death and Dying theme. Fulfills World Perspective requirement. 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 non-Western curing procedures and the cultural and psychodynamic features of illness. Part of Health, Illness, and Healing theme. Offered fall semester. Prerequisites: ANT 204 or ANT 206 or ANT 220. 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. Credits: 3

ANT 330 - Ethnology of Selected World Areas

Offered on demand, with each offering devoted to the study of a particular area. Students may repeat the course provided each repeat is for a different area. Offered on sufficient demand. 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. Part of Earth and Environment theme. Fulfills World Perspective requirement. Offered winter semester. Prerequisites: WRT 150 or satisfactory completion of first-year writing requirement; World Perspective or US 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, even years. Part of the Global Change Theme. Satisfies World Perspectives. Credits: 3

ANT 346 - Kinship and Culture

A survey and practical application of anthropological kinship. The course critically evaluates kinship concepts and case studies in order to understand how group identity links to culture, biology, reproduction, gender, and family. A Cross-cultural perspective is emphasized. Offered winter semester of even-numbered years. Fulfills World Perspectives Foundation. Prerequisites: ANT 204. Credits: 3

ANT 347 - Environments and Cultures of the Great Lakes Region

Pleistocene history, landforms, soils, vegetation and wildlife, and cultural development in the Great Lakes region over the past 20,000 years. Offered on sufficient demand. Prerequisites: Junior or senior status in anthropology, biology, geology, resource management, or sociology. 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. Prerequisites: ANT 215 or ANT 220 or MES 201 or prior approval of the instructor. Credits: 3

ANT 355 - Migration in Americas

A comparative, cross-cultural study of human migration in the Americas, drawing on the discipline of anthropology for methodology and content. Explores patterns of migration and issues of adaptation, assimilation, borders, transnationalism, immigrants, refugees, displacees, identity, and ethnicity. Part of the Continuity and Change in the Americas theme. Offered fall semester of odd-numbered years. Credits: 3

ANT 360 - Ethnology of Mesoamerica

Examines the cultural history and social dynamics that have shaped modern Mesoamerica. Includes discussion of environment, archaeology, diversity of modern Mexican and Guatemalan cultures and current issues of development and human rights. Fulfills World Perspectives requirement. Part of the Continuity and Change in the Americas theme. Offered fall of even-numbered years. 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. Fulfills World Perspectives requirement. Part of the Gender, Society, and Culture Theme. Offered winter semester. Prerequisites: 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 405 - Anthropological Theory

Considers the major historical developments and theoretical trends in anthropology over the past 150 years. The approach is both topical and

historical. Cross-ties with developments in related disciplines are noted. Offered fall and winter semester. Prerequisites: Senior standing as an anthropology major. 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)

Gives students the opportunity to integrate the diverse dimensions of anthropology and other disciplines. By focusing on a single culture area and research question, students will review the major theses, assumptions, and topics of anthropology. Offered fall and winter semester. Prerequisites: Senior standing 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: ANT 300, 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 - Elementary Arabic I

An introduction to the language with an emphasis on understanding, speaking, and reading, complemented by taped materials available in the language laboratory. Not for credit for students with prior college Arabic. Offered fall semester. Credits: 4

ARA 102 - Elementary Arabic II

Continuation of ARA 101. Offered winter semester. Prerequisites: 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

Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Required independent lab work assigned by instructor. Minimum of 50 minutes weekly. Offered fall semester. Prerequisites: C (not C-) or better in ARA 102, or credit. Credits: 4

ARA 202 - Intermediate Arabic II

Continuation of ARA 201. Fulfills World Perspectives category. Offered winter semester. Prerequisites: C (not C-) or better in ARA 201, or credit. 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 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

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winter semester of odd-numbered years. Prerequisites: 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. Prerequisites: ARA 102 or permission of instructor. Credits: 3

ARA 380 - Special Topics in Arabic

Offered on sufficient demand. Credits: 1 to 4

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 & 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, post-processual and contemporary theoretical debate, ethics and professionalism. Prerequisites: ANT 220, junior standing, and one Regional Archaeology course (ANT 320, 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 Arts Foundation. 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. Photography majors by permit. (ART majors and minors must take ART 150). Offered fall and winter semesters. Prerequisites: Photography majors or by permit. 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. Prerequisites: Art major or minor. 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. Prerequisites: Art major or minor. 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 and Art major or minor. Credits: 3

ART 153 - Creative Problem Solving

Introduction to various verbal and visual techniques for creative problem solving, including the use of the computer as a creative tool. 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. Prerequisites: Art major or minor. 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. Prerequisites: ART 155, and Art major or minor. 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. Prerequisites: 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 which print successfully. Offered winter semester. 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 230 - Art for the Classroom Teacher

Materials, methods of motivation, and techniques for teaching art to elementary children, with emphasis on the contemporary philosophy of art education. Not for art majors or minors. Offered fall and winter semesters. Credits: 4

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 non-majors. 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. Prerequisites: 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. Prerequisites: ART 257. Credits: 3

ART 260 - Introduction to Painting

Fundamentals of painting in opaque media with a variety of subjects and styles. Offered fall and winter semesters. Prerequisites: ART 152, ART 157. 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 collograph. Offered fall and winter semesters. Credits: 3

ART 270 - Introduction to Sculpture

Direct modeling, carving, and construction as approaches to sculpture. Experimentation with plaster, clay, wood, and metal. Offered fall and winter semesters. Prerequisites: ART 152, ART 157; waived for non-majors. Credits: 3

ART 275 - Introduction to Ceramics

All basic hand-building techniques, glazing, and concepts relating to ceramics and pottery. Included will be historical background, some clay geology, clay making, kiln loading and unloading. All other general studio practices and safety will also be covered. Offered fall and winter semesters. Prerequisites: ART 152, ART 157; waived for non-art majors. Credits: 3

ART 280 - Special Topics in Art and Design

An overview of the illustration field covering historical and contemporary perspectives, aesthetic sensitivity, and professional practicality. Offered fall and winter semesters. 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. Prerequisites: 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. Prerequisites: 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 web site design including interactivity, navigational systems, motion and typography, integrating both design methodologies and information architecture. Offered winter semester. Prerequisites: 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. Prerequisites: 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. Prerequisites: Sophomore, Junior, or Senior standing. Credits: 3

ART 325 - Nineteenth-Century Art

A survey of art in Europe during the nineteenth century. Offered fall semester of even-numbered years. Prerequisites: ART 222, or junior or senior 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. Prerequisites: ART 222, or Junior or Senior status. Credits: 3

ART 331 - Art in Special Education

Techniques for teaching art to exceptional children with emphasis on the special needs of all learners. For students going into special education and therapeutic recreation. Available for art students only in addition to major and minor requirements. Offered fall and winter semesters. Credits: 4

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 affect 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. Prerequisites: ART 332. Credits: 3

ART 334 - Teaching the Nontraditional Canon

This is a cross-cultural, hands-on, interactive, discussion and production course intended to inform the practice and delivery of a cross-cultural curriculum in a K-12 setting. Offered fall and winter semesters. Prerequisites: ART 332 and ART 333; permission of instructor. Credits: 3

ART 345 - Jewelry Repair

Basic repair techniques and problems associated with the trade. Techniques covered include finishing, cleaning, ring sizing, joint catch and pinstem work, chain and link repair, repairing of mountings and elementary plating. Offered fall semester every other year. Prerequisites: ART 245 or permission of instructor. Credits: 1

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. Prerequisites: 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. Prerequisites: ART 245. Credits: 3

ART 355 - Advanced Drawing I

Advanced exploration of drawing techniques with emphasis upon personal expression. Offered fall and winter semesters. Prerequisites: ART 258. Credits: 3

ART 356 - Advanced Drawing II

Advanced exploration of drawing techniques with emphasis upon personal expression. Offered fall and winter semesters. Prerequisites: ART 355. Credits: 3

ART 361 - Intermediate Painting I

Intermediate projects using a variety of styles, subjects, and techniques. Offered fall and winter semesters. Prerequisites: ART 260. Credits: 3

ART 362 - Intermediate Painting II

Intermediate projects using a variety of styles, subjects, and techniques. Offered fall and winter semesters. Prerequisites: 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. Prerequisites: ART 265. Credits: 3

Course Listing and Descriptions

ART 367 - Intermediate Printmaking II

A continuation of ART 366. Color and scale and combining printmaking media are emphasized. Offered fall and winter semesters. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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 stonewares & terracotta. Colored clays, 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. Prerequisites: 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 fall and winter semesters. Prerequisites: ART 280. Credits: 3

ART 382 - Intermediate Illustration II

Fundamentals of illustration with an emphasis on realistic representation. Offered fall semester. Prerequisites: ART 381. Credits: 3

ART 385 - Figure Painting

Introduction to painting the figure, with an emphasis on perceptual accuracy. Offered winter semester. Prerequisites: ART 260. 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. (may be repeated once for credit). Offered every third semester (Fall/Winter). Prerequisites: Art Majors: Completion of Foundations; Non-majors: Instructor permission. 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. (may be repeated once for credit). Offered every

third semester (Fall/Winter). Prerequisites: Art Majors: Completion of Foundations; Non-majors: Instructor permission. 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. Prerequisites: Art Majors: Completion of Foundations; Non-majors: Instructor permission. 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. Prerequisites: Art Majors: Completion of Foundations; Non-art majors: Instructor permission. 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/Winter) Prerequisites: Art Majors: Completion of Foundations; Non-majors: Instructor permission. 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. Prerequisites: Art Majors: Completion of Foundations; Non-majors: Instructor permission. 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: ART 410 or ART 483. Credits: 3

ART 417 - Practicum in Graphic Design

Students work on assignments under a practicing graphic designer in Grand Valley's production design studio. Students must have design experience and apply for a position in the course. Offered fall and winter semesters. Prerequisites: ART 310. Graded credit/no credit. Credits: 3

ART 418 - Practicum in Television Graphics

Students work on assignments under a practicing designer at WGUV-TV. Work includes graphic design, scenic design, and photography. Students must have design experience and apply for a position in the course. Offered fall and winter semesters. Prerequisites: ART 310. Graded credit/no credit. 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 or Senior 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. Prerequisites: ART 222, or Junior or Senior status. Credits: 3

ART 445 - Business Practices for the Artist

Focus on business practices necessary to operate a small business in art production. It will cover time management, advertising/marketing, purchasing, bookkeeping, tax information, networking, shipping/claims, etc. Offered winter semester of even years. Prerequisites: Art major/junior status. Credits: 2

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. Prerequisites: 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. Prerequisites: 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. Prerequisites: ART 362. Credits: 3

ART 463 - Advanced Painting II

A continuation of ART 362 with advanced and more individual problems. 463 may be repeated for credit. Offered fall and winter semesters. Prerequisites: 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. Prerequisites: 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. 468 may be repeated for credit. Offered fall and winter semesters. Prerequisites: 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 compliment 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. They will analyze and compare formula variations. Offered fall of odd numbered years. Prerequisites: 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 fall semester. Prerequisites: 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. Prerequisites: 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 every 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. Prerequisites: permission of department. Graded credit/no credit. Credits: 1 to 6

Course Listing and Descriptions

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. Prerequisites: 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. Prerequisites: Prior arrangement with a specific faculty. Credits: 1 to 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 healthcare settings including clinical, high school and collegiate settings followed by in-class discussions related to the observations and important entry-level athletic training topics. Prerequisites: PED 217 (or 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: PED 217, ATH 210. Credits: 2

ATH 225 - AT Emergency Care

Lecture and laboratory experiences for students relating to emergency situations commonly encountered in athletic healthcare settings. Students will qualify to sit for the Medical First Responder Licensure exam upon satisfactory completion of this course. (0-2-2) Prerequisites: Current American Red Cross or National Safety Council First Aid and CPR certification. 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) Prerequisites: ATH 220 and ATH 314. 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) Prerequisites: PED 217 and MOV 300. 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) Prerequisites: PED 217 and MOV 300. 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. Co-requisite: 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 pharmacology and psychosocial intervention and referral. Moral and ethical concerns related to these issues are explored. (0-3-0) Prerequisites: PSY 101 and ATH 230. Credits: 3

ATH 490 - Internship in Athletic Training

On-site work experience at an athletic healthcare 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 healthcare settings including high school, collegiate, clinical and industrial settings. Prerequisites: ATH 316, ATH 405, and successful achievement of junior-level writing requirement. 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. Offered fall, winter, and summer semesters. 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. Fulfills Life Sciences Foundation. Part of Earth and Environment theme. (3-0-0) Offered fall, winter, and summer semesters. 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 Life Sciences Foundation. (3-0-3) Offered fall semester. Credits: 4

BIO 109 - Plants in the World

A non-majors 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 Natural Sciences and Life Sciences Foundation. (3-0-2) Offered fall and winter semesters. Credits: 4

BIO 120 - General Biology I

Introduction to cell structure and physiology, growth and development, and genetics (3-0-3). Offered fall, winter, and summer semesters. Prerequisites: High school chemistry, CHM 109, or CHM 115 strongly recommended (CHM 109 or CHM 115 may be taken concurrently). Fulfills Life Sciences Foundation. Credits: 4

BIO 121 - General Biology II

Introduction to the diversity of living creatures, anatomy and physiology of organisms, animal behavior, patterns of reproduction, ecology, and major pathways of Darwinian mechanisms of evolution (3-0-3). Offered fall and winter and summer semesters. Prerequisites: BIO 120. 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 pre-service teachers emphasizing human traits. Includes Mendelian and non-Mendelian 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 semester. Prerequisites: BIO 120, BIO 121, (MTH 110 or MTH 122 or MTH 201). CHM 109 or CHM 201 recommended. Credits: 2

BIO 215 - General Ecology

Population, communities, and ecosystems, including primary productivity and energy flow, materials cycling, succession, population dynamics, and systems modeling. (3-0-3) Offered fall and summer semesters. Prerequisites: BIO 120 and 12 college credits; (BIO 121 recommended). Credits: 4

BIO 222 - Natural History of Vertebrates

Taxonomy, ecology, life histories, behavior, and distribution of vertebrates, with special emphasis on those of the region. Two Saturday field trips. (2-0-3) Offered fall semester. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: BIO 121. Credits: 4

BIO 303 - Plants and Fungi

Evolution, reproduction, and structure of algae, fungi, bryophytes, lower vascular plants, and seed plants. (3-0-3) Offered winter semester. Prerequisites: BIO 121. Credits: 4

BIO 309 - Plants and Human Health

Examination of the plants and fungi that are sources of medicines and herbal remedies or that are used in the healing practices of various societies. Plants that are a regular part of people's diets and that have been found to have specific health benefits also will be discussed. Does not count toward a Biology major or minor. Part of Health, Illness, and Healing theme. (3-0-0) Offered fall and winter semester. Prerequisites: Junior standing and completion of the Life Sciences General Education category. Credits: 3

BIO 310 - Biological Diversity of the Americas

Examines the relationships between long-term gradual change, short-term chaotic change, and the biodiversity of the Americas. The value of biodiversity will also be discussed. Does not count toward a Biology major or minor. Part of the Continuity and Change in the Americas theme. (3-0-0) Offered winter semester. Prerequisites: Junior standing and completion of the Life Science General Education Section. Credits: 3

BIO 311 - Biological Basis of Society

Examines the relationships and conflicts between the biological basis of human behaviors and the ideas of socially defined freedoms and controls. Does not count toward a Biology major or minor. Part of Freedom and Social Control theme. (3-0-0) Offered winter semester. Prerequisites: Junior standing and completion of the Life Science General Education Requirement. Credits: 3

BIO 319 - Global Agricultural Sustainability

Study of the biological and environmental principles at the foundation of agricultural sustainability; how various traditional and modern agricultural practices follow those principles and how social, cultural, and economic factors ultimately control agricultural practices. Cohesiveness with other courses in this theme will be maintained by highlighting a specific geographical region. (3-0-0) Offered fall and winter semester. Prerequisites: Completion of the General Education Life Science Requirement. Credits: 3

BIO 323 - Aquatic and Wetlands 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. Prerequisites: 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 Gender, Society and Culture Theme. (3-0-0) Offered fall, winter, and summer semesters. 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 Ethics theme. (3-0-0) Offered fall, winter, and summer semesters. Prerequisites: Junior standing. Credits: 3

BIO 329 - Evolution of Social Behavior

Study of the social behavior of animals from a Darwinian perspective, emphasizing processes through which animal societies are structured and maintained. Vertebrate and invertebrate species will be studied to understand how evolution, social behavior, and social roles are linked. Does not count toward biology or biopsychology majors or biology minor. Part of Marginality and Difference theme. (3-0-0) Offered fall and

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winter semester. Prerequisites: Junior standing. One course in biology or psychology recommended. Credits: 3

BIO 333 - Systematic Botany

Principles and methods of taxonomy of vascular plants. (2-0-3) Offered fall semester. Prerequisites: BIO 121. Credits: 3

BIO 338 - Environmental Ethics

Examination of the values, ideas, and technologies that humans have used, are using, and may use in the future with respect to environmental issues. Biology majors may not use both BIO 328 and BIO 338 as elective credit within the major. Part of Ethics theme. (3-0-0) Offered fall, winter, and summer semesters. Prerequisites: Junior standing. Credits: 3

BIO 342 - Ornithology

Identification, classification, anatomy, physiology, behavior, and life histories of birds. (2-0-3) Offered winter and occasional summer semesters. Prerequisites: BIO 121. Credits: 3

BIO 349 - The Darwinian Revolution

An introduction to the Darwinian revolution in biology and its impact on the Western world-view. Examines the power of Darwin's theory of evolution by natural selection to explain the origin, history, and diversity of life on Earth including human affairs. Does not count toward a Biology major or minor. Part of the Changing Ideas: Changing Worlds theme. (3-0-0) Offered fall semester. Prerequisites: 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 summer semesters. Prerequisites: BIO 120 or BIO 103, 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. Prerequisites: 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. Prerequisites: BIO 121; BIO 120 is recommended. Credits: 4

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. Prerequisites: BIO 120. Concurrent enrollment in BIO 376 is required. Credits: 3

BIO 376 - Genetics Laboratory

Laboratory exercises in classical and modern genetics. Required of all students taking BIO 375. (0-0-2) Offered fall and winter semesters. Prerequisites: 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 permission of instructor. Credits: 1 to 4

BIO 390 - Seminar

Student presentation of selected topics in biology. Open to junior and senior biology majors and minors. May be repeated once for credit. Credits: 1

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. Prerequisites: 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 405 - Cell and Molecular Biology

Investigation of the structure and phenomena of cells at the macromolecular and cellular levels. (4-0-0) Offered fall, winter, and summer semesters. Prerequisites: (BIO 375 or BIO 355) and BIO 376 and (CHM 232 or CHM 242 or CHM 247 may be taken concurrently). Credits: 4

BIO 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. Credits: 2

BIO 408 - Wildlife Management

Wildlife population management; life histories, census techniques, and habitat evaluation (3-0-3). Offered fall semester. Prerequisite: BIO 215. Credits: 4

BIO 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

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

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 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

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. Prerequisites: 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 above. The field-based experience is combined with readings, lectures, papers, and discussions. A maximum of six credits from BIO 417 & 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 above. The field based experience is combined with readings, lectures, papers, and discussions. A maximum of six credits from BIO 417 & 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. Prerequisites: BIO 376. Credits: 3

BIO 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. Cross listed with CMB 426. 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 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. Prerequisites: BIO 215 or permission of instructor. Credits: 4

BIO 442 - Fish Ecology

Advanced study of fish ecology, including feeding, habitat selection, mating systems, reproduction, life history strategies, biotic interactions, behavior, survival and adaptations in marine and freshwater habitats. Emphasizes Teleost (bony) fishes in their native ranges; examples include species from around the world. (3-0-0) Offered winter semester. Prerequisites: BIO 120, BIO 121, and BIO 215, or permission of instructor; BIO 222, BIO 352, or BIO 362 recommended. Credits: 3

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; and potential for anthropogenic changes in ecosystem processes. (3-0-3) Offered fall and occasional summer semesters. Prerequisites: 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. Prerequisites: 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 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 - Evolutionary Biology (capstone)

Principles and mechanisms of evolution of living organisms. Builds on the knowledge base of the biology core of general biology, ecology, genetics, and molecular biology. (3-0-0) Offered fall, winter, and summer semesters. Prerequisites: Senior status and BIO 120, BIO 121, BIO 215, (BIO 375 or BIO 355), BIO 376, and (CHM 231 or CHM 241 or CHM 245). 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.

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Offered fall, winter, and summer semesters. Prerequisites: A minimum grade point average of 3.0 in biology and permission of the department. Credits: 1 to 4

BIO 525 - Teaching Reproductive Health

The biology of human sexuality from physiological, anatomical, and behavioral perspectives. Emphasizes curriculum development and teaching strategies for K-12 instruction. Offered summer semester every third year. Prerequisites: bachelor's degree and teacher certification. Credits: 3

BIO 535 - Aquatic Microbial Ecology

Inconspicuous microscopic organisms control many ecosystem level processes. This course will explore the diversity, abundance, distribution and activities of planktonic microorganisms (e.g., virus, bacteria, protozoa, phytoplankton and zooplankton) in freshwater and marine ecosystems, by examining the role these ubiquitous microbes play in food web processes and biogeochemical cycles. Offered summer semester every third year. Prerequisites: Graduate standing or permission of instructor. Credits: 3

BIO 557 - Microbiology for Teachers

Microorganisms studied in their roles in the environment, medicine and industry, emphasizing methods and techniques useful for secondary teachers. Lecture and laboratory. Offered summer semester every third year. Prerequisites: bachelor's degree, including a year each of biology and chemistry, and teacher certification. Credits: 4

BIO 565 - Modern Genetics

Lectures and laboratory exercises stressing current knowledge in the field of genetics, including sources of normal and abnormal human phenotypes, gene function and regulation, genetic engineering and its applications, immunogenetics, developmental and behavioral genetics. Offered summer semester every third year. Prerequisites: bachelor's degree and familiarity with Mendelian genetics. 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. Prerequisites: Graduate standing or permission of instructor. Credits: 3

BIO 572 - Field Zoology

A survey of animals of the Great Lakes region: their classification, diversity, general features, specialization, habitats, distribution, growth, and reproduction. Collection, identification and preparation of specimens will be emphasized. Offered summer semester every third year. Prerequisites: One year of college-level biology; bachelor's degree. Credits: 3

BIO 573 - Plants of the Great Lakes Area

Identification of flowering plants and ferns native to the Great Lakes area; includes ecology of major plant communities. Offered summer semester every third year. Prerequisites: One year of college-level biology; bachelor's degree. Credits: 3

BIO 575 - Ecology of the Great Lakes

Geological history and processes, physical environment, chemical properties, animal and plant communities, and human impact on the Great Lakes and adjacent land areas. Lake Michigan is studied aboard the research vessel D. J. Angus. Offered summer semester every third year. Prerequisites: One year of college-level biology; bachelor's degree. Credits: 4

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 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. Prerequisites: 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. Offered fall in odd years. Prerequisites: 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 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 each 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 each semester. Prerequisites: BIO 610 and successful completion of qualifying exams. 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 each semester. Prerequisites: BIO 610 and successful completion of qualifying exams. Credits: 3 to 9

BIO 696 - 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

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 towards a M.S. in Biology degree or up to three credits toward a M.Ed. degree. 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 non-science 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 Life Sciences

Foundation. Offered fall, winter and occasionally summer semesters. Credits: 3

BMS 102 - Introduction to Clinical Laboratory Sciences

An introduction to principles and practices of cytotechnology, histotechnology, and medical technology and the role of professionals in these fields as members of the health care team. Restricted to freshmen, sophomores, or transfer students, or by permit. Offered winter semester. Credits: 1

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 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 Life Sciences Foundation. (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 fall, winter, and summer semesters. Prerequisites: BIO 120 or BMS 202. 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 fall, winter, and summer semesters. Prerequisites: BIO 120 and (CHM 230 or CHM 232 or CHM 241). Credits: 3

BMS 213 - Laboratory in Microbiology

Laboratory investigation into the morphology, isolation techniques, growth, and identification of bacteria. (0-0-4) Offered fall, winter, and summer semesters. Prerequisites: BMS 212 or concurrent enrollment. 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 - Public Health Concepts

An introduction to the strategies and tactics, both past and present, for the control and eradication of infectious and chronic diseases of humans. Part of the Health, Illness, and Healing theme. Offered winter semester. Credits: 3

BMS 250 - Anatomy & 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. Credits: 4

BMS 251 - Anatomy & 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 252 - Anatomy & Physiology I for Second Degree Nursing

This course is the lecture only version of BMS 250 Anatomy and Physiology I. Applicable to second degree nursing students only. Offered every semester. Prerequisites: Permission from Kirkhof College of Nursing or Biomedical Sciences. Credits: 3

BMS 253 - Anatomy & Physiology II for Second Degree Nursing

This course is the lecture only version of BMS 251 Anatomy and Physiology II. Applicable to second degree nursing students only. Offered every semester. Prerequisites: Permission from Kirkhof College of Nursing or Biomedical Sciences. Credits: 3

BMS 280 - 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 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 fall, winter, and summer semesters. 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 fall, winter, and summer semesters. Prerequisites: BMS 290 or concurrent registration. 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. Prerequisite: BMS 290 and (CHM 230 or CHM 232 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 summer semester. Prerequisites: BMS 290 or MOV 304, and CHM 232 or CHM 461. Credits: 3

BMS 307 - Advanced Clinical Nutrition

This course will focus and emphasize the role of nutrition in prevention and therapy. Students will be able to understand the physiological and metabolic abnormalities in acute and chronic diseases at a sophisticated level. Offered winter semester. Prerequisites: BMS 306. 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

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every semester. Prerequisites: B- or better in BMS 208, or BMS 251. 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 fall, winter, and occasionally summer semesters. Prerequisite: BMS 212 and (BMS 290 or BMS 251 or BMS 253.) 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 fall, winter, and summer semesters. 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. Prerequisites: BMS 312 or concurrent registration. Credits: 1

BMS 322 - 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. Prerequisites: BMS 212 or BIO 357. Credits: 3

BMS 323 - 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. Prerequisites: BMS 322 or concurrent registration. 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). Part of Death and Dying Theme. Not counted as an elective for HS and BIOS majors. Offered fall semester (and 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 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. Prerequisite: 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 305 or BMS 306. Credits: 3

BMS 408 - Advanced Human Physiology

Emphasis on cellular and molecular mechanisms involved in the functioning of the body systems, with emphasis on neuromuscular, cardiovascular, renal, and endocrine systems. Study includes the current research, literature, and current experimental knowledge. Prerequisites: BMS 290 and permission of instructor. 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 411 - Immunology Laboratory

An introduction to serological reactions, including: serum electrophoretic techniques, single and double diffusion in gels, hemagglutination reactions and complement fixation. (0-0-3) Offered winter semester. Prerequisites: BMS 410 or BMS 499 or CHM 462. Credits: 1

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. Prerequisites: 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 Summer semesters. Prerequisites: BMS 305 or BMS 306. Credits: 3

BMS 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. Offered fall semester. Prerequisites: BMS 208 and CHM 232. Credits: 2

BMS 417 - Clinical Hematology Laboratory

An introduction to a wide variety of clinical laboratory procedures with emphasis on accurate performance, theoretical basis of the tests and correlation of the data to disease. (0-0-3) Offered fall semester. Prerequisites: BMS 416 or concurrent registration. Credits: 1

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 309. Credits: 1

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 session; winter on demand. Prerequisites: 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 461 - 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. Prerequisites: Admission to the Physical Therapy or Physician's Assistant Studies program. 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 3 credit hours of BMS 492 may count toward the major. Graded Credit/NoCredit. Offered every semester. Prerequisites: BMS 290, BMS 291; CHM 232 or CHM 461. Credits: 1-4

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 fall, winter and occasionally summer semesters. Prerequisites: BMS 208, BMS 212, BMS 290 or BMS 291, and senior standing Offered for SWS credit. 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 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: 2

BMS 528 - Neuropathology

An in-depth course in neuroanatomy, neurophysiology, and neuropathology as they relate to neurological as well as psychological disease states. Special emphasis will be on current models regarding a biological basis for psychiatric and neurological disorders. Offered winter semester. Prerequisites: BMS 508 and graduate standing. 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. Prerequisites: graduate standing or permission of instructor. Credits: 3

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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. Prerequisites: 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, BMS 309 or equivalent anatomy courses. 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 upon 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. 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. 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. Credits: 3 or 6

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. Part of the World Perspectives group and the Global Change theme. Offered spring/summer. Credits: 3

BUS 350 - Sustainable Business Management

This course examines the ways companies can be more sustainable in each of their business functions and value chain activities. By redesigning value chain activities to reduce energy use, carbon emissions, and other waste, companies can implement green technologies and systems to improve their earnings, their communities, and their environment. Offered Fall semester. Prerequisites: ECO 211, FIN 320, MGT 331. 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. Prerequisites: 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 & 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. Prerequisites: MGT 510. Completion of all MBA 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 MBA background equivalents. Credits: 3

BUS 634 - Sustainability Principles & 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 the winter semester. 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 MBA 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 MBA 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 MBA background equivalents. Credits: 3

BUS 677 - Business Ethical Problems & 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 MBA 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. Prerequisites: 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. Prerequisites: Completion of all other core courses and at least four directed electives, or concurrently if taken in final semester. Credits: 3

BUS 698 - Washington Program

Special intensive study in Washington, D.C., for one week during the summer. Principal 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. 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 Web site 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 Web sites, corporate documents and databases. Includes citation formats and presentation methods. Offered fall and winter semesters. 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: Completion of composition requirement (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. Offered every semester. Prerequisites: Completion of composition requirement (WRT 150) with grade of C (not C-) or better. 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. Part of Sport and Life theme. Offered fall and winter semesters. Prerequisites: 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 311 - Direct Advertising

Study of direct mail as used to promote magazine circulation, merchandise, services, resorts and travel, conventions and meetings, fundraising, and other purposes. Includes emphasis on determining appropriate creative strategy, format, and development of budgets. Offered every fall. Prerequisites: CAP 210 or permission of instructor. Credits: 3

CAP 315 - Advertising Copywriting

Practice in the copywriting process, from conception of ideas to finished copy for product and corporate advertising objectives. Part of Creativity theme. Offered fall and winter semesters. Credits: 3

Course Listing and Descriptions

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. Prerequisites: 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. Prerequisites: CJR 256. Credits: 3

CAP 380 - Special Topics in Advertising & 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. Prerequisites: 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 400 - Advertising/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 and senior standing. Credits: 3

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. Prerequisites: CAP 321. 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. Prerequisites: 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

CBR 220 - Beginning TV Studio Production

Introduction to basic skills and techniques of television studio production: producing, directing, lighting, camera, audio mixing, floor direction, etc. Class members serve as crew for various projects. Offered fall and winter semester. Credits: 3

CBR 240 - Survey of Electronic Media

Examines the development and current status of radio and television broadcasting. Topics covered include comparative broadcast systems, physical aspects, broadcast history, current trends in programming, and effects of broadcasting on our society. Offered fall semester. Credits: 3

CBR 281 - 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 majors. Credits: 3

CBR 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. Prerequisites: CBR 220. Credits: 3

CBR 340 - Life on Television

A critical examination of the world as portrayed on television, with particular emphasis on gender and ethnic stereotyping; trends in news and so-called "reality" programming; effects on audiences; economic, political, and social influences. Offered fall semester. Prerequisites: Preference to Broadcasting majors. Credits: 3

CBR 350 - Broadcast Operations

Focuses on the decision-making process necessary for the short- and long-term operation of broadcast facilities. Includes discussion of practical solutions to regulatory and personnel problems as well as small-group dynamics. Offered fall semester. Prerequisites: CBR 240. Credits: 3

CBR 368 - Broadcast News I

News writing for radio and television. Projects include writing and producing newscasts and interviews. Offered winter semester. Prerequisites: CJR 256. Credits: 3

CBR 380 - Special Topics in Broadcasting

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

CBR 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 spring/summer semester. Prerequisites: CBR 281 or permission of instructor. Credits: 3

CBR 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

CBR 411 - Broadcast Seminar

Senior course for broadcasting majors, intended to serve as a bridge between the student's academic and professional careers. Helps students synthesize their communication education into a view of the dominant themes, issues, and trends of the field. Offered winter semester. Prerequisites: CBR 240 and senior standing. Credits: 3

CBR 468 - 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 semester. Prerequisites: CBR 368 and CFV 125. Credits: 3

CBR 483 - TV News Production

Students will serve as studio crew — director, camera operators, audio control, teleprompter, and other production positions as required — for weekly campus newscast. May be repeated once for credit. Offered winter semester. Prerequisites: CBR 220. Credits: 1

CBR 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. Prerequisites: CBR 468. 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. Prerequisites: 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

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 pre-requisite course for film and video production. Offered fall and winter semesters. Prerequisite: Restricted to Film/Video majors. Credits: 3

CFV 124 - Image and Sound

A beginning course in problem-solving skills, image-sound, and sequencing relationships applied to basic expression through visual and audio media. Students explore the principles that guide the development of creative solutions and learn basic terminology used in production and critique. A pre-admission course for film and video production. Offered fall and winter semesters. Prerequisite: Restricted to Film/Video 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 pre-admission course for film and video production. Offered fall and winter semesters. Prerequisite: Restricted to Film/Video, Broadcasting, Communication Studies, Health Communications, and Journalism majors. Credits: 4

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 Arts Foundation. Offered every semester. Credits: 3

CFV 226 - Media Production II

The second course in the media production sequence, emphasizing the techniques and aesthetics of editing. Offered fall and winter semesters. Prerequisites: Admission to major. Credits: 3

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. Prerequisites: Restricted to Film/Video or Broadcasting majors. Credits: 3

CFV 321 - 16mm Film Production I

16mm shooting, editing, and budgeting, using class members as production unit. Includes attention to the history and aesthetics of this format. Offered fall and winter semesters. Prerequisites: Admission to major. Credits: 3

CFV 322 - Documentary Production I

Explores theory and practice of documentary production through a series of short projects. Includes viewings and readings. Offered every year. Prerequisites: Admission to major and 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 winter semester of even-numbered years. Prerequisites: 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. Prerequisites: 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. Prerequisites: Admission to major. Credits: 3

CFV 326 - Computer Image Making

Explores theory and practice of imaging, image manipulation, and multimedia production. Emphasis will be placed on how the computer as a tool affects the communications environment. Offered fall semester. Prerequisites: Admission to major. 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 semester. Prerequisites: 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: Junior standing. 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 winter 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 semester. Prerequisites: Admission to major and CFV 226. Credits: 3

Course Listing and Descriptions

CFV 370 - Film and Television Interpretation

A series of courses, each of which considers the political, dramatic, and aesthetic qualities of a specific group of films or television programs. Offered fall and winter semesters. May be repeated for credit when content varies. Prerequisite: Restricted to Film/Video or Communication Studies majors. 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 of even-numbered years. Prerequisites: Admission to major or permission of instructor. Credits: 3

CFV 380 - Special Topics in Film & 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. Prerequisites: Admission to major. Credits: 3

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. Prerequisites: Admission to major. Credits: 1 to 6

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 424 - 16mm Film Production II

Working in production teams, students will shoot a short synchronous sound motion picture from a pre-existing script. Offered winter semester. Prerequisites: Admission to major and CFV 321. Credits: 3

CFV 425 - Animation II

Continued work in animation production for character and graphic animation. Introduction to 3-D 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 - Cinematic Multimedia

An introduction to multimedia production. Students will design, script, build, and user-test a variety of interactive learning modules that run on the *Macintosh* computer. The course will examine the increasing use of computers in motion picture and video production, including consideration of how cinematic techniques can be applied to interface design. Offered winter semester. Prerequisites: Admission to major and CFV 326. 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 semester. Prerequisites: Admission to major and CFV 424. Credits: 3 or 6

CFV 429 - Post Production Practicum

The process of audio, film, and video post-production, emphasizing the draft/revision process. The medium is film; however, editing will

proceed in a nonlinear digital environment. Offered summer semester.

Prerequisites: CFV 261 and either CFV 330 or CBR 281. Credits: 3

CFV 470 - Nonfiction Film/Video Practicum

This is a client-oriented course. Students will produce a professional video from a variety of non-fiction contexts. 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. Prerequisites: Admission to the major. Credits: 1 to 6

CFV 498 - Senior Thesis/Project

The senior thesis/project demonstrates both depth and sophistication in the major. Offered every fall and winter semester, but not necessarily in the summer. Prerequisites: 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. Prerequisites: Permission of instructor. Credits: 1 to 5

CHI 101 - Elementary Chinese I

An introduction to the language with emphasis on listening, speaking, reading, and writing. Offered fall semester. Credits: 4

CHI 102 - Elementary Chinese II

Continuation of CHI 101. Offered winter semester. Prerequisites: C (not C-) or better in CHI 101. 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 201 - Intermediate Chinese I

Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Offered fall semester. Prerequisites: C (not C-) or better in CHI 102. Credits: 4

CHI 202 - Intermediate Chinese II

Continuation of CHI 201. Fulfills World Perspectives. Offered winter semester. Prerequisites: C (not C-) or better in CHI 201. 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 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 (twelfth 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 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, non-fiction 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 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 Physical Sciences Foundation (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 Physical Sciences Foundation. 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 Physical Sciences Foundations. Credits: 3

CHM 115 - Principles of Chemistry I

First semester in the two-semester general chemistry sequence for the sciences. Begins with concepts of atomic structure and develops the principles of modern chemistry. Emphasis on connections between

atomic/molecular structure and observed behavior. Students continuing with CHM 116 are advised to take MTH 122 or 125 concurrently with CHM 115. (4-1-3) Offered every semester. Prerequisites: High School Chemistry, MTH 110 or MTH 122 or MTH 125 or MTH 201. Fulfills Physical Sciences Foundation. Credits: 5

CHM 116 - Principles of Chemistry II

The second semester in the two-semester general chemistry sequence for science majors. Builds on the theoretical foundation of CHM 115 to develop the concepts of equilibria, solubility, acids and bases, kinetics, and thermodynamics. (4-1-3) Offered every semester. Prerequisites: CHM 115 and (MTH 122 or MTH 125 or MTH 201). Credits: 5

CHM 180 - Special Topics in Chemistry

Special topics for the first year in college chemistry. Offered upon sufficient demand. Prerequisites: Permission of CHM 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 Physical Sciences Foundation. (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 fall and winter semesters. Prerequisites: CHM 116 or one full year of General Chemistry. Credits: 4

CHM 222 - Quantitative Analysis

An intensive coverage of statistics and equilibria in chemistry analyses and electrochemical properties. The laboratory experience focuses on gravimetric and volumetric wet-chemical methods of analysis along with potentiometric measurements. (2-1-4) Offered fall and winter semesters. Prerequisites: CHM 116. Corequisite: CHM 241 or CHM 245. Credits: 3

CHM 225 - Instrumental Analysis I

An introduction to the theory and application of common analytical instrumentation. Emphasis will be given to spectroscopic and separation instrumental techniques. The laboratory experience focuses on practical utilization of analytical techniques. (2-1-3) Offered fall and winter semesters. Prerequisites: CHM 222. Credits: 3

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. Offered fall and winter semesters. Prerequisites: 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. Prerequisites: CHM 109 or CHM 116. Credits: 4

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. Prerequisites: CHM 231. Credits: 4

Course Listing and Descriptions

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. (3-1-3) Offered fall and winter semesters. Prerequisites: CHM 116. Credits: 4

CHM 242 - Organic Chemistry For Life Sciences II

A continuation of 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. (3-1-3) Offered fall and winter semesters. Prerequisites: 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. (3-1-0) Offered fall semester. Prerequisites: CHM 116. Co-requisite: CHM 246. Credits: 3

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. Prerequisites: CHM 116. Co-requisites: 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. (3-1-0) Offered winter semester. Prerequisites: CHM 245 and CHM 246. Co-requisites: 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. Co-requisites: CHM 247. Credits: 1

CHM 249 - Organic Mechanisms and Spectroscopy

A bridge course for students who have taken CHM 241/242 but want to learn the mechanistic and spectroscopic topics covered in CHM 245/246/247/248. Topics include an introduction to reaction mechanisms, mechanistic problem solving in organic chemistry, and an overview of spectroscopic analysis, including hands-on experiences using spectroscopic instrumentation. (1-0-0) First offered fall 2005. Prerequisites: CHM 242. Credits: 1

CHM 280 - Special Topics in Chemistry

Special topics for the second year in college chemistry. Offered upon sufficient demand. Prerequisites: Permission of CHM department. Credits: 1 to 3

CHM 311 - Green Chemistry and Industrial Processes

Green Chemistry is the design of chemicals and processes while eliminating the use and generation of hazardous substances. Focuses on green chemistry principles and their industrial applications: global perspectives on green chemistry performed in industrial settings with no negative environmental consequences and increased benefits to humans

and the earth. Offered fall semester. Prerequisites: CHM 242 or CHM 247. Credits: 3

CHM 321 - Environmental Chemistry

A study of the chemistry of our environment and the chemistry underlying our environmental problems. The sources, transport, reactions, and fates of chemical species in the water, air, and soil will be discussed, and the health effects associated with these pollutants on humans, animals, and the environment will be addressed. (3-0-0) Offered winter semester. Prerequisites: CHM 231 or CHM 242 or CHM 247 or CHM 248. Credits: 3

CHM 322 - Environmental Chemical Analysis

Provides the basic concepts of pollution and hands-on experience with the techniques for instrumental analysis of environmental samples. Sample acquisition, preparation, and analysis will be discussed and practiced. Understanding quality control and quality assurance procedures will also be covered. Capstone for environmental emphasis. (2-0-3). Offered fall semester. Prerequisites: CHM 221 or CHM 222, and CHM 231, CHM 242, CHM 247 or CHM 248. Credits: 3

CHM 344 - Qualitative Organic Analysis

Identification of organic compounds using chemical and instrumental methods. (1-1-4). Offered winter semesters. Prerequisites: CHM 247 or CHM 248 or CHM 249. Credits: 3

CHM 351 - Introduction to Physical Chemistry

Physical chemical concepts for students of biology, health sciences, geology, chemistry (technical, education, biochemistry, and environmental emphases), and related fields. Credit cannot be given for 351 as well as 356 and 358. Does not satisfy the requirements of the professional emphasis in chemistry. (3-0-0). Offered fall semester. Prerequisites: CHM 116, MTH 201, and PHY 220 (may be taken concurrently). Credits: 3

CHM 352 - Applied Physical Chemistry

Laboratory experiments in physical chemistry for students with credit in CHM 351 (Introduction to Physical Chemistry). Topics will include thermodynamics, equilibrium, spectroscopy, and kinetics. (0-0-3) Offered winter semester. Prerequisites: CHM 116, CHM 351 (may be taken concurrently), MTH 201, and PHY 220 (may be taken concurrently). Credits: 1

CHM 353 - Physical/Computational Chemistry Lab I

Laboratory experiments in physical chemistry and computational chemistry. Topics include quantum mechanics, spectroscopy, and chemical kinetics. (0-0-4) Offered fall semester. Prerequisites: CHM 222 and CHM 356 (may be taken concurrently). Credits: 2

CHM 355 - Physical Chemistry Laboratory II

Laboratory experiments in physical chemistry. Topics include thermodynamics and chemical kinetics. (0-0-2) Offered winter semester. Prerequisites: CHM 222, CHM 353, and CHM 358 (may be taken concurrently). Students will meet for labs every other week for four-hour laboratory sessions. 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 372 - Inorganic Chemistry Lab Techniques

An introduction to the techniques specific to synthesizing and characterizing inorganic compounds; applying knowledge of basic chemical kinetics and thermodynamics to experimental design and troubleshooting in inorganic synthesis; acquiring greater depth of knowledge in the descriptive chemistry of inorganic compounds. (0-0-3) Offered fall semester. Prerequisites: CHM 222; and CHM 247 or CHM 248 or CHM 249. Credits: 1

CHM 380 - Special Topics in Chemistry

Special topics for the third year in college chemistry. Offered upon sufficient demand. Prerequisites: Permission of CHM department. Credits: 1 to 3

CHM 391 - Chemistry Seminar I

Invited speaker and student presentation of topics from current chemical literature. Participation in two semesters of seminar is required for one credit. Open only to junior chemistry majors and minors. Required for majors in the junior year. (0-1-0) Credited after second semester. Offered fall and winter semesters. 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. Capstone for the education emphasis. Offered winter semester. Prerequisites: Chemistry major or minor, teacher certification candidate, and 18 credits in chemistry. Credits: 3

CHM 425 - Instrumental Analysis II

This course focuses on the theory and application of advanced analytical instrumentation. Emphasis will be given to sample preparation methodology, atomic spectroscopy, infrared spectroscopy, mass spectroscopy and advanced topics in separation methodologies. The laboratory experience focuses on practical utilization of analytical techniques. Capstone for the technical emphasis. (2-0-2) Offered fall semester. Prerequisites: CHM 225. Credits: 3

CHM 441 - Advanced Organic Chemistry

An advanced treatment of organic structure, reactions, and mechanisms and physical organic chemistry. (3-0-0) Offered winter semester of odd-numbered years. Prerequisites: CHM 247 or CHM 248 or CHM 249, and CHM 351 or CHM 356 (CHM 351 or CHM 356 may be taken concurrently). Credits: 3

CHM 442 - Polymer Chemistry

Covers the physical and chemical properties of polymers, the preparations and reactions of polymers, and the industrial uses of polymers. (3-0-0) Offered winter semester of even-numbered years. Prerequisites: CHM 242, CHM 247 or CHM 248, and CHM 351 or CHM 356 (CHM 351 or CHM 356 may be taken concurrently). Credits: 3

CHM 452 - Advanced Synthetic Techniques

An advanced laboratory course designed to incorporate modern synthetic techniques of both organic and inorganic chemistry. Experiments will focus on demonstrating the overlap of these two synthetic fields. (0-1-5) Offered winter semester of odd-numbered years. Prerequisites: CHM 247, CHM 248 or 249; CHM 344 recommended. Credits: 2

CHM 455 - Physical/Computational Chemistry Lab II

Laboratory experiments in physical chemistry and computational chemistry. Topics include thermodynamics, molecular dynamics, statistical mechanics, and chemical kinetics. (0-0-4) Offered winter

semester. Prerequisites: CHM 222, CHM 353, and CHM 358 (may be taken concurrently). Credits: 2

CHM 461 - Biochemistry I

Structure and function of biological compounds, bioenergetics, intermediary metabolism, and protein synthesis. (4-0-0) Offered fall and winter semester. Prerequisites: 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. (1-0-6) Offered fall and winter semesters. Prerequisites: CHM 461 or permission of instructor. Credits: 3

CHM 463 - Biochemistry II

A continuation of CHM 461. An in-depth coverage of the biochemistry of membranes, chemistry of DNA, photosynthesis, enzyme kinetics and mechanisms, and coenzymes. Capstone for biochemistry and biotechnology emphasis. (3-0-0) Offered winter semester. Prerequisites: CHM 461 and BIO 120 or permission of instructor. Credits: 3

CHM 471 - Advanced Inorganic Chemistry

Structure and bonding as related to chemical and physical properties of inorganic compounds. Capstone for the professional emphasis. (3-0-0) Offered fall semester. Prerequisites: CHM 351 or CHM 356 (CHM 351 or CHM 356 may be taken concurrently). Credits: 3

CHM 473 - Organometallic Chemistry

Focuses on the unique chemistry that results when organic molecules are covalently bonded to metals. Emphasis on the organometallic chemistry of the transition metals. Topics include bonding, preparation and reaction of the major classes of organometallic molecules, reaction mechanisms, use of synthons, and catalysis. Eight hours individually scheduled lab project. (3-0-0) Offered winter semester of even-numbered years. Prerequisite: CHM 247, CHM 248 or CHM 249. Credits: 3

CHM 480 - Special Topics in Chemistry

Special topics for the fourth year in college chemistry. Offered upon sufficient demand. Prerequisites: Permission of CHM 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. Participation in two semesters of seminar is required for one credit. Open only to chemistry majors and required of them in the senior year. (0-1-0) Credited after second semester. Offered fall and winter semesters. 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. Prerequisites: 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. Prerequisites: Permission of instructor. Can be taken for a maximum of seven credits. Credits: 1 to 5

CHM 580 - Special Topics in Chemistry

Special topics appropriate for graduate study in college chemistry. Offered upon sufficient demand. Credits: 1 to 3

Course Listing and Descriptions

CHM 610 - Graduate Research Seminar

Preparation for research experience: maintaining a proper laboratory notebook, conducting effective searches of the chemistry literature, reading and interpreting chemistry research papers. Introduction to the various types of chemistry projects available for summer research. Offered winter semester of even-numbered years. Credits: 2

CHM 611 - Research for Teachers

Teachers work with a faculty mentor while conducting chemical research. Engaging in chemistry research allows teachers to improve their understanding of scientific inquiry and further develop their chemistry content knowledge. Teachers will present their research results, either at Grand Valley or at a local or national meeting. Offered summer semester of even-numbered years. Prerequisites: CHM 610. Co-requisites: CHM 612. Credits: 3

CHM 612 - Applications of Research to Teaching

Teachers meet with a chemical education faculty mentor and fellow teachers to discuss their chemistry research projects. Teachers will deepen their understanding of scientific inquiry through reflection and discussion, and will begin to develop strategies for applying inquiry methods to their classrooms. Offered summer semester of even-numbered years. Prerequisites: CHM 610. Co-requisites: CHM 611. Credits: 1

CHM 621 - Education Research in Chemistry

Teachers learn chemical education and action research methods designed to improve student learning in the secondary chemistry classroom. Topics include chemistry education literature, quantitative and qualitative research methods, and ethical considerations. Offered winter semester of odd-numbered years. Prerequisites: CHM 611 and CHM 612. Credits: 3

CHM 631 - Inquiry Curriculum Development

Teachers will design and evaluate inquiry-based units of instruction for high school chemistry to be implemented in their own classrooms. Offered summer semester of odd-numbered years. Prerequisites: CHM 621. Credits: 4

CHM 632 - Inquiry Colloquium

Teachers are required to implement and evaluate inquiry-based units of instruction for high school in their own classrooms. Teachers must register each semester while implementing and evaluating their inquiry curriculum. Participation in two semesters of CHM 632 is required for one credit. Offered fall semester of odd-numbered years and winter semester of even numbered years. Prerequisite: CHM 631. Credits: 1

CHM 633 - Applications of Chemistry Education

Application of chemistry research and curriculum development to action research project. Consultations with a chemical education advisor required to assist in interpretation and analysis of classroom data collected during action research project. Offered summer semester of even-numbered years. Prerequisites: CHM 632. Credits: 1

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 fall and winter semesters. 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 Mathematical Sciences Foundation. (3-0-0) Offered fall and winter semesters. Prerequisite: MTH 110. 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 fall and winter semesters. Prerequisites: MTH 110. Credits: 4

CIS 163 - Computer Science II

Programming methodology, design and analysis of algorithms, an introduction to data structures and an introduction to the CIS computing facilities. Examples from a wide range of computing applications will be discussed. (3-0-1) Offered fall and winter semesters. Prerequisite: CIS 162. 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. Prerequisites: 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 fall and winter semesters. Prerequisites: 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. Prerequisites: 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. Prerequisites: CIS 150, 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 semester. Prerequisites: CIS 160 or CIS 162. Credits: 3

CIS 251 - Computer Organization

Overview of a computer's organization. Methods of data representation. Organization of an assembly language program. Instruction set: data movement, arithmetic, comparing and branching, and bit manipulation. Procedure calling sequences. Implementation of high-level language constructs. Interrupt processing. (3-0-0) Offered fall and winter semesters. Prerequisite: CIS 162. 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. Prerequisites: CIS 162. Credits: 4

CIS 260 - Application Development in Visual Basic

Builds on a student's knowledge of programming to explore applications designed for PC's 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 semester. Prerequisites: 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. Prerequisites: 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 CS 490 Internship. Offered fall and winter semesters. Prerequisite: CIS major standing. Credits: 1

CIS 307 - Computer Science Teacher Assisting Seminar

Strategies for teaching computer science in junior and senior high school. Coordinated and taken concurrently with ED 331. (3-0-0) Offered fall semester. Prerequisites: CIS 163 and PSY 301. Credits: 3

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 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 - Advanced Spreadsheet Development

A high-level spreadsheet course for users of current versions of spreadsheet programs, who will be expected to create multi-sheet and multi-file 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 fall and winter semesters. Prerequisites: CIS 162 or CIS 160, and MGT 268. 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. Prerequisites: 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 CIS major standing. 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 health care information systems. Course is taught so that individuals with various backgrounds can become familiar with computer applications in medicine and the fundamentals of medical decision making, artificial intelligence, and information retrieval. A major project serves to integrate components from the health and computer sciences. (3-0-2) Offered fall semester. Prerequisites: CIS 233, CIS 237, and HPR 340. Credits: 4

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: CIS major standing. 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. Prerequisites: CIS 163. Credits: 3

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 361 - System Programming

The C programming language is taught in the context of the UNIX operating system. Coverage: functions, variable scope, control structures, pointers, arrays, program organization, structures, standard C library,

Course Listing and Descriptions

memory allocation, signals, inter-process communication, and UNIX system calls. UNIX utilities and software development tools are used throughout the course. (3-0-0) Offered winter semester. Prerequisites: CIS 163 and CIS major or minor standing or EGR major standing. 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: CIS major standing. 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. 3-D graphics. Hidden line/surface elimination. (3-0-0) Offered winter semester of odd-numbered years. Prerequisites: CIS 263, and CIS major standing. Credits: 3

CIS 368 - Usability Design & Evaluation

The usability engineering design cycle. Discount usability evaluation techniques. Graphical user interface development. Technical communication skills. (3-0-0) Offered fall semester. Prerequisite: CIS major standing. 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 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. Prerequisites: 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 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. Prerequisites: CIS 333, CIS 337, and CIS major standing. Credits: 4

CIS 443 - Software Development Tools

Advanced on-line programming, incorporating: contemporary multi-platform 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 253, CIS 260, CIS 330, CIS 333, and CIS major standing. 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 CIS major standing. 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 winter semester. Prerequisites: CIS 251 or EGR 326 and CIS or EGR major standing. Credits: 4

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 251 and (CIS 343 or CIS 361)) or EGR 326, and CIS major or minor standing, or 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 251 or EGR 326, CIS major or minor standing, or EGR major standing. 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 CIS major standing. 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 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 CIS major standing. 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 251, CIS 263 and CIS major standing. Credits: 3

CIS 463 - Information Systems Project (Capstone)

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 CIS major standing. 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, non-determinism, pushdown automata, context-free languages, Turing machines and variants, halting problem, time complexity of algorithms, and NP-complete problems. (3-0-0) Offered fall semester of odd-numbered years. Prerequisites: MTH 325, CIS 162, and CIS major standing. Credits: 3

CIS 467 - Computer Science Project

Individual or group projects using the department's laboratory facilities. (3-0-0) Offered winter semester. Prerequisites: CIS 350 and either CIS 452 or CIS 457, and CIS major standing. 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 fall and winter semesters. Credits: 1 to 4

CIS 500 - Fundamentals of Computer Science

Focuses on the advanced programming concepts, common data structures, and basic models that students of Computer Science and Information Systems need to know. Elements of discrete mathematics are integrated through lectures and programming projects. (3-0-0) Offered fall and winter semester. Prerequisite: CIS 163. 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 621 - Object-Oriented Programming

An introduction to object-oriented programming. Constructs and programming techniques that are essential for performing successful object-oriented design and implementation are covered. (3-0-0) Offered fall semester. Prerequisite: Admission to CIS Program or permission of instructor. 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. Prerequisites: CIS 621. 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 621. 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 or equivalent. Credits: 3

CIS 641 - Management of Software Development

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 - Software Project Management

Planning, organizing, staffing, controlling, and directing software projects. Major emphasis on project planning, techniques for monitoring and controlling projects, quantitative methods and tools, and leadership issues in project management. A term project that involves the development of a project plan for a non-trivial software project will be required. (3-0-0) Offered winter semester. Prerequisites: CIS 641. Credits: 3

CIS 643 - Information Systems Policy

Operational, strategic, and tactical facets of the planning cycle. Hardware and software considerations, system migration, capacity and contingency planning, project selection and prioritization. Role of contract programmers and consultants as supplement to regular staff. Comparison of systems developed in-house with packages available for purchase. (3-0-0) Offered fall semester. Prerequisites: CIS 642. Credits: 3

CIS 654 - Computer Networking

Fundamental data communications and computer networking concepts; communications model, signals, digital transmission systems, packet switching, multiplexing, data link protocols, Internet-working. Projects build around TCP/IP protocol suite and Internet application protocols. Introduction to client/server programming and sockets API. (3-0-0) Offered winter semester. Prerequisite: Admission to CIS Program or permission of instructor. Credits: 3

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, DHT's, 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 654. Credits: 3

CIS 658 - Web Architectures

Current and emerging web-based technologies, protocols, system architectures, development frameworks, and languages. Offered winter semester. Prerequisites: CIS 654. 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

Course Listing and Descriptions

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 semester 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. Prerequisite: CIS 500 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. Prerequisites: 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. Prerequisite: Admission to CIS Program or permission of instructor. Credits: 3

CIS 674 - Modeling and Decision Systems

Introduction to modeling, model types, and methods. A simulation language is studied and a programming project is assigned that requires this language for a discrete system simulation. (3-0-0) Offered on demand. Prerequisites: CIS 500. 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. Prerequisites: CS 500. Credits: 3

CIS 676 - Database Management Systems

This course provides an in-depth study of the concepts and techniques used in implementing typical relational database engines. It also covers how the concepts are extended to address the challenges posed by post-relational, distributed, and parallel databases. (3-0-0) Offered winter semester. Prerequisites: 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 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 equivalent. Credits: 3

CIS 679 - Advances in Database Management Systems

This course exposes students to the latest trends in database management systems. Specific contents and level of emphasis of each topic will be determined by trends in the field and by the interests and expertise of faculty and students. (3-0-0) Offered fall semester. Prerequisites: 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. Credits: 1

CIS 690 - Master's Thesis Research

Faculty-supervised study and research on a suitable topic in Computer Information Systems. Offered fall and winter semesters. Prerequisites: 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 fall semester. Prerequisites: 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. Prerequisites: Completion of two content areas. Credits: 3

CIS 693 - Master's Project

Individual student project involving the development or evaluation of a complex software, information, or database system. Offered fall and winter semesters. Prerequisites: Completion of two content areas. Credits: 3

CIS 695 - Master's Thesis

Continuation of faculty-supervised study and research on topic identified in CIS 690. Offered fall and winter semesters. Prerequisites: Consent of Thesis Committee. Credits: 3

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 fall and winter semesters. Prerequisite: CIS 500. 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 Social and Behavioral Sciences Foundation. 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. Prerequisites: 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. Part of the Gender, Society and Culture theme. Offered fall semester. Credits: 3

CJ 325 - Criminal Justice and Human Rights

Major focus is on the tension between evolving definitions of human rights and criminal justice system efforts to maintain or increase levels of social control. The course also provides opportunities to study international perspectives on criminal justice institutions. Part of Freedom and Social Control theme. Offered winter semester. 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. Prerequisites: CJ 201. Credits: 3

CJ 340 - Courts Process

An examination of court systems in the United States, emphasizing comparison of civil and criminal court systems; the roles and responsibilities of the legal actors in the system; the dynamics of courthouse justice, and historical and contemporary cases and controversies that have impacted the authority of the judicial branch. 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. Prerequisites: CJ 201. Credits: 3

CJ 355 - Youth Culture and Crime

The study of the emergence of youth subcultures over the course of the twentieth 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 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

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 pre-existing texts. Required for B.S. cognate in criminal justice. 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. Part of the War and Peace theme. Offered fall and winter semesters. Prerequisite: Junior status. 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 or senior standing. Credits: 3

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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 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 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 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 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 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 youths' 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 430 - U.S. Jails

Traditionally, jails are plagued with problems of inadequate personnel, lack of modernization, overcrowding and under-funding. This course equates the student with those problems and investigates possible solutions. Offered winter semester of even-numbered years. Prerequisite: Junior or senior standing. 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 or senior standing. Credits: 3

CJ 444 - Forensic Behavior and Law

Forensic Behavior and Law examines the relationship among social/behavioral science research, law, and the legal system. Lectures and readings emphasize Supreme Court opinions where the Court has analyzed the use of social/behavioral science research. Research in criminal profiling, eyewitness identification, criminal/civil competency, and jury selection is addressed. Offered fall semester of odd-numbered years. Prerequisites: Junior standing. Credits: 3

CJ 464 - Security Administration and Legal Issues

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 or senior 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. Prerequisites: Junior or senior status. Credits: 3

CJ 470 - Crime Control and Justice Policy

A course offering a philosophical review of the nation's justice system introducing the student to the policy process, as well as practices designed to prevent, control, and reduce crime and to improve justice. Offered fall and winter semesters. Prerequisites: CJ 201 and junior standing. 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 allow students to apply academic knowledge to actual and professional experience. May be repeated for up to six credits. Offered every semester. Prerequisites: Junior or senior 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 pre-existing texts. 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. Prerequisites: Admission to GVSU graduate program or permission of the MCJ Graduate Program Coordinator. Credits: 3

CJ 604 - Criminal Justice Policy & 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. Prerequisites: 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 criminal justice research. Students will become familiar with research techniques that are necessary for systematic analysis of the criminal justice system, offender behavior, crime trends, and program effectiveness. Students will also learn to critically evaluate existing research. Students will also be able to understand the process of writing professional, empirical and evaluation research proposals. Offered fall semester. Prerequisites: Admission to MCJ graduate program, 19 credits completed or permission of MCJ Graduate Program Coordinator. 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. Prerequisites: Admission to GVSU graduate program or permission of MCJ Graduate Program Coordinator. Credits: 3

CJ 608 - Research Methods II

This course focuses on the research methodologies and data analysis techniques utilized in the discipline of criminal justice. Students will develop an expertise in utilizing selected qualitative and quantitative data analysis tools, including computerized statistical software. The goal of this course is to develop each student's capacity for collecting, analyzing and interpreting data, as well as disseminating discipline specific research. Offered winter semester. Prerequisites: Admission to MCJ graduate program, CJ 606, 18 credits completed or permission of MCJ Graduate Program Coordinator. Credits: 3

CJ 611 - 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 presented and analyzed. Offered winter semester of odd numbered years. Prerequisites: Admission to GVSU graduate program or permission of MCJ Graduate Program Coordinator. Credits: 3

CJ 620 - Advanced Police Systems

In-depth study of police organizations, organizational and law enforcement system development, management philosophies, and current issues of most concern to regional and national law enforcement executives. Prerequisites: Admission to GVSU graduate program or permission of MCJ Graduate Program Coordinator. Credits: 3

CJ 621 - Advanced Corrections Systems

In-depth study of adult corrections organizations, organizational and system development, management philosophies, and current issues of most concern to regional and national corrections executives. Offered fall semester of even-numbered years. Prerequisites: Admission to GVSU graduate program or permission of MCJ Graduate Program Coordinator. Credits: 3

CJ 622 - Advanced Juvenile Justice Systems

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. Prerequisites: Admission to GVSU graduate program or permission of MCJ Graduate Program Coordinator. Credits: 3

CJ 623 - Advanced Private Security Systems

In-depth study of private security organizations, organizational and system development, management philosophies, and current issues of most concern to regional and national private security executives. Offered

winter semester of even-numbered years. Prerequisites: 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. Prerequisites: Admission to GVSU graduate program or permission of MCJ Graduate Program Coordinator. Credits: 3

CJ 644 - Forensic Behavior and Law

Forensic Behavior and Law examines the relationship among social/behavioral science research, law, and the legal system. Lectures and readings emphasis Supreme Court opinions where the Court has analyzed the use of social/behavioral science research. Research in criminal profiling, violence, eyewitness identification, criminal/civil competency, and jury selection is addressed. Offered winter semester of even numbered years. Prerequisites: 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. Prerequisites: 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 693 - Criminal Justice Project

In cooperation with a criminal justice or private security agency and under faculty supervision, students will design a project to address the development of a particular policy or set of procedures for responding to specific administrative problems or issues within an agency or institution. Formal presentation of finished product required. Graded Credit/No Credit. Offered every semester. Prerequisites: Admission to CJ graduate program, 18 credits of graduate coursework completed, and permission of MCJ Graduate Program Coordinator. 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 CJ graduate program, 18 credits of graduate coursework completed, approved committee and proposal, and permission of Graduate Director (completion of core curriculum may be concurrent). Credits: 1 to 6

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. Prerequisites: Admission to GVSU graduate program or permission of MCJ Graduate Program Coordinator. Credits: 1 to 3

Course Listing and Descriptions

CJR 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. Part of Society and the Media Theme.

Offered fall and winter semesters. Credits: 3

CJR 256 - News Reporting I

Development of skills in news-gathering, reporting, writing, and copy-editing primarily for print media. Work on organizing news stories, finding information, interviewing, and writing to meet deadlines. Offered fall, winter, and spring/summer semesters. Prerequisites: Fulfillment of the freshman writing requirement. Credits: 3

CJR 270 - News Reporting II

Gathering news, filtering and confirming facts, and writing both basic and advanced news stories for specific media, in appropriate format and language. Offered fall and winter semesters. Prerequisite: CJR 256, or permission of instructor. Credits: 3

CJR 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 both fall and winter semesters. Credits: 3

CJR 316 - Editing

How to edit writing, including your own, from a reader's point of view. Principles of rhetoric, logic and grammar applied to the substantial revision of nonfiction manuscripts, e.g., feature stories, magazine articles, technical reports, interpretive essays. Analysis of criteria for editorial judgment, e.g., Strunk and White, Beardsley, Orwell, style books. Offered fall and winter semesters. Prerequisites: CJR 256 or permission of instructor. Credits: 3

CJR 364 - Article Writing

Practice in writing feature-length articles on factual subjects. Emphasis not on the ins and outs of getting published but on the fundamental skills involved in producing knowledgeable and readable material. A workshop dealing with the problems inherent in finishing a work. Professional editing standards insisted upon. Students will be encouraged to submit their finished work for publication. Offered fall and winter semesters. Prerequisites: CJR 256 or permission of instructor. Credits: 3

CJR 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. Prerequisites: CJR 316 or permission of instructor. Credits: 3

CJR 366 - Arts Reporting and Criticism

A workshop in writing about the arts. Examination of the function of arts publicists, reporters and reviewers, and "serious" critics. Focus on conveying aesthetically relevant information about artifacts, exhibits, and performance in lucid and interesting prose. 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. Prerequisites: Ability to write competently and experience or coursework in one or more of the arts. CJR 256 or permission of instructor. Credits: 3

CJR 380 - Special Topics in Journalism

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 fall semester. Prerequisites: Sophomore standing. May be repeated for credit when content varies. Credits: 3

CJR 390 - Technical Writing

The interpretation, rewriting, and editing of specialized material for both professional and general readers is emphasized. For advanced students in the sciences or writing. Students are required to read professional journals in one scientific or technical field, e.g., medicine, environmental science, chemistry, biology, psychology, computer science, communications, economics, or sociology. There will be practice in analyzing, organizing, and presenting information to a variety of audiences for different purposes. Writing definitions, abstracts, and instruction guides will also be used to develop clarity, concision, and control. Offered winter semester. Prerequisites: CJR 256 or permission of instructor. Credits: 3

CJR 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

CJR 454 - Community Reporting

Course introduces community journalism through instruction in public affairs reporting methods. Assigned to "beats" within communities surrounding Grand Valley, students will write stories of depth under deadlines. Possible beats include local government, court reporting, law enforcement, education, business, and cultural diversity within communities, including regional news. Offered fall semester. Prerequisites: CJR 270. Credits: 3

CJR 465 - 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. Prerequisites: Junior standing. Credits: 3

CJR 466 - Freelance Journalism

The purpose of this course is to show students the various local, regional, and national markets for freelance materials; to outline specific steps for finding, researching, writing, and placing their stories, and to help students establish a base from which they can further explore outlets for their material. Freelance writing for newspapers, magazines, and public relations will be included. During the course students will be asked to write a query letter, research a topic of their choice and write out possible interview questions, submit at least four story ideas for publications of their choice, produce a short finished article, and participate fully in the work of the class. Offered on sufficient demand. Credits: 3

CJR 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. Prerequisites: CJR 316 or permission of instructor. Credits: 3

CJR 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

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. 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 Historical Perspectives Foundation. 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 History Foundation requirement. Offered winter semester. Credits: 3

CLA 201 - Classical Literature

Great works from the ancient world in translation, selected from Homeric epics, plays of Aeschylus, Sophocles, Euripides, and Aristophanes, and from such other classic works as Virgil's Aeneid, the Bible, and Eastern epics such as Gilgamesh. Fulfills Philosophy and Literature Foundation. Offered fall and winter semesters. Prerequisites: fulfillment of the freshman writing requirement. 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 Arts Foundation. Offered winter semester. Prerequisites: fulfillment of the freshman writing requirement. Credits: 3

CLA 275 - Ancient Drama

A study of the drama of ancient Greece and Rome, from playwrights such as Sophocles, Euripides, Aristophanes, and Plautus. Readings of tragedy and comedy will be augmented by considerations of ancient dramatic theory and the possibilities of performance on the ancient and modern stage. All works read in English translation. Fulfills Arts Foundation. Offered fall semester. Prerequisites: fulfillment of the freshman writing requirement. Credits: 3

CLA 287 - Roman Law

Multidisciplinary introduction to the legal system that governed the Roman Empire and influenced all subsequent Western legal thought. Interactive, case-based approach focuses upon analysis of hypothetical situations. Topics include substantive private law, Roman legal history, and contributions to modern legal systems. Especially valuable for pre-law students. All readings in translation. Part of Freedom and Social Control theme. Offered odd years, winter semester. Prerequisites: fulfillment of the freshman writing requirement. Credits: 3

CLA 311 - Ancient Great Philosophers

A study of one or several ancient great philosophers, such as the pre-Socratics, Plato, Aristotle, Lucretius. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. Cross-listed as PHI 311/CLA 311. May be repeated for credit if content varies. Prerequisites: 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. Part of Religion theme. Offered fall semester. Prerequisites: fulfillment of the freshman writing requirement. Credits: 3

CLA 320 - Women in the Classical World

Introduction to women's lives and gender relations in ancient Greece and Rome, in both the private world of the family and the public sphere of religion and politics. Topics include myths about women; how legal, medical, and philosophical texts represent women; and what women say about themselves in their writings. Part of the Gender, Society, and Culture Theme. Offered winter semester. Prerequisites: fulfillment of the freshman writing requirement. Credits: 3

CLA 345 - Tradition and Reception

Study of specific classical authors or genres of classical literature or art and the ways they have been understood, adapted, and transformed in new cultural environments of later periods. The course may consider authors such as Sappho, Aristotle, and Virgil or genres such as epic, comedy, lyric, and temple architecture. May be repeated for credit when content varies. Offered fall semester in even-numbered years. Prerequisites: fulfillment of the freshman writing requirement. 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. Prerequisites: CLA 250, or HNR 221/222. 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 410 - Literary Translation: Theory and Practice

An introduction to the theory, practice, and art of translating poetry, prose, and drama. In a workshop format, students translate texts into English from their choice of ancient or modern languages, and study the history, theory, and the social, cultural, and political contexts of translation. Offered winter semester in odd-numbered years. Prerequisite: One 200 level course in any non-English language. Credits: 3

CLA 461 - Studies in the Classical Tradition

Examines the relationship between classical civilization and a specific region, period, or intellectual movement of the nonclassical world. Emphasis on how the classics and classical cultures were understood and exploited in different cultural environments such as medieval Spain, the Renaissance, the American Enlightenment, Modernism, or post-colonial Africa. May be repeated for credit when content varies. Offered fall semester in even-numbered years. Prerequisite: Junior standing. Credits: 3

CLA 479 - Classical Drama Workshop

Rehearsal and public performance of a play selected from the repertory of ancient Greek and Roman drama. Cross-listed with CTH 479. Students may not receive credit for both classes. Offered winter semester in even-numbered years. 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. Prerequisite: Senior standing. Credits: 3

Course Listing and Descriptions

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

CLS 102 - Introduction to Clinical 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

CLS 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 CLS program. Credits: 2

CLS 370 - Diagnostic Microbiology 1

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 212/213. Credits: 5

CLS 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

CLS 380 - Special Topics in Clinical 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

CLS 399 - Readings in Clinical Laboratory Science

Independent supervised readings on selected topics or supervised independent clinical 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 hours credit toward the major in clinical laboratory science. Credits: 1 to 4

CLS 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. Prerequisites: CLS 320. Credits: 3

CLS 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: 2

CLS 417 - Clinical Hematology Laboratory

An introduction to a wide variety of hematology clinical laboratory procedures with an emphasis on accurate performance, theoretical basis of tests, and correlation of data to disease. Prerequisites: CLS 416 (may be taken concurrently). Credits: 1

CLS 422 - Clinical Chemistry

Biochemical, physiological, and analytic aspects of organic and inorganic substances of clinical interest, including electrolytes, blood gases, proteins, enzymes, lipids, drugs, and hormones are presented through lecture, demonstration, and practical experience. Offered fall semester. Prerequisites: CLS 320. Credits: 6

CLS 450 - Clinical Practicum I

The first of two full-time clinical experiences. Practicing clinical laboratory scientists will supervise and teach students in basic laboratory procedures, including Urinalysis, Immunoserology, Hematology, and Clinical Chemistry. The students will be exposed to patients and usual workload in the hospital laboratory. Offered fall semester. Prerequisites: CLS 320. Co-requisites: CLS 372, CLS 410, CLS 422, BMS 416/417. Credits: 1

CLS 460 - Advanced Clinical Science

Advanced lecture and discussion of Clinical Laboratory Science, with emphasis on hemostasis, bacteriology, transfusion medicine, and laboratory service assessment. Offered winter semester. Prerequisites: HPR 340, CLS 372, CLS 410, BMS 416. Co-requisite: CLS 461. Credits: 5

CLS 461 - Advanced Clinical Laboratory

Taken in conjunction with CLS 460 (Advanced Clinical Science), this laboratory course is designed to provide the students with experience in advanced clinical laboratory technologies. Emphasis will be placed on hemostasis, bacteriology, and transfusion medicine. Prerequisites: CLS 422, BMS 417. Co-requisite: CLS 460. Credits: 2

CLS 490 - Clinical Practicum II

The second of two full-time clinical experiences. Practicing clinical laboratory scientists will supervise and teach students in advanced laboratory procedures, including Hemostasis, Clinical Chemistry, Microbiology, and Transfusion Service. Students will be exposed to patients and usual workload in the hospital laboratory. Offered winter semester. Prerequisites: CLS 372, CLS 422, CLS 450. Co-requisites: CLS 460/461. Credits: 3

CLS 495 - Issues in Clinical Laboratory Science (Capstone)

Exploration of issues that impact health care, particularly the laboratory professional. Includes in depth discussions of research literature and its relevance to clinical laboratory science. Students will work individually and in groups to prepare a paper, presentation, and a poster. Offered winter semester. Prerequisites: Senior standing in the Clinical Laboratory Science Program. Co-requisite: CLS 490. Credits: 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 Life Sciences Foundation. 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 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 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. 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 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: 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: 1-3

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. Prerequisites: 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. Prerequisites: Admission to a graduate school in the life sciences. Credits: 3

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 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. Prerequisites: 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. Prerequisites: 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. and approval of the CMB Graduate Program Coordinator. Credits: 1 to 9

CMB 696 - 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. Prerequisites or Corequisites: CMB 695. Credits: 2

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. Prerequisites or Corequisites: PSM 691. 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 MS in CMB. Amount of credit and topic to be arranged with the supervising faculty member. Offered every semester. Prerequisite: Permit required. Credits: 1-6

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 Philosophy and Literature Foundation. 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 semester. Prerequisites: Sophomore standing. Credits: 3

Course Listing and Descriptions

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. Prerequisites: Fulfillment of composition requirement. Credits: 3

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. Part of Society and the Media theme. 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 295 - Theories of Communication

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. Prerequisites: 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. Prerequisites: 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. Part of Perception Theme. Offered fall even 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. Part of Society and the Media theme. Offered every fall. Credits: 3

COM 373 - Women and Minorities in Film and Television

An examination of American film and television from the perspective of those social groups whose participation in the industry has been restricted both in front of and behind the camera. Offered every other year. 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. Prerequisite: 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 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. Prerequisites: 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; 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 Ethics theme. Offered winter semester. 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; School of Communications major. Credits: 3

COM 498 - Senior Thesis/Project

The senior thesis/project demonstrates depth and sophistication in the major. Offered every fall and winter semester, but not necessarily in the summer. 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, SS 300, 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. Prerequisites: 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. Prerequisites: COM 600. 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. Prerequisites: COM 600. Credits: 3

COM 641 - Emerging Telecommunication Technologies

An analysis of the impacts of a variety of new telecommunication technologies on business and industry, with particular emphasis on the use of these technologies to increase efficiency and productivity. Technologies considered in some detail include cable television, microcomputers, teleconferencing, and fiber optics. Prerequisites: 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. Prerequisites: 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, 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, 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 695 - Master's Thesis/Project

Master's thesis or project completed in consultation with the student's advisor and committee. Prerequisites: COM 660. Credits: 3

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 photography. Emphasis on the basic aesthetics and techniques that underlie photographic communication. 35mm camera with manual operation required. Students register for one lab section in addition to lecture. Offered every semester. Prerequisite: Access to 35mm camera (manual control option required.) Photo, Health Communications, or Communication Studies majors or by permit. 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. Offered every semester. Prerequisite: CPH 171. Access to 35mm camera (manual control option required). Photography, Health Communications, or Communication Studies majors or by permit. Credits: 4

CPH 175 - Understanding Still Photography

A course for those who want to be able to use still photography at an introductory level but do not require darkroom expertise. Covers camera operation, composition, aesthetics, and visual communication. 35mm camera required. Does not count toward the photography major. Offered fall semester. 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 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. Prerequisites: CPH 172 or permission of instructor. Credits: 3

CPH 279 - Color Printing

Introduction to color theory, negative-to-positive chromagenic printing, and expressive use of color in photography. Offered fall semester. Prerequisites: CPH 172 or permission of instructor. Credits: 4

CPH 280 - Special Topics in Photography

A study of topics not regularly covered in the curriculum. May be repeated for credit when topic varies. Prerequisites: Sophomore standing or permission of instructor. Credits: 1 to 3

CPH 366 - History of Photography II

An examination of the principal 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 History of Photography I, 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. Prerequisites: CPH 273. Credits: 3

CPH 372 - Computer Photo I

Introduction to the use of computers in photography with emphasis on digital image processing. Students will gain experience with hardware

Course Listing and Descriptions

and software used to access, manipulate, and output photographs for use in display, print, and the digital environment. Offered every semester.

Prerequisites: ART 149 and one of the following: CPH 175, CPH 278, CPH 279, CFV 226, or permission of instructor. Credits: 3

CPH 373 - Computer Photo II

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. Prerequisites: CPH 372 or permission of instructor. Credits: 3

CPH 374 - Color Photography

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. Prerequisites: 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 in large format, in black-and-white and color. Offered winter semester. Prerequisites: CPH 372. 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, odd years. Prerequisites: CPH 372. Credits: 4

CPH 380 - Special Topics 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. Prerequisites: CPH 372. Credits: 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. Prerequisites: 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 498 - Senior Thesis/Project

The senior thesis/project demonstrates depth and sophistication in the major. Offered fall and winter semesters, but not necessarily in the summer. Prerequisites: CPH 266 with a grade of C or better. 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 Arts Foundation. 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 & 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. Prerequisite: CTH 151. Credits: 3

CTH 161 - Theatre Production

An introduction to the collaborative nature of the theatrical process, particularly the relationships between the performers, designers, and directors. The organization and functions of design, technology, materials, people, space, time, and money in a theatre production. Procedures in different theatrical organizations and situations will be examined. Students will participate in the production activities of the college. Fulfills Arts Foundations. 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: CTH 161 or permission of instructor. 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. Prerequisites: 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. Part of Creativity theme. Offered fall of even numbered years. Prerequisites: 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 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 even-numbered years. Prerequisites: CTH 151, 161, 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, odd-numbered years. Prerequisites: 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. Prerequisites: fulfillment of the Freshman Writing Requirement. 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. Prerequisites: fulfillment of the Freshman Writing Requirement. Credits: 3

CTH 373 - Global Arts Performance

Surveys contemporary international trends in intercultural performance, identifying the boundaries of an emerging world culture. Examines theatre forms, theatre festivals, and the issues arising from global arts performance. Part of Global Integration and Fragmentation theme. Offered spring semester. Prerequisites: Permission of instructor and two courses in any arts area. 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. Prerequisites: 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 or senior 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. Prerequisites: 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. Prerequisites: CTH 365 or by permission of instructor. Credits: 3

CTH 479 - Classical Theatre Workshop

Rehearsal and public performance of a full-length play selected from the repertory of ancient Greek and Roman drama. Crossing of CLA 479. Students may not receive credit for both classes. Offered winter semester in even-numbered years. 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

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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 150 - Dance Practicum

Rehearsal and performance of student choreographed projects approved by the dance program. May be repeated for credit (no limit). Offered fall, winter semesters. Prerequisites: permission of the instructor. Credits: 1

DAN 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. Offered fall, winter semesters. Credits: 1

DAN 179 - Dance Ensemble

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. Offered fall, winter semesters. Prerequisites: audition and permission of the instructor. 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 Arts Foundation requirement. Offered fall, winter semester. 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 semesters. Prerequisites: permission of the instructor. Credits: 1

DAN 241 - Ballet Technique

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, up to a maximum of 10 credit hours. Offered fall, winter semesters. Prerequisites: permission of the instructor. Credits: 2

DAN 251 - Modern Dance

Sequential training in atraditional and postmodern dance techniques. May include Limon, Cunningham, Graham, or other styles. May be repeated for credit, up to a maximum of 10 credits. Offered fall, winter semesters. Prerequisites: permission of the instructor. 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, 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, winter semesters. Prerequisites: permission of the instructor. Credits: 1

DAN 279 - Music as Dance Accompaniment

The history of music as it relates to the development of contemporary dance forms; music theory and rhythmic skills; practical aspects of working with musicians in the studio, and as part of the process of choreography. Offered fall semester of odd years. Prerequisites: permission of the instructor. Credits: 2

DAN 281 - Jazz Technique

Sequential training in jazz technique drawn from a variety of sources both traditional and contemporary. Students will be exposed to styles including

Broadway, swing, salsa, and hip-hop. Dancers will be expected to improve speed, stamina, strength, and flexibility as well as their understanding of rhythm. May be repeated for credit, up to a maximum of 10 credits. Offered fall, winter semesters. Prerequisites: permission of the instructor. Credits: 2

DAN 311 - Improvisation and Choreography

Introduction to improvisation and choreography. Development of new movements from a variety of source materials, including visual, musical, theatrical, and site-specific ones. Offered winter semester. Prerequisites: permission of the instructor. Credits: 3

DAN 345 - Dance History

The interdisciplinary nature of dance as a cross-cultural phenomenon; writings and video from a variety of methodological backgrounds, including those from a historical, sociological, critical, and ethnological viewpoint. Offered fall semester, even years. Prerequisites: Permission of the instructor and junior standing in the dance program. Credits: 3

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. Prerequisites: Permission of instructor. Credits: 1 to 4

DAN 441 - Advanced Ballet Technique

Sequential training in the technique and vocabulary of classical ballet with an emphasis on placement, alignment, coordination, flexibility, and movement quality. Continuation of DAN 241. May be repeated for credit, up to a maximum of 10 credit hours. Offered fall, winter semesters. Prerequisite: Permission of instructor. Credits: 2

DAN 451 - Advanced Modern Technique

Sequential training in nontraditional and postmodern dance techniques. May include Limon, Cunningham, Graham, or other styles. Continuation of DAN 251. May be repeated for credit, up to a maximum of 10 credits. Offered fall, winter semesters. Prerequisite: Permission of instructor. Credits: 2

DAN 481 - Advanced Jazz Technique

Sequential training in jazz technique drawn from a variety of sources both traditional and contemporary. Students will be exposed to styles including Broadway, swing, salsa, and hip-hop. Dancers will be expected to improve speed, stamina, strength, and flexibility as well as their understanding of rhythm. May be repeated for credit, up to a maximum of 10 credits. Offered fall, winter semesters. Prerequisites: at least four semesters of DAN 281, or 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. Prerequisites: permission of the instructor. 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 World Perspectives requirement. Offered fall semester. 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 odd-numbered years. Prerequisites: EAS 201 or junior standing. Credits: 3

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

EAS 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

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 Social and Behavioral Sciences Foundation. Offered fall and winter semesters. Credits: 3

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. Prerequisites: 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 Social and Behavioral Sciences foundation. Offered every semester. Prerequisites: MTH 110 or MTH 122 or MTH 201, sophomore standing recommended. Fulfills Social Sciences Foundation. 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 Social and Behavioral

Sciences foundation. Offered every semester. Prerequisites: MTH 110 or MTH 122 or MTH 201, sophomore standing recommended. Fulfills Social Sciences Foundation. 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. Prerequisites: 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. Prerequisites: 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. Offered winter semester. Prerequisites: completion of Social Science foundations requirement. Part of the Sport and Life theme. Credits: 3

ECO 341 - Economics of Business Strategy

Practical application of microeconomic methods to business decisions. Topics include current issues in consumer demand; business organization, cost decisions, and pricing strategies; decision making under uncertainty and risk management; projections using supply/demand analysis; information, incentives, and employee compensation; and cost-benefit analysis of investment projects. Offered every other year. Prerequisites: 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 Mathematical Science Foundation. Part of Creativity theme. 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. Offered each year. Prerequisites: ECO 211 or ECO 200. Part of Earth and Environment theme. Credits: 3

ECO 349 - Emerging Markets Issues

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 economies; the use of natural resources and agriculture in economic development; and the relationship of economic development to education, health and migration. Offered every other year. Prerequisites: ECO 210 or ECO 200. Fulfills the World Perspectives requirement. Part of the Global Change Theme. Credits: 3

ECO 350 - Gender and Economics

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, antipoverty

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programs, comparable worth, parental leave, and affirmative action. Historical trends and cross-cultural comparisons are discussed along with current U.S. conditions. Part of Gender, Society and Culture theme. 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. Prerequisites: 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. Prerequisites: 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. Offered every other year. Prerequisites: ECO 210 or ECO 200. Part of Democracy Theme. 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. Offered every year. Prerequisites: ECO 210 or ECO 200. Fulfills the World Perspectives requirement. Part of Global Change theme. 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 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 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. Prerequisites: ECO 210 or ECO 200. Credits: 3

ECO 435 - Urban Economics

Topics include the urbanization process, the city as an economic system, location analysis, poverty, housing, pollution, transportation, and public finance. Offered fall semester. Prerequisites: ECO 211 or ECO 200. Part of the Cities theme. Credits: 3

ECO 436 - Real Estate Economics

Develops an economic framework for understanding urban real estate markets. Topics include: the determinants of land prices and urban spatial structure, the characteristics of the urban housing market, factors that influence business locations, characteristics of commercial real estate markets, and the response of real estate markets to business cycles. Offered winter semester. Prerequisites: ECO 211 or ECO 200. Part of the Cities theme. 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. Prerequisites: ECO 211 or 200. Credits: 3

ECO 480 - Special Topics in Economics

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. Offered every other year. Prerequisites: ECO 200, ECO 210 or ECO 211, and STA 215. 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, 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 cumulating 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. Prerequisites: 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. Prerequisites: ECO 542, FIN 521, or 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. Prerequisites: ECO 542 or equivalent. 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: ECO 542. 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.

Prerequisites: Admitted or permit. Credits: 3

ECO 646 - Employment, Wages, and Productivity

Examines labor market and personnel issues. Topics include training and employee productivity, employee compensation and incentives, effects of international trade on labor markets, information issues in labor markets as they relate to turnover and hiring practices; business cycle effects on labor markets; and the role of labor unions. Prerequisite: ECO 542.

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. Prerequisites: Approval of instructor. Credits: 1 to 3

ED 200 - Introduction to Education

Designed to acquaint students with the education profession. General knowledge of public schools and the historical, sociological, multicultural, philosophical, financial, and legal foundations of American education.

This course will foster personal reflection, inquiry, and values clarification. Classroom observations required. Formerly ED 300. Offered fall and winter semesters. Prerequisites: Freshman year, second semester.

Credits: 3

ED 205 - Computers in Education

Introduction to computers and their use in the classroom. Focus on the use of the computer as an instructional and managerial tool. Evaluation of software and the future impact of computers on education. Offered fall and winter semesters. Prerequisite: ED 200. Credits: 3

ED 225 - Diversity in Education

A study of the implications of inclusionary environments for students with exceptional needs and individual differences, including race, class, culture, and gender. Emphasizes diversity in educational environments, student learning styles, and instructional strategies. Classroom observations required. Offered fall and winter semesters. Fulfills U.S. Diversity requirement. Credits: 3

ED 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. Prerequisites: Admission to the College of Education. (Program outlines specify co-requisites.) Credits: 3

ED 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 the U.S. Diversity requirement. Offered every semester. Credits: 3

ED 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. Prerequisites: Admission to the College of Education.

Credits: 3

ED 321 - Content Area Literacy

This course will help secondary pre-service 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. Prerequisites: admission to the College of Education. Co-requisites: ED 310 and ED 331. Credits: 3

ED 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. Prerequisites: admittance to College of Education. Co-requisites: ED 310, ED 320. Credits: 5

ED 331 - Methods and Strategies of Secondary Teaching

Secondary Methods and Strategies: 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. Prerequisites: admittance to the College of Education. Co-requisites: ED 310, ED 321. Credits: 5

ED 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. Prerequisites: admission to College of Education. Co-requisites: ED 320, ED 361, ED 495. Credits: 6

ED 337 - Introduction to Learning and Assessment

An introductory course for pre-service 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. Prerequisite: ED 315. Credits: 3

ED 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. Prerequisites: admission to the College of Education. (Program outlines specify co-requisites.) Credits: 3

ED 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. (Program outlines specify co-requisites.) Credits: 3

ED 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: ED 330, 331, or 332; ED 310, and ED 320 or ED 321. All may be taken concurrently. Credits: 3

ED 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 every semester. Prerequisites: ED 330 or ED 331; ED 310, ED 320 or ED 321. All may be taken concurrently. Credits: 3

ED 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 every semester.

Course Listing and Descriptions

Prerequisites: ED 330 or ED 331; ED 310, ED 320 or ED 321. All may be taken concurrently. Credits: 3

ED 399 - Special Topics in 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

ED 430 - Student Teaching, Elementary

Full-time student teaching with weekly seminar discussions of classroom issues and personal reflection. One to two weeks of professional development will be included in ED 480, to be taken concurrently. Offered fall and winter semesters. Prerequisites: Advancement to student teaching and positive recommendations from prior fieldwork. Credits: 10

ED 431 - Student Teaching, Secondary

Secondary. Full-time student teaching with a two-hour weekly seminar covering pedagogy, methodology, and instructional best practices. Offered fall and winter semesters. Prerequisites: ED 310, ED 321, ED 331, ED 370, ED 379. Credits: 10

ED 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. Credits: 3

ED 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. Credits: 3

ED 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. Prerequisites: Successful completion of prior coursework. Credits: 3

ED 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. Prerequisites: Successful completion of prior coursework. Credits: 3

ED 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. Co-requisite: ED 441. Credits: 9

ED 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. Co-requisite: ED 442. Credits: 9

ED 480 - Special Topics in Education

Content area seminars and classroom issues. Topics include technology, diversity, collaboration, and content area integration. Offered fall and winter semesters. Co-requisite: ED 430. Credits: 2

ED 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. Prerequisites: ED 430 or ED 431. All may be taken concurrently. Credits: 3

ED 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. (Program outlines specify co-requisites.) Credits: 3

ED 497 - Educational Interventions: Cognitive Impairment

Study of the educational interventions appropriate for students with cognitive impairments. Offered winter semester. (Program outline specify corequisites.) Credits: 3

ED 498 - Educational Interventions: Emotional Impairment

Study of the educational interventions appropriate for students with emotional impairments. Offered winter semester. (Program outline specify corequisites.) Credits: 3

ED 499 - Independent Study and Research

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

ED 599 - Independent Study

Individual study of a theoretical or applied problem in education. Offered fall, winter, and summer semesters. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 4

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 630 - 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

ED 631 - English as a Second Language Methodologies

Study of methodologies and selected problems in teaching English as a second language. Exploration of curricula of school districts with application to classroom teachers. Offered every other year. Credits: 3

ED 632 - 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 session. Credits: 3

ED 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

ED 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

ED 635 - Survey of Urban Education

Study of the historical, sociological, and educational bases of urban education. Credits: 3

ED 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

ED 651 - Counseling and Guidance for the Classroom Teacher

Study of counseling processes applicable to the school setting. Basic principles related to diagnosing, interviewing, listening, communicating, assisting, and referring students for special assistance. Emphasis on relationships of teacher’s role in affecting the positive mental health of students. Theories of counseling and behavior change will be reviewed. Offered at least once a year. Credits: 3

ED 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

ED 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

ED 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

ED 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

ED 670 - Critical Issues in Special Education

Examination of current crucial issues in the administration of special education. Offered at least once a year. Credits: 3

ED 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

ED 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

ED 680 - Special Topics in Education

Study of selected topics in education. Offered upon sufficient demand. 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; ED 660; Application Required 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; ED 660; Application Required Credits: 3

ED 699 - Directed Readings

This course involves a research or reading project, program proposal, or other approved activity that builds on the student’s area of specialization. Offered fall, winter, and summer semesters. Prerequisite: Permission of the advisor and completion of at least 27 semester credits. Credits: 3

EDC 621 - The Profession of School Counseling

This course provides the student with an introduction to the profession of school counseling. It provides the students with background in the philosophy, principles, and practice of school counseling including professional knowledge of national standards and ethical and legal issues related to the school counseling profession. Offered at least once a year. Prerequisites: None. Credits: 3

EDC 623 - Personal/Social Development of Children in Schools

This course is designed for graduate students who intend to work as school counselors in elementary, middle, and high schools. It provides students with knowledge and practice in developmental counseling appropriate for children within a school setting and teaches skills and process for consulting with teachers, parents, and support personnel. Offered at least once a year. Prerequisites: None. Credits: 3

EDC 625 - Academic Counseling and Classroom Guidance

This course provides the student with strategies to support and enable children in schools to experience academic success. It includes the acquisition of skill in decision-making, problem solving and goal setting, critical thinking, logical reasoning, and interpersonal communication applied to academic achievement. Offered at least once a year. Prerequisites: None. Credits: 3

EDC 685 - Practicum/Internship in School Counseling

A field-based learning experience designed to provide work experience for graduate students in an area of school counseling. Each practicum/internship must be approved by the faculty coordinator/advisor. A practicum/internship seminar will meet weekly to provide university supervision. Offered fall and winter. Prerequisites: EDC 621, EDC 623, EDC 625 (may serve as co-requisite), EDG 649. Credits: 3 to 6

EDG 599 - Independent Study

Individual study of a theoretical or applied problem in education. Offered fall, winter, and summer semesters. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 4

EDG 600 - Content/Curriculum Workshops

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

Course Listing and Descriptions

EDG 601 - Content/Curriculum Workshops

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

EDG 610 - Advanced Studies in Child Development

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

EDG 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

EDG 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

EDG 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

EDG 617 - School Library Media Information Inquiry

This course explores the instructional role of the School Library Media Specialist (SLMS) in providing information literacy instruction across the curriculum through the examination of research and learning theories. Application and assessment of the information inquiry process in K-12 settings will be emphasized. Offered once a year. Credits: 3

EDG 622 - Information Resources: Selection and Management

Theoretical and practical aspects of the selection, evaluation, acquisition and management of collections in print, multimedia, and electronic formats. Acquisitions, publishers and publishing, policy making, intellectual freedom and user's rights, network and resource sharing are emphasized. Offering varies. Credits: 3

EDG 623 - Reference

This course introduces students to the basic information sources and services of the school library media center. Characteristics of and search strategies for the use of bibliographic, referral, citation, fact, numeric, and electronic resources are discussed. Offering varies. Credits: 3

EDG 624 - Cataloging and Processing

Designed to provide training in the technical services of cataloging and processing print, multimedia, and electronic materials for the school library media specialist. Topics include cataloging rules, filing rules, subject headings, and automated systems for technical services. Offering varies. Prerequisite: EDT 622. Credits: 3

EDG 625 - Media Center Administration

Designed to prepare the school library media specialist to perform the administrative functions of the school library media center: program planning; development and evaluation for learning and teaching; budgeting; public relations; collection and facilities design and development; personnel supervision; and information networking within the learning community. Offering varies. Credits: 3

EDG 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

EDG 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

EDG 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

EDG 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

EDG 635 - Development and Needs of Adolescents

Addresses the impact on teaching of student development, needs and characteristics (cognitive, social, physical, emotional, moral, and character); how family, peers, and society influence students; and the application of developmental and learning theories to school structure, classroom management, and teaching and learning activities. Offered at least once a year. Credits: 3

EDG 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

EDG 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. Three credits. Offered at least once a year. Credits: 3

EDG 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. Three credits. Offered at least once a year. Credits: 3

EDG 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

EDG 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

EDG 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

EDG 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

EDG 649 - Career Guidance

This course examines the principles and processes involved in providing career guidance. Students will explore a variety of theories, philosophies, and programs related to career guidance and career development and its important role in educational settings. Offered at least once a year. Credits: 3

EDG 650 - Materials and Methods for Adult and Continuing Education

Materials and methods of teaching the adult learner in school and non-school settings. Offered at least once a year. Credits: 3

EDG 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

EDG 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

EDG 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: EDG 651. Credits: 3

EDG 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: EDG 651. Credits: 3

EDG 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: EDG 647. Credits: 3

EDG 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

EDG 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 EDS 666. Offered at least twice a year. Credits: 3

EDG 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

EDG 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

EDG 669 - School Finance

The principles and theory underlying finance practice in public schools. Offered at least once a year. Credits: 3

EDG 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

EDG 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

EDG 672 - Policy Development

A series of competency modules dealing with various areas of special education. Offered at least once a year. Credits: 1

EDG 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

EDG 680 - Special Topics in Education

Study of selected topics in education. Offered upon sufficient demand. Credits: 1 to 3

EDG 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.

EDG 685A Elementary Education

EDG 685B Secondary Education

EDG 685D Early Childhood Education

EDG 685E Middle Level

EDG 685F Elementary Principal

EDG 685I Secondary Principal

EDG 685J School Library Media Services

EDG 685K TESOL

EDG 685L Adult and Higher Education.

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

EDG 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 (3 in Foundations and 18 in Emphasis Area) and EDG 685. Credits: 3

EDG 699 - Directed Readings

This course involves a research or reading project, program proposal, or other approved activity that builds on the student's area of specialization. Offered fall, winter, and summer semesters. Prerequisites: Permission of the advisor and completion of at least 27 semester credits. Credits: 3

EDG 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

Course Listing and Descriptions

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

EDG 750 - Curriculum Design: Policy and Process

This course focuses on concepts, strategies, and evaluation techniques for conducting curriculum planning and design, supporting curriculum development, and putting into place district curriculum and instruction models, practices, policies and processes that support teachers and the learning of all students. Offered at least once a year. Credits: 3

EDG 752 - Assessment and Accountability

This course will focus on planning, constructing, analyzing and applying educational assessment to document student performance for instructional and accountability purposes. Specific assessment and accountability topics may include: student-centered accountability; academic achievement scores; managing operations and resources; instructional research methodologies; as well as curriculum, teaching, and leadership practices. Offered at least once a year. Credits: 3

EDG 754 - Effective Professional Development

Systematic study of theories, models, research, plans and leadership responsibilities for professional development within a climate of high expectations and mutual support for learning. Analysis of staff development grounded in adult learning theories and ways professional development facilitates organizational culture, change, reform and district improvements consistent with the district's vision. Offered at least once a year. Credits: 3

EDG 780 - Special Topics in Education

Advanced topics for educational leaders in curriculum and/or instruction areas not ordinarily dealt with in other courses will be presented and explored. Offered as needed or in odd years. Credits: 3

EDG 799 - Independent Study Curriculum and Instruction

Student initiated advanced study or research in curriculum and instruction. 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

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: EDG 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: EDG 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 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: EDG 685. Credits: 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 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: 3

EDL 785 - District Leadership Internship

This course is the internship experience for the Educational Specialist in Leadership degree. It provides opportunities to work with district administrators in learning knowledge, skills and dispositions needed to be a school district leader. Offered as needed. Credits: 3

EDL 799 - Independent Study 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 599 - Independent Study

Individual study of a theoretical or applied problem in education. Offered fall, winter, and summer semesters. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 4

EDR 600 - Content/Curriculum Workshops

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

EDR 601 - Content/Curriculum Workshops

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

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. A K-8 teaching certificate is required to take this course. Offered Fall/Winter. Prerequisites: 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. A 6-12 teaching certificate is required to take this course. Offered Fall/Winter. Prerequisites: A 6-12 teaching certificate is required to take this course. 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. Prerequisites: 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. Prerequisites: none. 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. Prerequisites: none. 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. Prerequisites: EDR 621, and (EDR 622 or EDR 623). 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 every semester. Prerequisites: Teaching experience or acceptance into a graduate certification program. Credits: 3

EDR 680 - Special Topics in Education

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. Reading/Language Arts program with faculty guidance. Not to be used for initial certification. Completion of emphasis area and separate application to College of Education is required. Offered at least once a

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year. 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 696 - 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. Prerequisites: EDR 687; permit required. Credits: 3

EDR 699 - Directed Readings

This course involves a research or reading project, program proposal, or other approved activity that builds on the student's area of specialization. Offered fall, winter, and summer semesters. Prerequisites: Permission of the advisor and completion of at least 27 semester credits. 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 summer and fall semesters. Credits: 6

EDS 599 - Independent Study

Individual study of a theoretical or applied problem in education. Offered fall, winter, and summer semesters. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. Credits: 1 to 4

EDS 600 - Content/Curriculum Workshops

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

EDS 601 - Content/Curriculum Workshops

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

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. 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 in 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 Procedures for Placement & 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 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. 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 - Instructional Practices: Learning Disabilities 1

In this course, students will learn instructional practices for teaching fundamental listening, speaking, reading, and writing skills to children and adolescents with high incidence disabilities. Offered: fall and winter. Credits: 3

EDS 638 - Instructional Practices: Learning Disabilities 2

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. 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. Credits: 3

EDS 646 - Counseling Parents

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 665 - Foundations of Special Education Administration

A study of federal and state legislation affecting special education, the methods available for the evaluation of programs; needs assessment, evaluation of in-service, and the role of the special education administrator. Offered at least once a year. Credits: 3

EDS 666 - Curriculum Development in Special Education Administration

Study of the patterns of curriculum organization, teaching trends in special education areas of the curriculum, processes of curriculum improvement, and proposals for curriculum reform. May be combined with EDG 666. Offered at least once a year. Credits: 3

EDS 667 - Administration of Special Education

Theory and practice of personnel, finance, curriculum, and law in special education. Offered at least once a year. Prerequisite: EDS 665. Credits: 3

EDS 668 - Budget and Accounting

A series of competency modules dealing with various areas of special education. Offered at least once a year. Credits: 1

EDS 669 - Special Education Law

Specific local, state, and federal laws governing special education programs and services will be discussed in detail. The impact, application of the laws, and strategies for complying with them in the K-12 setting are major areas of focus. Credits: 1 to 3

EDS 670 - Computers in Instruction

A series of competency modules dealing with various areas of special education. Offered at least once a year. Credits: 1

EDS 671 - Computers in Management

A series of competency modules dealing with various areas of special education. Offered at least once a year. Credits: 1

EDS 672 - 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: 1 to 3

EDS 673 - School and Community Relations

A series of competency modules dealing with various areas of special education. Offered at least once a year. Credits: 1 to 3

EDS 674 - In-Service Education

A series of competency modules dealing with various areas of special education. Offered at least once a year. Credits: 1

EDS 675 - Facilities Planning

A series of competency modules dealing with various areas of special education. Offered at least once a year. Credits: 3

EDS 676 - School Board Relations

A series of competency modules dealing with various areas of special education. Prerequisites: Teacher certification; admitted to the College of Education or permit. Credits: 1

EDS 678 - Spec. Ed. Supervisor Proficiency Capstone

The Special Education Supervisor Proficiency Capstone is designed to measure a candidate's knowledge and competency in specific areas required in Michigan Special Education Law (i.e. School Law, Curriculum, Personnel Administration, Current Issues and Special Education Administration). Students must pass this proficiency capstone to receive supervisor approval. Credits: 1

EDS 679 - Special Education Director Proficiency Capstone

The Special Education Director Proficiency Capstone is designed to measure a candidates knowledge and competency in special areas required in Michigan Special Education Law (i.e. Special Education Law, Special Education Administration, Facilities Planning, and Special Education Finance). Students must pass this capstone to receive director approval. Credits: 1

EDS 680 - Special Topics in 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.

EDS 685A Special Education Supervisor

EDS 685B Special Education Director

EDS 685C Emotional Impairment

EDS 685E Cognitive Impairment

EDS 685H Learning Disabilities

EDS 685J Early Childhood Developmental Delay

EDS 685K Autism

Offered at least once a year. Credits: 3 or 6

EDS 686 - Internship in Special Education

One-year paid internship in a classroom for the handicapped under supervision of an intern consultant from Grand Valley. Fee required. Offered fall and winter semesters. Requires special application and admission procedure, done during winter semester. Credits: 9

EDS 699 - Directed Readings

This course involves a research or reading project, program proposal or other approved activity which builds in the student's area of specialization. Prerequisites: Prior approval of advisor and unit head and demonstrated ability to pursue special study; admitted to the College of Education or permit. Credits: 3

EDT 618 - Introduction to Computers in Education

For teachers with little computing experience. This course provides an introduction to the use of computers in educational settings, including hands-on use of productivity and communication software. Students who submit a portfolio demonstrating mastery may take an elective technology-related course instead. Offered every semester. Credits: 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

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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. Offered fall semester. Credits: 3

EDT 621 - Topics in Educational Technologies

Advanced study of issues related to school-wide adoption of technology and the impact on teachers, administrators, and others involved in K-12 education. This course covers a broad range of topics, including distance education, video technology, funding educational technology projects, ethical uses of technology, networking, technology adoption planning, and field-based experiences. Offered winter semester. Credits: 3

EDT 626 - Assessment/Evaluation with Ed. 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 technology-based environments, uses of technology to support diversity and assessment, alternative forms of assessment made possible with technology supporting student needs. 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 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

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, discussion, hands-on learning activities, and field trips. (0-1-1) Offered fall semester. Credits: 1

EGR 101 - Computer Aided Design and Manufacturing

Introduction to the engineering design process using solid modeling and computer-aided manufacturing. Students work individually and in teams to design and build several products of increasing complexity using standard industry software and CNC milling machines. Graphical communication, 2D and 3D sketching, orthographic detail drawings, sectioning, dimensioning, tolerancing, and assembly drawings. Laboratory. (2-0-3) Offered fall and winter semesters. Prerequisites:

MTH 122 and MTH 123, or college preparatory algebra and trigonometry and MTH 201 (may be taken concurrently). Credits: 3

EGR 102 - Engineering Strategies

Current issues in undergraduate engineering education, the engineering profession, and the societal context in which engineering work is done. Discussion of engineering activities and engineered products. Sourcing and long distance collaboration issues are included. Emphasis on curriculum, time management, student life, environmental issues and professional ethics. Offered fall semester. Prerequisite: MTH 201 (may be taken concurrently). Credits: 1

EGR 103 - Engineering Measurement and Analysis

An introduction to basic engineering measurement and analysis. Topics include measurement techniques and instrumentation, conduct of experiments, data analysis, statistical error analysis, uncertainty propagation, and mathematical methods in measurement. Students improve technical communication skills through formal laboratory reports and oral presentations. Laboratory. (2-0-3) Offered fall and winter semesters. Prerequisites: MTH 201 with a grade of C or better or permission of instructor. WRT 150 (may be taken concurrently). Credits: 3

EGR 105 - Product Design and Prototyping

Introduction to the fundamentals of product design and prototyping, including the safe use of hand and power tools commonly employed in engineering shop practice. Various exercises and short projects that involve the use of common tools and machines. Intended for students with little or no exposure to shop practice. Laboratory. (1-0-2) Offered fall and winter semesters. Prerequisites: MTH 122 and MTH 123. Credits: 2

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: MTH 202 and PHY 230. Admitted ZEGR or permit. Credits: 4

EGR 210 - Solid Mechanics

Designed for transfer students who have had a statics course but not a solid mechanics course. Topics include stress/strain diagrams, generalized Hooke's law, stress and strain due to axial, torsional shear, and flexural loads. (1-0-0) Offered fall semester. Prerequisites: Sophomore level course in statics. Admitted ZEGR or permit. Credits: 1

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, time-domain analysis of first order circuits. Laboratory. (3-0-3) Offered fall and winter semesters. Prerequisites: MTH 202 and PHY 230 (may be taken concurrently). Admitted ZEGR or EGR or permit. 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). Admitted ZEGR or EGR or permit. Co-requisite: STA 220. Credits: 1

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. Prerequisite: EGR/CIS 261. Admitted ZEGR or EGR 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, performance and application in engineering. Materials selection exercises are included. Laboratory. (3-0-3) Offered winter and spring/summer semesters. Prerequisites: CHM 115 and PHY 234 or PHY 231. Credits: 4

EGR 257 - Electronic Materials & 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, fundamental of semiconductor devices including diodes and transistors. Laboratory activities. Offered winter semester. Prerequisites: CHM 115 and PHY 231 or PHY 234. Credits: 4

EGR 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. A dual listing of CIS 261. (0-2-2) Offered every semester. Prerequisite: MTH 201 (may be taken concurrently). Admitted ZEGR or EGR or permit. Credits: 3

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: MTH 202. Admitted ZEGR or EGR or permit. 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. Prerequisites: Acceptance into B.S.E. degree program, employability through standard interview process, EGR 289. Must have permission of the co-op director. 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). Credits: 4

EGR 304 - Innovation

An exploration of innovative techniques used in the development of new products and systems. Applying idea generation techniques. Balancing

divergent thinking with decision making. Recognizing and managing conditions and activities supportive of an innovative environment. Examining the benefits and risks of innovative behaviors. The nature of innovation and technological advancement. Part of the Creativity: Ideas & Innovation theme. Offered fall and winter semesters. Prerequisites: Junior Standing. 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, introduction to strain gages and rosettes. Laboratory. (3-0-3) Offered spring/summer semester. Prerequisites: EGR 209 and either ZEGR or EGR major standing. Credits: 4

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. Offered fall semester. Prerequisites: EGR 209. Admitted EGR or permit. 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 EGR or permit. 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 EGR or permit. 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) Offered spring/summer semester. Prerequisites: EGR 314. Admitted to EGR or permit. Credits: 3

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 EGR or permit. Credits: 4

EGR 329 - Introduction to Finite Element Analysis

Main Topics: Modeling techniques, element technology, materials, loading, constraints and results post processing 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 summer semesters. Prerequisite: EGR 309. 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

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systems, fault analysis, and contemporary safety, social and environmental issues. (3-0-3) Laboratory. Offered spring/summer semester. Prerequisites: EGR 314. Credits: 4

EGR 335 - 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 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; and EGR 314. 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, computer simulation. Emphasis on mechanical systems. Laboratory. (3-0-3) Offered fall semester. Prerequisites: EGR 214 and MTH 302. Admitted to EGR or permit. 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. Offered spring/summer semester. Prerequisites: EGR 345. Admitted to EGR or permit. 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. Offered winter semester. Prerequisite: EGR 312, MTH 302. Admitted to EGR or permit. 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, heat exchanger design. Offered fall and winter semesters. Prerequisites: PHY 231 or PHY 234, and Math 302. Admitted to EGR or permit. 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, open channel flow. Laboratory. (3-0-3) Offered spring/summer semester. Prerequisites: EGR 312, EGR 360, or permission of the instructor. Admitted to EGR or permit. Credits: 4

EGR 366 - Combustion Applications

A comprehensive overview of combustion chemistry and the theory of reacting systems. The theoretical and practical aspects of the major technologies based on combustion are emphasized. Topics include internal combustion engines, liquid-propellant rockets, turbines and fossil fuel power plants. Environmental aspects and incineration issues are stressed.

Offered spring/summer semesters of odd numbered years. Prerequisite: EGR 365 (may be taken concurrently). 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: EGR 250. Admitted to EGR or permit. Credits: 4

EGR 370 - Engineering Acoustics

An introduction to acoustics and control of sound. Propagation of sound in air, enclosures, and architectural structures. Psycho-acoustics and human sensation to sound. Laboratory. (3-0-3) Offered winter semester. Prerequisites: EGR 314. Admitted to EGR or permit. 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 EGR or permit. 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, continued acceptance into BSE degree program, and employability through standard interview process. Must have permission of the co-op director. 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 EGR or permit. 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. Offered winter semester. Prerequisites: EGR 301. 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. Offered winter semester. Prerequisite: Admission to the engineering program. Credits: 4

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 409 - Machine Design II

Topics include design of screws, clutches, brakes, belts, gears, journal bearings, roller bearings, and planetary gear trains. Offered winter semester. Prerequisite: EGR 309. Admitted to EGR or permit. Credits: 4

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) Offered alternating fall and winter semesters. Prerequisites: EGR 323. Admitted to EGR or permit. 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) Offered alternating fall and winter semesters. Prerequisite: EGR 323. 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) Offered spring/summer semester. Prerequisites: EGR 326. Admitted to EGR or permit. 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) Offered winter semester. Prerequisites: EGR 326. Admitted to EGR or permit. 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) Offered winter semester. Prerequisites: EGR 330. Admitted to EGR or permit. 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, quantification, segmentation, and pattern analysis. EE/CE. Offered winter semester. Prerequisites: EGR 323, Admission to EGR. Prior admission from Instructor. 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. EE elective. Offered fall semester. Prerequisites: EGR 323, MTH 203, Admission to EGR, and prior permission from Instructor. Credits: 3

EGR 436 - Analog Circuit Design

A continuation of EGR 315. Topics covered include high frequency modeling and frequency response of transistor circuits, feedback amplifier systems and their implementation, oscillators, power amplifiers, timers, D/A and A/D converter circuit design, low-power power supply design. Laboratory. Offered winter semester. Prerequisites: EGR 315. Credits: 4

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. Prerequisites: Engineering major with senior standing or permission of the instructor. Credits: 3

EGR 445 - Robotics 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. Prerequisite: EGR 345. 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. Offered winter semester. Prerequisite: EGR 345. 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. (3-0-3) Offered spring/summer semester. Prerequisites: EGR 345. Admitted to EGR or permit. 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. Offered fall semester. Prerequisite: EGR 250. 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, compensator design and implementation. Laboratory. (3-0-3) Offered alternating fall and winter semesters. Prerequisites: EGR 323. Admitted to EGR or permit. 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. Offered spring semester. Prerequisites: EGR 315 and EGR 323. Credits: 3

EGR 468 - Heat Transfer

Study of the mechanisms by which heat is transferred in different media including 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 EGR or permit. Credits: 4

EGR 473 - Strategic Manufacturing Engineering Considerations

A study of the pervasive issues in the Manufacturing Enterprise, including Life Cycle Analysis, Quality Function Deployment, environmentally responsible design, product safety, and economic justification. Offered spring/summer semester. Prerequisites: EGR 367. Credits: 4

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EGR 474 - Systems Integration

An introduction to systems integration with an emphasis on manufacturing. Topics include programming, robots, databases, serial communication, networking and system architecture. The course includes extensive use of hands-on laboratories and projects. Laboratory. (0-3-3) Offered spring/summer semester. Prerequisites: EGR 450 or EGR 326. 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. (3-0-3) Offered spring/summer semester. Prerequisites: EGR 468. Admitted to EGR or permit. Credits: 4

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. 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: Senior engineering students in good standing. 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. Prerequisites: EGR 485. Admitted EGR or permit. 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, continued acceptance into BSE degree program, and employability through standard interview process. Must have permission of the co-op director. Credits: 3

EGR 499 - Research in Engineering

Investigation of current ideas and techniques in engineering for upperclass 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: 25 credits in engineering and permission of the director of the School of Engineering. Credits: 1 to 4

EGR 520 - Traditional Manufacturing Processes

Overview of the major processes by which durable goods are manufactured as well as material properties relevant to those processes. Mechanical properties of metals, plastics, glass, wood, and composites. Processes include casting, forging, drawing, sheet metal forming, material removal, joining, and fastening. Offered winter semesters. Prerequisite: Permission of Director. Credits: 2

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 MSE 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. Prerequisites: 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 MSE 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 - Design for Manufacturability

An integrated approach to producing capable designs. Topics include value engineering, cost estimating, break-even analysis, ergonomics, design for manufacturing processes and operations as well as for the environment, repair/maintenance, testing, and supportability. A course project is used to unify these topics. Offered fall semester. Prerequisite: EGR 610. Credits: 3

EGR 615 - Applied Finite Element Analysis

Fundamentals of structural finite element modeling. Geometry creation, element types, material specification, problem solution and results post-processing. A focus is placed on modeling techniques and guidelines using commercially available software. Offered winter semester. Credits: 3

EGR 616 - Experimental Stress Analysis

Fundamentals of experimental stress analysis. Included are analytical and experimental approaches to accurate stress determination, photoelasticity, strain gage techniques and instrumentation, and applied problems. Offered fall semester. Prerequisite: Admission to the MSE Program. 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 MSE Program. Credits: 3

EGR 630 - Contemporary Manufacturing Controls

Methods for the design and implementation of nonlinear control systems are examined. Topics include contemporary control methods such as Petri nets, fuzzy logic, and neural networks. Control systems are discussed and implemented. Offered winter semester. Prerequisite: EGR 604 (may be taken concurrently). 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 include 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 644 - Manufacturing Work Environments

The application of the classical techniques of industrial engineering to current manufacturing engineering practice. Methods engineering, work measurement techniques and applications, time standards, compensation, human behavior, human factors, cost and budgetary control. Emphasis on case studies. Offered spring/summer semester. Prerequisite: EGR 600. 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 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

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 masters 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 - Masters 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 - Masters Project (MSE capstone)

An individualized project involving the development of an engineered product or system. The nature and scope of the project are determined by the student in consultation with and approval of the instructor. Offered winter semester. Prerequisites: EGR 692. Admitted EGR or permit. Credits: 3

EGR 696 - Masters Thesis Research

Student performs research under the guidance of an advisor that will lead to a 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. May be repeated once. Offered every semester. Prerequisites: Permission of the graduate program chair. Credits: 3

EGR 697 - Masters Thesis (MSE capstone)

Completion of a thesis under the guidance of an advisor that results in a publicly disseminated thesis. Involves working with a thesis committee and a formal defense of the thesis. The student will register for this course in the semester in which the thesis will be completed and defended before the thesis committee. Offered every semester. Prerequisites: EGR 696. Permission of the graduate program chair. Credits: 3

EGR 699 - Independent Study in Engineering

Independent supervised study on selected topics. Offered upon demand. Prerequisites: Permission of instructor. Credits: 1 to 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 (non-graduation) 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. Offered fall and winter semesters. Credits: 3

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 Philosophy and Literature Foundation. Offered fall and winter semesters. Prerequisites: Fulfillment of the freshman writing requirement. 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

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preoccupations. Fulfills World Perspectives requirement. Offered fall and winter semesters. Prerequisites: Fulfillment of the freshman writing requirement. 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 Philosophy and Literature Foundation. Offered fall and winter semesters. Prerequisites: Fulfillment of the freshman writing requirement. Credits: 3

ENG 215 - Foundations of Literary Study: Genre

The course examines a variety of literary genres (including fiction, poetry, drama and non-fiction) 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 Analysis

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. Prerequisites: Fulfillment of the freshman writing requirement. 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. Prerequisites: Fulfillment of the freshman writing requirement. 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. Prerequisites: Fulfillment of the freshman writing requirement. 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. Prerequisites: Fulfillment of the freshman writing requirement. Credits: 3

ENG 231 - Early African American Literature

Analysis and discussion of discourse primarily written by African Americans during the formative years of this nation. Emphasizes literary discourse as a means of defining African American consciousness and community, and understanding how African Americans communities of origin shaped African-American discursive expression. Cross-listed with AAA 231. Students may not receive credit for both. Fulfills World Perspectives, and Philosophy and Literature Foundations requirements. Offered fall semester. Prerequisites: Fulfillment of the freshman writing requirement. 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. Prerequisites: Fulfillment of the freshman writing requirement. Credits: 3

ENG 236 - Introduction to Writing by Women

Introduction to the tradition of women writing in English. Emphasis on the cultural and historical contexts of British, American, and Anglophone women's writing. Course will include a variety of texts and authors, including significant attention to minority women writers. Cross-listing with WGS 236. Offered fall semester, odd years. Prerequisites: Fulfillment of the freshman writing requirement. 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 semester. Credits: 3

ENG 302 - Introduction to Language Arts: Teaching Writing & 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 (ED 200 or ED 337). 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: Fulfillment of the freshman writing requirement 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: Fulfillment of the freshman writing requirement 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: Fulfillment of the freshman writing requirement 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: Fulfillment of the freshman writing requirement 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: Fulfillment of the freshman writing requirement 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. Prerequisites: Fulfillment of the freshman writing requirement. 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. Prerequisites: Fulfillment of the freshman writing requirement. 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. Offered odd years, fall semester. Prerequisites: Fulfillment of the freshman writing requirement and ENG 220 and ENG 221 or permission of instructor. May be repeated for credit if content varies. 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. Offered even years, winter semester. Prerequisites: Fulfillment of freshman writing requirement and ENG 220 and ENG 221 or permission of instructor. May be repeated for credit if content varies. 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. Offered even years, fall semester. Prerequisites: Fulfillment of the freshman writing requirement and ENG 220 and ENG 221 or permission of instructor. May be repeated for credit if content varies. Credits: 3

ENG 324 - British Literature: Victorian-Present

An in-depth study of texts, themes, and authors representative of British literature and post-Colonial Anglophone literature from the Victorian period through the present. Topics vary by semester. Offered odd years, winter semester. Prerequisites: Fulfillment of the freshman writing requirement and ENG 220 and ENG 221 or permission of instructor. May be repeated for credit if content varies. Credits: 3

ENG 325 - American Literature to 1800

Intensive study of major authors, literary movements, and themes from America's pre-Colonial 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; early American poetry, drama, and fiction. Offered odd years, fall semester. Prerequisites: Fulfillment of the freshman writing requirement, ENG 225 and ENG 226 or permission of instructor. May be repeated for credit if content varies. Credits: 3

ENG 326 - Nineteenth-Century American Literature

Intensive study of major authors, literary movements and themes from the post-Revolutionary 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 content varies. Offered even years, winter semester. Prerequisites: Fulfillment of the freshman writing requirement, ENG 225 and ENG 226 or permission of instructor. 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 years, fall semester. Prerequisites: Fulfillment of the freshman writing requirement, ENG 225 and ENG 226 or permission of instructor. May be repeated for credit if content varies. 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 Non-Fiction Novel; Travel Narratives, and developments in contemporary genres. Offered odd years, winter semester. Prerequisites: Fulfillment of the freshman writing requirement, ENG 225 and ENG 226 or permission of instructor. May be repeated for credit if content varies. 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 the literature of African American, Native American, Asian American, and Hispanic American authors. Emphasis on themes, literary styles, and the historical and social experience of marginality on the literature. Part of Marginality and Difference theme. Fulfills U.S. Diversity requirement. Offered fall and winter semesters. Prerequisites: Fulfillment of the freshman writing requirement. 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 non-fictional 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

Course Listing and Descriptions

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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Offered even years, winter semester. Prerequisites: Fulfillment of the freshman writing requirement and one literature course. Cross listed with SPA 378 and LAS 378. Students may not receive credit for more than one. 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. Prerequisites: One literature foundation course. Credits: 1 to 3

ENG 381 - Regional Discourses in US Civil Rights

Regional differences in US Civil Rights' discourse. Part of the Civil and Human Rights Movements theme. Offered even years, fall semester. Prerequisite: Fulfillment of freshman writing requirement. Credits: 3

ENG 382 - Nature Writing

Focuses on the literature that deals with the relationship between human beings and the natural world. Includes literary non-fiction, nature poetry, environmental fiction, and other forms of literature that illuminate both human and non-human nature. In addition to writing analytical papers, students will try several forms of nature writing. Part of Earth and Environment theme. Offered fall and winter semesters. Prerequisite: Fulfillment of freshman writing requirement. 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. Part of Changing Ideas: Changing Worlds theme. Offered fall and winter semesters. Prerequisites: Fulfillment of the freshman writing requirement. Credits: 3

ENG 384 - Literary Responses to War and Peace

Course uses literary texts to explore the causes and consequences of war from a variety of perspectives. Works may include short stories, novels, poetry, non-fiction essays, autobiographies. Part of the War and Peace theme. Offered fall and winter semesters. Prerequisite: Fulfillment of freshman writing requirement. Credits: 3

ENG 385 - Writing and Revolution in the Americas

Examines literary responses to various forms of revolutionary change in the Americas. Students consider the ways in which writers have responded to major transformations in societies across the Western Hemisphere. Profound societal changes are examined against the backdrop of everyday life and the persistence of the status quo. Part of the Continuity and Change in the Americas theme. Offered winter semester. Prerequisites: Fulfillment of the freshman writing requirement. Credits: 3

ENG 386 - Literary Responses to Death and Dying

This course uses literary texts to acquaint students with the variety of responses of different cultures to issues surrounding death and dying. Works may include nonfiction, memoir, poetry, drama, and fiction. Part of the Death and Dying theme. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. 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, language and politics. May be repeated for credit. Prerequisites: Fulfillment of the freshman writing requirement. 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. Part of Freedom and Social Control theme. Offered winter semester. Prerequisites: Fulfillment of the freshman writing requirement. 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: Fulfillment of the freshman writing requirement. Prior approval of instructor. Credits: 1 to 4

ENG 400 - Language Arts for Teaching

Integrates the theories of teaching elementary children the skills of reading, writing, speaking, and listening. Offered fall and winter semesters. Prerequisites: Senior standing. 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 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 post-modernism. Offered odd 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-listing with WGS 461. 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 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 (capstone).

Capstone course required of all English majors. Focuses on the issues and problems inherent in the study of language and literature through the comparative study of twentieth-century critical theories, with significant attention to current trends. Offered fall and winter semesters. 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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 non-fiction) and of the nature of the genre, focusing on selected works. May be repeated for credit when content varies. Offered every year. Prerequisites: 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 fall and winter semesters. Prerequisites: 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 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. Prerequisites: Completion of English major or minor or consent of instructor. Credits: 3

ENG 641 - History of the English Language

Presents the assumptions and historical background necessary to an understanding of the changes in the English language. Also emphasizes one aspect of linguistic change, such as vocabulary and dictionaries, varieties of English, grammatical change, or phonology. Offered every other year. Prerequisites: 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. Prerequisites: 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.

Course Listing and Descriptions

Offered every other year (odd years). Prerequisites: 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. Serves as a prerequisite for ENG 662, ENG 664, ENG 665, and ENG 668. Students must receive a grade of C (not C-) or better to fulfill this prerequisite. Required of those seeking Michigan ESL endorsement. 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 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. Prerequisites: Completion of English major or minor or consent of instructor. Credits: 3

ENG 664 - Sociolinguistics and Language Teaching

The study of sociolinguistic theories investigating the interaction of language and society in the classroom, grades K-12. An examination of the social and cultural aspects of language, language use, and teaching. Particular emphasis on English as a second language, bilingual and multilingual educational situations, and cultural influences on learning, communications, and ideology. Required of those seeking Michigan ESL endorsement. Offered winter semester. Prerequisites: Completion of ENG 660 or equivalent. 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. Required of those seeking Michigan ESL endorsement. Offered winter semester. Prerequisites: Completion of ENG 660 or equivalent. 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. Prerequisites: Completion of ENG 660 or equivalent. Credits: 3

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 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 and approval of thesis proposal. Credits: 1 to 3

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 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 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, 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

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. Prerequisites: ENT 150. Credits: 3

ENT 250 - Entrepreneurial Finance and Accounting

This course begins the process of business plan development by incorporating the raising of capital through multiple sources, risk management and controls, capital budgeting, costing, financial statement and working capital analysis, and the management of information systems. Offered every semester. Prerequisites: ENT 151. 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. Prerequisites: ENT 251. 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 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. Prerequisites: ENT 350. Credits: 3

ESL 098 - English as a Second Language (ESL): Composition

Provides non-native 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. 4 (non-graduation) credits. Offered fall semester. Credits: 4

FIN 221 - Personal Finance

Designed for the non-finance 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 fall and winter semesters. 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 fall and winter semesters. 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 winter semester. 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 semester. Prerequisites: 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 semester. Prerequisites: 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. Prerequisites: FIN 322. 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. Prerequisites: 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. Prerequisites: 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 fall semester. Credits: 3

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

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 the instructor required. Offered each semester. Credits: 1 to 3

FIN 521 - Data Analysis in Business

The application of quantitative tools to problems encountered by business with emphasis on business case studies; basics of data presentation and descriptive methods; computer-based empirical modeling; methods of sampling in business; and discussion of commonly encountered problems in the interpretation of financial and other business data. Equivalent to STA 215. Offered fall and winter semesters. Credits: 2

FIN 522 - Finance Principles for Managers

A development of the foundation tools of business finance for M.B.A. students. Topical coverage includes basics of financial analysis and cash flow analysis, time value of money, stock and bond evaluation, introduction to risk and return, and basics of capital budgeting. A financial calculator may be required. Offered fall and winter semesters. Prerequisites: ACC 511 and FIN 521, or equivalents. Equivalent to FIN 320. Credits: 2

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. Prerequisites: FIN 522 or equivalent. 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. Prerequisites: FIN 621. Credits: 3

Course Listing and Descriptions

FIN 626 - Advanced Managerial Finance

Application of principles of finance to solving selected business case problems and analyzing current financial events. Prerequisites: 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; 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. Prerequisite: FIN 621. 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. Prerequisites: FIN 621. 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

FRE 101 - Elementary French I

An introduction to the language with emphasis on understanding, speaking, and reading, complemented by taped materials available in the language laboratory. Not for credit for students with prior college French or more than two semesters of high school French. Offered fall, winter and spring/summer semesters. Credits: 4

FRE 102 - Elementary French II

Continuation of FRE 101. Students may not receive credit for both FRE 150 and FRE 102. Required independent lab work assigned by instructor. Offered fall, winter and spring/summer semesters. Prerequisites: C (not C-) or better in FRE 101, or credit, or appropriate placement test score. Credits: 4

FRE 150 - Intensive Elementary French

One semester review of elementary French for students with prior study but who are not adequately prepared for 200-level courses. 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: appropriate high school background or placement test score. 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

Continuation of FRE 102 or FRE 150. Offered fall, winter and spring/summer semesters. Prerequisites: C (not C-) or better in FRE 102 or FRE 150, or credit, or appropriate placement test score. Credits: 4

FRE 202 - Intermediate French II

Study of written language through readings from modern authors, continued practice in listening and speaking, review of grammar. Fulfills World Perspective requirement. Offered fall and winter semesters.

Prerequisites: C (not C-) or better in FRE 201, or credit, or appropriate placement test score. 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. Prerequisites: FRE 201. Credits: 1 to 6

FRE 300 - 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 core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307 or permission of instructor. Credits: 3

FRE 301 - Introduction to Literature

Students read entire literary texts and poetry. They are introduced to the analysis of literary texts, and to literary translation. By close reading and study, students develop the confidence and competence needed to pursue further study of literature in French. FRE 301 must be taken before any other literature course in French. A French core curriculum course required for advanced study. Offered fall and winter semesters. Prerequisites: C (not C-) or better in FRE 202 or permission of instructor and C (not C-) or better in FRE 306. Credits: 3

FRE 302 - Survey of French Literature II

A survey of French literature of the 17th and 18th centuries. Offered winter semester in odd-numbered years. Prerequisites: C (not C-) or better in core curriculum course, FRE 301, FRE 304, FRE 306 and FRE 307 or permission of instructor. Credits: 3

FRE 303 - Survey of French Literature III

A survey of French literature of the 19th and 20th centuries. Required independent lab work assigned by instructor. Offered fall semester in even-numbered years. Prerequisites: C (not C-) or better in core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307 or permission of instructor. Credits: 3

FRE 304 - French Conversation

Extensive practice in oral communication. Offered fall and winter semesters; and offered spring/summer on sufficient demand. Prerequisites: C (not C-) or better in FRE 202 or permission of instructor. A French core curriculum course required for advanced study. Credits: 3

FRE 305 - French Phonetics

Intensive study of the basic principles of French phonetics with the emphasis on improving pronunciation and aural comprehension. Introduction to principles of French pronunciation, the International Phonetic Alphabet, and phonetic transcription. Intensive exposure to French through a variety of media, including the language laboratory, and practice with each major phoneme. Offered fall semester. Prerequisites: C (not C-) or better in FRE 202, and one other course at the 300 level, or permission of instructor. Credits: 3

FRE 306 - French Composition

Extensive practice in written composition. Review of the finer points of grammar and study of stylistic techniques through an analysis of excerpts from French literature. A French core curriculum course required for advanced study. Offered fall and winter semesters; and offered spring/summer on sufficient demand. Prerequisites: C (not C-) or better in FRE 202. Credits: 3

FRE 307 - 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 is designed to help students expand their French skills to a level appropriate for third- and fourth-year reading and writing courses. Offered fall and winter semesters. Prerequisites: C (not C-) or better in FRE 202, or permission of instructor. A French core curriculum course required for advanced study. Credits: 3

FRE 308 - 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.

Prerequisites: C (not C-) or better in core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307 or permission of instructor. Credits: 3

FRE 310 - Contemporary France

French civilization and culture as seen through books, periodicals, and films; discussion of current events. Offered winter semester odd-numbered years. Prerequisites: C (not C-) or better in core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307 or permission of instructor. Credits: 3

FRE 312 - Francophone Civilization

The study of aspects of French and Francophone culture. Topics include language and communication; marriage, the family and gender roles; immigration and colonization; socio-political institutions; and the arts. Materials are drawn from novels, short stories, plays, newspapers, films, music, and video documentation. Offered fall semester odd-numbered years. Prerequisites: C (not C-) or better in core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307 or permission of instructor. Credits: 3

FRE 350 - Business French

Study of the economy and business practices in France. The French language as used in business, cultural differences, new technologies. Conducted in French. Credit toward French minor, and for civilization track. Offered fall semester odd-numbered years. Prerequisites: C (not C-) or better in FRE 202 or permission of instructor. Credits: 3

FRE 355 - Introduction to French Linguistics

An introduction to general linguistics through the French language. Phonology, sociolinguistics and dialectology, applied linguistics, bilingualism and language contact. Offered winter semester. Prerequisites: C (not C-) or better in core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307, and FRE 305, 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. Offered on sufficient demand. Prerequisites: C (not C-) or better in core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307 or permission of instructor. Credits: 1 to 6

FRE 399 - Independent Reading

Offered fall and winter semesters. Credits: 1 to 4

FRE 410 - Medieval or Renaissance French Literature

Course focus alternates. Study of representative French medieval works. Readings include poetry, courtly literature, fables, farces, and theatre. The Renaissance course explores historical and cultural topics and their impact on 16th century literatures. May not be repeated for credit. Offered fall semester even-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 300, or permission of instructor. Credits: 3

FRE 412 - French Literature of the 17th or 18th Century

Course focus alternates. 17th: Classical literature in social context. Social mobility, court/city rivalry, the female condition, education, social distinction. 18th: 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 core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307, and C (not C-) or better in FRE 302, or permission of instructor. Credits: 3

FRE 414 - French Literature of the 19th Century

Study of drama, criticism, poetry, and the novel of the 19th century. Offered winter semester in even-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 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 420 - 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 core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307, and C (not C-) or better in FRE 312, 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 core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307 or permission of instructor. Credits: 1 to 4

FRE 495 - Advanced Topics in French (capstone)

Content varies according to the instructor: French studies in Literature, Linguistics, or Civilization. The capstone course connects the different fields of specialization by providing a forum with invited guests, who will complement the current instructor's perspective. All presentations and papers will be geared toward the students' chosen track. Offered winter semester. Prerequisites: C (not C-) or better in core curriculum courses, FRE 301, FRE 304, FRE 306 and FRE 307, or permission of instructor, and senior standing. Credits: 3

FRE 499 - Independent Study and Research

Offered fall and winter semesters. 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 non-science majors; not for Geology or Earth Science majors. Lectures and field trips. Fulfills Physical Sciences Foundation. (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 Physical Sciences Foundation. (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 Physical

Course Listing and Descriptions

Sciences Foundation. (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 Physical Sciences Foundation. (3-0-2) Offered each semester and in summer. Credits: 4

GEO 112 - Earth History

Introduction to geological structures, stratigraphic relations, and fossils as instruments for studying the physical and biological events of Earth history. Lecture, laboratories, and field trips. (3-1-2) Offered fall and winter semesters. Prerequisites: A course in physical or general geology. Credits: 5

GEO 175 - Info-Tech for Earth Scientists

A basic introduction to information sources and technology in Earth Science and Geology. Skills gained, such as making digital presentations and preparing electronic poster presentations, will be built upon in subsequent Geology courses. Integrated lectures and computer laboratories. Offered fall and winter. 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 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 for K-8 Pre-Service Teachers

Introduction to how the atmosphere works emphasizing a descriptive approach. Includes daily, seasonal, and long-term changes, weather patterns, and relationships between human activities and the atmosphere. Course is intended for Integrated Science majors. Does not fulfill requirements for other majors or minors. Content reflects national and Michigan Science standards. Lecture and laboratory. (1-0-2) Offered fall and winter semesters. Credits: 3

GEO 210 - Rocks and Minerals

Hand specimen study of common rocks, minerals, and fossils. Especially suitable for teacher candidates. Does not count toward the Geology major. Lectures, laboratory, and field trips (one full Saturday, one Saturday morning, and three class-time trips are required). (3-0-2) Offered summer semester on demand. Credits: 4

GEO 211 - Mineralogy

The study of mineral growth, structure and occurrence. The determination of minerals by their physical, chemical, and crystallographic properties. Lectures and laboratory. (3-1-4) Offered fall semester. Prerequisites: GEO 111 and CHM 115. Credits: 4

GEO 212 - Petrology

Topics include the origin, nature, occurrence, and identification of rocks. Lectures and laboratory. (3-1-2) Offered winter semester. Prerequisites: GEO 112, GEO 211, and CHM 115. Credits: 5

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 285 - Regional Field Geology

One- to two-week trips to New England, Appalachian, Ozark-Ouachita, or Lake Superior regions to study regional aspects of lithology, stratigraphy, structure, fossils, landforms, and geological history. Pre-trip report required. Offered on sufficient demand. Prerequisites: GEO 111 and permission of instructor. Credits: 1 or 2

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. Part of the Earth and Environment theme; 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 305 - Resource Exploitation in the Third World

Numerous nonrenewable fuel (energy) and non-fuel (mineral) resources are exported from developing countries for use by industrialized nations. This course examines the relationship between geology, location, and production/exportation of third world resources by developed nations and the implications of resource depletion. Part of The New Third World theme; not included in the Geology/Earth Science major or minor. (3-0-0) Prerequisites: Junior standing and completion of physical and life sciences foundation. General Education requirement. Credits: 3

GEO 310 - Plate Tectonics

An upper-level course that explores the fundamental science behind plate tectonics, Geology's major paradigm. Investigates the evolution and development of the thoughts and technology that led to this relatively new (1960s) breakthrough, how plate tectonics is tested, and the predictions that it makes. Part of the Changing Ideas: Changing World theme; not part of the Geology/Earth Science major or minor. (3-0-0) Prerequisites: Completion of physical or life science foundations General Education requirement. Credits: 3

GEO 311 - Structural Geology

Elementary treatment of stress and strain, theory of rock failure: description and origin of rock structures and selected techniques of structural analysis. Lectures, laboratory, and three-day field exercise. (2-0-2) Offered fall semester. Prerequisites: GEO 212 and MTH 123. Credits: 3

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. Prerequisites: GEO 112. Credits: 4

GEO 315 - Geological Field Methods

Principles and applications of surveying and geophysical instruments in geological fieldwork. Practical field exercises in making planimetric and topographic base maps are required. Laboratory. (1-0-3) Offered fall semester of even-numbered years. Prerequisites: GEO 112 and permission of instructor. Credits: 2

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 (Earth Science Capstone)

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. Geology majors are required to take the course in the fall semester. Earth Science and Group Science students are required to take the course in the winter semester. (3-1-2) Offered fall semester; winter semester of even-numbered years. Prerequisites: GEO 112. Credits: 4

GEO 350 - Geology's Great Debate in the New World

Geology's great debate, whether Earth was shaped by slow, uniform processes (uniformitarianism) or rapid, catastrophic events (catastrophism), is explored in the context of the history of the science of Geology and the development of the New World by examining selected topics related to major or minor geologic events in the Western Hemisphere. Part of the Continuity and Change in the Americas theme; not part of the Geology/Earth Science major or minor. (3-0-0) Offered fall semester. Prerequisites: Completion of physical or life science General Education requirement. 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 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. Prerequisites: 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. Prerequisites: GEO 112; GEO 312 strongly recommended. Credits: 4

GEO 430 - Oceanography

Principles and processes of a physical nature such as waves, tides, currents, and submarine volcanic and seismic action. Lectures and cruise on Lake Michigan. (3-0-0) Offered fall semester of even-numbered years. Prerequisites: 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. Prerequisites: GEO 111. 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. (3-0-2) Offered fall semester of even-numbered

years. Prerequisites: GEO 112; MTH 122 and CHM 116 (may be taken concurrently); MTH 201 strongly recommended. Credits: 4

GEO 450 - Optical Mineralogy

The determination of minerals by their optical properties in crushed fragments and rock thin sections using the petrographic microscope. Lecture and laboratory. (2-0-3) Offered on demand. Prerequisites: GEO 212. 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. Prerequisites: GEO 212; 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 Seminar

Student investigations of geologic literature and problems, including spring and/or fall departmental field trips. Required of Geology and Earth Science majors. Seminar and discussion. (0-1-0) Offered fall and winter semesters. Prerequisites: Geology or Earth Science major or minor. 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 495 - Global Tectonics (Geology Capstone)

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 plates of lithosphere. The relationships between plate tectonics and the evolution of selected fold mountain systems as the Appalachians, Alps, Himalayas, and Cordilleran fold chains. (3-0-0) Offered winter semester. Prerequisites: GEO 311. Credits: 3

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 fall, winter, and summer semesters. Prerequisites: 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

GEO 602 - Earth Science by Inquiry

Focuses on the development of fundamental concepts, reasoning and critical thinking skills through inquiry-based instruction and laboratory experience, using materials based on research in Earth Science education. Introduces teachers to inquiry-based instruction by immersing them in it as students. Topics include plate tectonics, Earth materials, geologic time, hydrosphere, and landscapes. (2-1-3) Offered fall semester of even-numbered years. Prerequisites: teacher certification. Credits: 4

Course Listing and Descriptions

GER 101 - Elementary German I

An introduction to the language with emphasis on understanding, speaking, and reading, complemented by recorded materials available in the Language Resource Center. Not for credit for students with prior college German or more than two semesters of high school German. Offered fall and winter semesters. Credits: 4

GER 102 - Elementary German II

Continuation of GER 101. Students may not receive credit for both GER 102 and GER 150. Offered fall and winter semesters. Prerequisites: C (not C-) or better in GER 101, credit, or appropriate placement test score. Credits: 4

GER 150 - Intensive Elementary German

One-semester review of elementary German for students with prior study but who are not adequately prepared for 200-level courses. 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. Prerequisites: 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

Continuation of GER 102. Review and advancement of grammar, with additional focus on reading, writing, and the culture of German-speaking countries. Required independent lab work assigned by instructor. Minimum of 50 minutes weekly. 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

GER 202 - Intermediate German II

Continuation of GER 201. Fulfills World Perspective requirement. Offered fall and winter semesters. Prerequisites: 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. Prerequisites: GER 201. Credits: 1 to 4

GER 301 - 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. Prerequisites: GER 202 with a C (not C-) or better, or by appropriate placement. Credits: 3

GER 302 - 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. Prerequisites: GER 202 with a grade of 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. Corequisite: 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. GER 302 should be taken concurrently if not already completed. Credits: 3

GER 311 - German Civilization and Culture II

A study of the cultural, social, and economic history and development of the German-speaking peoples from the Baroque to 1945. Offered fall semester in odd-numbered years. Prerequisites: GER 301. Credits: 3

GER 312 - Contemporary German Culture

The study of aspects of the culture of German-speaking countries from the post-war 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. Co-requisite: GER 302 should be taken concurrently if not already completed. 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 302. Credits: 3

GER 321 - Phonetics

An introduction to the sound system of German, designed to improve students' pronunciation, intonation and listening comprehension, primarily through comparison of English and German. Offered fall semester. Prerequisites: 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. Corequisite: GER 302 should be taken concurrently if not already completed. Credits: 3

GER 331 - Business German I

Part of a two-course sequence. This course 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, and the environment. Offered fall semester, odd-numbered years. Prerequisites: GER 302. Credits: 3

GER 332 - Business German II

The second of two courses designed to prepare students for a position with a German-speaking company in an increasingly global marketplace. This course focuses in part on German business culture and organization, as well as on specific types of business correspondence. Other topics include transportation, tourism, consumer concerns, and social security. Offered winter semester, even-numbered years. Prerequisites: GER 331. 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. 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: GER 304. 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 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: GER 321. 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 Geography

Explores the spatial patterns between landforms, natural systems of flora and fauna, and climate. Designed to increase awareness of the physical environment, its landscape, controls, and processes, and the interrelationships of natural phenomena. Offered every semester. Credits: 3

GPY 200 - Computer Cartography

Cartography is a major tool that geographers and others use to represent the world. This hands-on course provides an introduction to the art and science of cartography and computers. Students will acquire skills in up-to-date computer cartography and computer graphics design. Offered fall and winter semesters. 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 Social and Behavioral Sciences. Offered every semester. Credits: 3

GPY 235 - World Regional Geography

A survey of geography followed by an examination of specific geographic concepts. Physical, cultural, economic, and related factors will be given more emphasis than place-name geography. Fulfills Social and Behavioral Sciences Foundation. Fulfills World Perspectives requirement. Offered every semester. Credits: 3

GPY 300 - Research Methods in Geography and Planning

A survey of the principal methods of conducting research in Geography and Planning, focused on the logic and theory of research, formulation and testing of hypotheses, research design, measurement, data collection and analysis, classical and spatial statistics, the presentation of results, and ethical issues involved in research involving people. Offered winter semester. Prerequisite: STA 215. Credits: 3

GPY 307 - Introduction to Computer Mapping/Geographic Information Systems

Basic hands-on approach to computer mapping and geographic information systems. Class work focuses on natural and social science examples of mapping and geographic information systems. Offered fall and winter semester. Prerequisites: Sophomore standing or permission of instructor. Credits: 3

GPY 309 - Introduction to City and Regional Planning

An introductory course for people interested in careers in planning and public administration. Explores the relationship between the goals of a community and the techniques needed to implement them. Offered fall semester. Credits: 3

GPY 310 - Land Use Planning

Provides students with a practical understanding of how land development and land preservation are affected and controlled by public- and private-sector entities in the United States. Offered winter semester in odd-numbered years. Credits: 3

GPY 335 - Geographic Patterns-Global 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 Global Change theme. Offered winter semester. Credits: 3

GPY 345 - Geography of Michigan/Great Lakes Region

A study of the physical and cultural features of the Great Lakes region with emphasis on Michigan. Offered summer and fall semester. Credits: 3

GPY 350 - Geography of Russia and Its Neighbors

Introduces trends in physical, cultural, economic and environmental geography of Russia and fourteen Eurasian republics of the former Soviet Union. Cross-listed with RST 350. Part of the Global Change theme. Satisfies World Perspectives. Offered winter semester. 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 World Perspectives requirement. Offered winter semester. 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. 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 US Diversity. Offered winter semester. Credits: 3

GPY 354 - Geography of Asia

Introduction to the physical and cultural geography of Asia: The Indian subcontinent, China, the Koreans, Japan, Taiwan, and Southeast Asia. Offered fall semester. Credits: 3

GPY 355 - Geography of Southwest Asia (The Middle East).

Introduction to physical and cultural geography of Southwest Asia and North Africa. Fulfills World Perspectives requirement. Offered winter semester of even-numbered years. Credits: 3

GPY 356 - Geography of Europe

The world has been strongly influenced by European geographic principles and practices. Course will focus on the physical and cultural geographic development of Europe, including a spatial analysis of

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the area's population, resources, and economy. Part of the Earth and Environment theme. Offered winter semester. Credits: 3

GPY 361 - Historical Geography of 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 Earth & Environment theme. Offered fall semester. Credits: 3

GPY 362 - A Geography of World Agriculture and Farmers

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. Offered fall semester. 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. Offered fall semester. Credits: 3

GPY 364 - GIS for Economic & Business Geography

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. 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 385 - Economic Geography of the United States

Analyzes the location of economic activity, changes in the location of economic activity, and the implications of changing economic location patterns for national, regional and local economic development in the United States. Emphasis on the empirical study of the U.S. economy using GIS and spatial analysis techniques. Credits: 3

GPY 399 - Independent Readings

Independent supervised readings in selected topics. Offered every semester. Prerequisites: 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. Prerequisites: GPY 307. Credits: 4

GPY 410 - Landscape Analysis

Landscape analysis is a broadly interdisciplinary study that includes concepts and methods of physical and 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 Earth and Environment theme. Offered fall semester. Prerequisites: GPY 100 or GEO 111 or BIO 105. 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 Earth and Environment theme. Offered winter semester. Prerequisites: GPY 100 or BIO 105. Credits: 3

GPY 425 - 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. Offered summer semester. Prerequisites: Permission of instructor. 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. Prerequisites: GPY 307 or NRM 350. Credits: 3

GPY 490 - Internship

Supervised work experience in an area related to geography. Offered every semester. Prerequisites: 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 and winter semester. Prerequisites: Senior standing in the department. 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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 World Perspectives requirement. Offered winter semester. Prerequisite: GRK 201. Credits: 3

GRK 350 - Greek Literature and Culture

Readings from selected works such as Herodotus' Histories and the Acts of the Apostles with the aim of integrating sources within their larger historical and cultural contexts and developing reading proficiency in non-Attic and post-classical Greek. Special attention to electronic resources in Classics and elements of textual criticism. Offered fall semester of even-numbered years. Prerequisite: GRK 202 Credits: 3

GRK 351 - 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. May be repeated for credit. Prerequisite: GRK 202. Credits: 3

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 - Greek Poetry

Study of ancient Greek poetry such as the Homeric Hymn to Demeter, Hesiod's Theogony, or the lyric poetry by Archilochus, Sappho, and Simonides. Special attention to the meter, meaning, and context of poetry designed for public performance. Offered winter semester in odd-numbered years. Prerequisite: One 300 level Greek course. Credits: 3

GRK 401 - Greek Drama

Study of ancient Greek tragedy or comedy in the cultural, historical, and theatrical contexts of Athenian drama. Topics include the staging of the plays, the emotional effects of tragedy or comedy, drama's function as political and social commentary, and the linguistic complexities of imagery and word-play. Offered fall semester. Prerequisite: One 300 level Greek course. Credits: 3

HBR 101 - Elementary Biblical Hebrew I

An introduction to the vocabulary and grammar of the Hebrew Bible, using exercises to progress toward reading simple Biblical narrative texts. Offered fall semester in even years. Credits: 4

HBR 102 - Elementary Biblical Hebrew II

Continuation of HBR 101. This course is structured around readings, such as from the Book of Ruth, taken directly from the Hebrew Bible. Offered winter semester in odd years. Prerequisites: Completion of HBR 101. Credits: 4

HBR 201 - Intermediate Biblical Hebrew I

Readings from the Book of Genesis, chosen to illustrate the different styles of Biblical writing. Study of various methodologies of Biblical interpretation, including critical scholarship. Offered fall semester in odd years. Prerequisites: Completion of HBR 102. Credits: 4

HBR 202 - Intermediate Biblical Hebrew II

Extensive readings in the Book of Exodus. This course emphasizes translation and presentation of readings, and introduces Biblical Hebrew poetry. Offered winter semester in even years. Prerequisite: HBR 201. Credits: 4

HNR 209 - Islamic Middle East I: The Classical Period

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 Historical Perspectives and Philosophy and Literature requirements. Offered fall semester. Corequisites: HNR 209 and HNR 210 must be taken concurrently. Credits: 3

HNR 210 - Islamic Middle East I: Philosophy and Art

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 Historical Perspectives and Philosophy and Literature requirements. Offered fall semester. Corequisites: HNR 209 and HNR 210 must be taken concurrently. Credits: 3

HNR 211 - Classical World I

Courses deal with the history, literature, intellectual history, philosophy, and arts of the Classical period with emphasis on Greeks and Romans. Fulfills Historical Perspectives Foundation and World Perspectives. Offered fall semester. Corequisites: HNR 211 and HNR 212 must be taken concurrently. Credits: 3

HNR 212 - Classical World I

Courses deal with the history, literature, intellectual history, philosophy, and arts of the Classical period with emphasis on Greeks and Romans. Fulfills Philosophy and Literature Foundation. Offered fall semester. Corequisites: HNR 211 and HNR 212 must be taken concurrently. Credits: 3

HNR 213 - American Civilization I

Courses provide a survey of American history, literature, and intellectual progress from European Colonization through Reconstruction. Fulfills Historical Perspectives Foundation and US Diversity. Offered fall semester. Corequisites: HNR 213 and HNR 214 must be taken concurrently. Credits: 3

HNR 214 - American Civilization I

Courses provide a survey of American history, literature, and intellectual progress from European Colonization through Reconstruction. Fulfills Philosophy and Literature. Offered fall semester. Prerequisites: HNR 213 and HNR 214 must be taken concurrently. Credits: 3

HNR 215 - European Civilization I

Courses deal with European history, philosophy, and culture from the Middle Ages through the early modern period. The period emphasized varies with faculty expertise. Fulfills Historical Perspectives Foundation and World Perspectives. Offered fall semester. Prerequisites: HNR 215 and HNR 216 must be taken concurrently. Credits: 3

HNR 216 - European Civilization I

Courses deal with European history, philosophy, and culture from the Middle Ages through the early modern period. The period emphasized varies with faculty expertise. Fulfills Philosophy and Literature Foundation. 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 Historical Perspectives Foundation and World Perspectives. Offered fall semester. Credits: 3

HNR 218 - The Making of Europe II: 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 Philosophy and Literature Foundation. Offered winter semester. Prerequisites: HNR 217. Credits: 3

HNR 219 - Islamic Middle East II: The Modern World

This course, which is a continuation of HNR 209/210, covers the history, literature, philosophy, and art of the Islamic Middle East from

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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 Arts and World Perspectives. Offered winter semester. Prerequisites: HNR 209 and HNR 210. Must be taken concurrently with HNR 220. Credits: 3

HNR 220 - Islamic Middle East II: Philosophy and Art

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 Arts and World Perspectives. Offered winter semester. Prerequisites: HNR 209 and HNR 210. Must be taken concurrently with HNR 219. Credits: 3

HNR 221 - Classical World II

Continues the study of history, philosophy, and culture of the Classical period begun in HNR 211. Fulfills Arts Foundation. Offered winter semester. Prerequisites: HNR 211. Concurrent Enrollment: HNR 222 Credits: 3

HNR 222 - Classical World II

Courses continue the study of history, philosophy, and culture of the Classical period begun in HNR 212. Fulfills Philosophy & Literature Foundation. Offered winter semester. Prerequisites: HNR 212. Concurrent enrollment: HNR 221. Credits: 3

HNR 223 - American Civilization II

Continues the study of American Civilization begun in HNR 213. Emphasis is on philosophy and arts in American culture. Fulfills Arts Foundation. Offered winter semester. Prerequisites: HNR 213. Credits: 3

HNR 224 - American Civilization II

Course continues the study of American Civilization begun in HNR 214. Emphasis is on philosophy and arts in American culture. Fulfills Philosophy & Literature Foundation. Offered winter semester. Prerequisites: HNR 214. Credits: 3

HNR 225 - European Civilization II

Course continues the study of European history, philosophy and culture begun in HNR 215. Fulfills Arts Foundation. Offered winter semester. Prerequisites: HNR 215. Credits: 3

HNR 226 - European Civilization II

Course continues the study of European history, philosophy and culture begun in HNR 216. Fulfills Philosophy & Literature Foundation. Offered winter semester. Prerequisites: HNR 216. Credits: 3

HNR 227 - The Making of Europe III: 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 Philosophy & Literature Foundation. 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 Arts Foundation. 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. Social Sciences. LD. Offered fall and winter semesters. Credits: 3

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. Social Sciences. LD. Offered winter semester. Prerequisites: HNR 231 or permission of instructor. Credits: 3

HNR 233 - Society and Self: Sociological Perspective

Course satisfies the requirement for a first course in sociology. Common topics and discussion will create a dialogue between psychology and sociology. Fulfills Social Sciences Foundation. Offered fall semester. Co-requisites: HNR 234. Credits: 3

HNR 234 - Society and Self: Psychological Perspective

Course satisfies the requirement for a first course in psychology. Common topics and discussion will create a dialogue between psychology and sociology. Fulfills Social Sciences Foundation. Offered fall semester. Co-requisites: HNR 233. 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 Social Sciences Foundation. Offered fall semester. 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 Physical Science Foundation. See University 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 Life Sciences Foundation. 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 Physical Science Lab Foundation. 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 Life Science without a Lab Foundation. Offered winter semester. Prerequisites: 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 Life Science. Offered fall semester. Credits: 3

HNR 246 - Chemistry in Perspective

A one-semester course partially fulfilling the general education requirements in science for non-science majors. The subject matter is the interplay between chemistry and important societal issues. Fulfills Physical Science with a Lab Foundation. 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. Life Science. LD. Offered winter semester. Credits: 3

HNR 254 - African Civilization I

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 Historical Perspectives. Offered fall semester. Prerequisites: Enrollment in the Honors College and co-requisite HNR 255. Credits: 3

HNR 255 - African Civilization I

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 Philosophy and Literature. Offered fall semester. Prerequisites: Enrollment in the Honors College and co-requisite HNR 254. Credits: 3

HNR 274 - African Civilization II

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 post-independence political and economic developments. Fulfills World Perspectives. Offered winter semester. Prerequisites: Enrollment in the Honors College, HNR 254 and HNR 255. Co-requisite: HNR 275. Credits: 3

HNR 275 - African Civilization II

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 World Perspectives. Offered winter semester. Prerequisites: Enrollment in the Honors College, and HNR 254 and HNR 255. Co-requisite: HNR 274. 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 University Honors College; previous HNR coursework. Credits: 1 to 3

HNR 300 - Classical Mythology

Examines ancient Greek and Roman myths in their cultural and historical contexts. A variety of methods of interpreting myths are explored. Readings include myths that continue to influence modern literature and thought such as the Homeric Hymns, Hesiod's Theogony, and Ovid's Metamorphoses. Fulfills Philosophy and Literature Foundation and World Perspectives. Offered fall semester. Credits: 3

HNR 301 - Research Methods

Provides an introduction to the process of conducting scientific research. The course examines research from the formulation of the hypothesis to the preparation of scientific reports. In this course, students will learn to use scientific methodology, apply statistical techniques, develop proposals, and critically evaluate published research as applied to fresh water systems. 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 World Perspectives. 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 U.S. Diversity. 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. Prerequisites: Junior standing. Credits: 3

HNR 324 - Worlds of Late Antiquity

Explores geopolitical and cultural transformation in the Mediterranean and the Near East from roughly 300 to 800 C.E. Topics include the rise of Christianity and Islam, the later Roman state and army, "barbarian" invasions, Byzantium and Persia, personal piety and ecclesiastical controversy, urban life and the foundation of Constantinople. Offered fall semesters, even years. Prerequisites: Honors students with Junior or Senior status, or permission of the instructor. Credits: 3

HNR 331 - Culture and the Holocaust

Examines the Holocaust's effects on Europeans and on American culture. Likely areas of study will include literature, art, film, theology, architecture, and philosophy. Fulfills World Perspectives. Offered winter semester. Credits: 3

HNR 380 - Honors 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. Prerequisites: 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: 1-4

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 principal cognate field. Permit required. Credits: 1 to 4

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HPR 100 - Medical Terminology

The construction and translation of common medical terms. Credits: 2

HPR 110 - Introduction to Health Professions

Introduces students to health related disciplines and presents awareness/ understanding of potential professions they might enter. Content includes such topics as health care reform, educational and legal requirements, and current social, ethical and political issues. (2.1.0) Offered every semester. Credits: 3

HPR 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

HPR 220 - Health Care Delivery

An introduction to health care delivery systems in the United States and elsewhere today. An exploration of trends, experiments, problems, and solutions. Credits: 2

HPR 301 - Inquiry Into Evidence Based Practice

Introduces students to concepts and methods of inquiry in the health professions including scientific inquiry and evaluation for evidence based practice. Includes an emphasis on how practitioners can apply such methods to improve the quality of care provided to consumers as well as the interventions and services they prescribe and provide. Prerequisite: STA 215. Credits: 3

HPR 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, Illness, and Healing theme. Credits: 2

HPR 350 - Systems Analysis in Health Care

Explores issues that affect health care. The framework of a conceptual systems model (Neuman) will be used through the study of five foundational variables (physiological, psychological, sociocultural, spiritual, and development) to reach an understanding of a holistic perspective. (2-0-0) Prerequisites: At least junior standing and/or admission to one of the HPR professional programs. Credits: 2

HPR 380 - 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 3

HPR 480 - 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

HPR 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

HPR 495 - Issues in Health Professions (capstone)

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: (HPR 301 or BMS 301 or PSY 300 or SS 300), and senior standing. Credits: 3

HPR 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; permission of professional curriculum director. Credits: 1 to 3

HPR 510 - Introduction to Health Professions Research

Provides in-depth discussion and relevance of research literature. Emphasis on critical analysis of research articles. Independent thought and critical thinking skills will be addressed. Assigned readings will offer students the opportunity to examine prevailing research in health professions. (2-0-0) Offered spring/summer semester. Prerequisites: Good standing in one of the HPR professional programs. Credits: 1

HPR 580 - 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

HPR 610 - Research in the Health Professions

Investigates the theories, paradigms, and steps necessary to select and approach a research problem. A continued emphasis (from HPR 510) on critical analysis of research articles, designing and writing research proposals, and further refinement of the research process. (2-0-0) Offered fall semester. Prerequisites: HPR 510 and good standing in one of the HPR professional programs. Credits: 2

HPR 621 - Management in Rehabilitation

Interdisciplinary study of management behaviors and processes for effective administration of clinical rehabilitation settings. Emphasizes organizational behaviors, structures, and systems. Examines staffing, personnel evaluation, fiscal management, quality assurance, and ethics. (2-0-0) Offered winter semester. Prerequisites: Good standing in one of the HPR professional programs or consent of instructor. Credits: 2

HPR 622 - Case Studies in Rehabilitation

Students research and present oral and written case studies of selected patients seen during clinical affiliations. Rationales for evaluation and treatment are presented. Alternate procedures and treatment plans discussed. (2-0-0) Offered winter semester. Prerequisites: Successful completion of all previous didactic and clinical professional work or consent of instructor. Credits: 2

HPR 625 - Health Professions Leadership

Introduces students to leadership practices that transcend professional boundaries. Discussion will include leadership theories, their application in health care, and the development of an individual leadership plan consistent with personal and professional goals. (3-0-0) Offered winter semester. Prerequisites: Successful completion of all previous didactic and clinical professional work or consent of instructor. Credits: 3

HPR 657 - Role of Education in Health Professions

Educational theory, assessment/evaluation, behavioral objectives, and teaching methods. Planning for teaching situations common to 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. Offered winter semester. Prerequisites: Successful completion of all previously required courses in the respective health profession's curriculum. Credits: 2

HPR 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

HPR 688 - Health Professions Research I

First of two courses in which a group of students defines a problem within the health professions. Application 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. Offered every semester. Prerequisites: OT 564, OT 570. Co-requisites: OT 571, OT 572, and OT 573. Credits: 1 to 3

HPR 689 - Health Professions Research II

Second of two courses in which a group of students defines a problem within the health professions. Coursework involves data collection, analysis, and interpretation. Students will present written and oral reports discussing pertinent findings. Research studies will be guided by and defended to appropriate faculty. Offered every semester. Prerequisites: HPR 688 and good standing in one of the HPR professional programs. Credits: 2

HPR 690 - Master's Thesis Proposal

The individual student will select a significant and original research question pertinent to the health professions. Coursework involves literature review, research design, and submission of a research proposal with the guidance of a faculty committee. Offered every semester. Prerequisites: HPR 610 and good standing in one of the HPR professional programs. Credits: 1 to 3

HPR 695 - Master's Thesis

Continuation of research activity developed in HPR 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 and defended to a faculty committee. Offered every semester. Prerequisites: HPR 690 and good standing in one of the HPR professional programs. Credits: 3

HPR 699 - Independent Study — Health Professions

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 HPR professional programs; permission of the professional program director. Credits: 1 to 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 Historical Perspectives Foundation. Part of Changing Ideas: Changing Worlds theme. Offered fall, winter, and occasional 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 Historical Perspectives Foundation. 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 Historical Perspectives Foundation. Offered every semester. Credits: 3

HST 102 - Introduction to European Civilizations

Designed to support general education goals and develop historical capabilities, this course examines the history of Europe from the later Middle Ages to the present, emphasizing 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 Historical Perspectives Foundation. 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 Historical Perspectives Foundation. 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 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 Historical Perspectives Foundation. 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. Offered every semester. Credits: 3

HST 205 - American History to 1877

The formation of American character and society, the role of democracy and the impact of the Revolution and Civil War on values and political institutions. Required for majors. Supplemental writing skills course. Offered every semester. Credits: 3

HST 206 - American History since 1877

Political systems in an urban industrial society, a mass production economy, emergence of America as a world power and the quest for social equality. Required for majors. Supplemental writing skills course. Offered every semester. Credits: 3

HST 210 - Empire, Culture, and Conflict

An introduction to the history of non-Western cultures and the development of their relationships with Western Europe and the United States. Regional emphasis varies. Course may not be repeated for additional credit. Supplemental writing skills course. Fulfills World Perspectives requirement. Offered fall and winter semesters. 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 World Perspectives requirement. Part of Religion Theme. Offered fall and winter semesters. Credits: 3

HST 300 - Writing History

Students will learn about the writing of history by writing it, basing their accounts on primary sources. They will engage in careful, objective consideration and criticism of the writing of other students in the class,

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and their own work will receive the same kind of attention. Writing topics may vary from semester to semester. A supplemental writing skills course. Offered fall and winter semesters. Credits: 3

HST 301 - Colonial U.S. History to 1763

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. Offered winter semester, odd-numbered years. Prerequisites: HST 205 or junior standing. Credits: 3

HST 302 - American Revolution and Federalist Era

Topics include changes in British colonial policy following the Seven Years War and the ensuing crisis, the political, military, and social histories of the American Revolution, the drafting and ratification of the U.S. Constitution, and foreign and domestic crises of the 1790's. Offered winter semester, even numbered years. Prerequisites: HST 205 or junior standing. Credits: 3

HST 303 - Era of Sectional Conflict and Civil War

Examination of U.S. social, political, and cultural history from 1800 to 1877. Emphasis on the rise of sectionalism and the causes and consequences of the American Civil War. Offered winter semester, even-numbered years. Prerequisites: HST 205 or junior standing. Credits: 3

HST 305 - The United States Transformed

An in-depth chronological survey of the United States during the years 1877 to 1929. Emphasis will be given to changes in the social, industrial, agricultural, and urban structures as the United States was transformed from an agricultural nation to an industrial world power. Offered fall semester, even-numbered years. Prerequisites: HST 206 or junior standing. Credits: 3

HST 306 - Recent U.S. History, 1930 to Present

Analysis of the forces that have shaped society in contemporary America: the Cold War, consumer economy, the civil rights movement, youth culture, the new woman, development of the welfare state, new left and neo-conservatism. Offered fall semester, odd-numbered years. Prerequisites: HST 206 or junior standing. 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. Offered fall semester. Prerequisite: WRT 150. 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. Offered winter semester, even-numbered years. Prerequisites: HST 205, HST 206 or junior standing. 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. Offered fall semester of odd-numbered years. Prerequisites: HST 205, HST 206, or junior standing. 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. Part of American Mosaic theme. Offered winter semester.

Prerequisites: Completion of Historical Perspectives Foundation or junior standing. 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. Part of the Civil and Human Rights Movements theme. Offered fall semesters. Prerequisites: Completion of Historical Perspectives Foundation or junior standing. 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. Part of the War and Peace theme. Offered fall and winter semesters. Prerequisites: Completion of Historical Perspectives Foundation or junior standing. Credits: 3

HST 318 - History of Democracy in America

Examines the historical development of democratic principles, ideologies, and practices in American history. Period varies. Focuses on the range and limits of democracy in American history, debates among Americans over democracy and the practice of democracy in a variety of areas, including parties, voting, citizenship, and the presidency. Part of Democracy theme. Completion of the Historical Perspectives. Foundation category of junior standing. Offered winter semesters. 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. Offered winter semester. Part of Perception theme. Prerequisites: Completion of Historical Perspectives Foundation or 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. Offered fall and winter semesters. Prerequisites: HST 206 or junior standing. Credits: 3

HST 325 - History of American Sports

Course examines the history of American Sports from folk games and blood sports to the modern era of professional sports. Course will explore impact of broad, social, political, and economic changes upon the development of America's sporting culture. Special emphasis placed upon issues of race, class, and gender. Part of the Sport and Life General Education theme. Offered fall and winter semesters. Prerequisites: Completion of Historical Perspectives Foundation or junior standing. Credits: 3

HST 326 - Industrializing America

Examines labor and working-class culture from the artisan republic through the industrial revolution and beyond. Topics studied include the evolution of class relations, working-class culture, the labor movement, labor and gender, labor and race. Offered winter semester, odd-numbered years. Prerequisites: HST 205, HST 206, or junior standing. Credits: 3

HST 327 - History of American Urban History

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. Part of Cities theme. Offered fall and winter semesters.

Prerequisites: Completion of Historical Perspectives Foundation or junior standing. Credits: 3

HST 328 - Constitutional History of the U.S.

Introduction to the constitutional history of the United States, with particular focus on the creation of the Constitution, the role of judicial review, and the changing meaning of the Constitution. Offered winter semester, even-numbered years. Prerequisites: HST 205 and HST 206 or junior standing. Credits: 3

HST 329 - Intellectual History of the United States

A study of the major intellectual traditions; includes the Puritan synthesis of the 17th century, the republican ideologies of the 18th century, the romantic movement of the 19th century, and the existentialist ethos of the 20th century. Offered winter semester, odd-numbered years. Prerequisites: HST 205 and HST 206 or junior standing. Credits: 3

HST 330 - Early Latin America

A comparative examination of common Latin America socio-economic, political, and cultural topics from pre-Columbian times to the nineteenth century. Offered fall semester, even-numbered years. Prerequisites: HST 204 or junior standing. Credits: 3

HST 331 - Modern Latin America

A comparative examination of common socio-economic, political, and cultural topics in 19th and 20th century Latin American societies. Offered fall semester, odd-numbered years. Prerequisites: HST 204 or junior standing. Credits: 3

HST 333 - Survey of Modern Chinese History

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. Offered fall semester, odd-numbered years. Prerequisites: Junior standing. Credits: 3

HST 334 - The Making of the Caribbean

A survey of Caribbean history from the pre-colonial 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. Offered fall semester, even-numbered years. Prerequisites: HST 204 or junior standing. Credits: 3

HST 335 - African Civilizations Before 1870

African civilizations to the nineteenth century. It will concentrate on the economic, cultural, social, and religious characteristics of specific African societies before European conquest of the continent. Topics include human evolution, languages, dress, social organization, Atlantic slave trade, slavery in Africa, and state formation. Offered winter semester, even-numbered years. Prerequisites: HST 203, 204 or junior standing. Credits: 3

HST 336 - Africa after 1870

A study of Africa from late nineteenth century to the present. It will focus on African societies on the eve of European colonial conquest; conquest and Africans' response, transformation of African societies under colonial rule; the rise of nationalism and the process of decolonization and post-independence developments. Offered winter semester, odd numbered years. Prerequisites: HST 204 or junior standing. 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. Offered fall semester. Prerequisites: HST 203, HST 204 or junior standing. 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. Offered winter semester. Prerequisites: HST 204 and HST 206 or junior standing. Credits: 3

HST 340 - 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. Offered winter semester, odd numbered years. Credits: 3

HST 341 - A History of East Asia since 1800

Introduces major themes of history of East Asia (China, Japan, Korea, Vietnam), from 1800 to the present. Explores socio-political interactions with the West as well as the changing identities of East Asia in the modern world. Also involves basic skills, such as critical reading and writing. Offered winter semester, even-numbered years. Credits: 3

HST 342 - History of East Asian Religions

Introduces the major East Asian religious traditions and their modern developments through historical perspectives; also explores religious interactions among East Asian countries as well as their indigenous traits. Readings include primary materials and interpretative secondary scholarship. Part of Religion theme. Offered fall and winter semesters. Prerequisites: Completion of Historical Perspectives Foundation or junior standing. Credits: 3

HST 345 - The Ancient Mediterranean and Orient

Examination of literate civilizations of the ancient world from their origins in the Mesopotamian, Nile, Indus, and Yellow River Valleys through Classical Greece to the culmination in the great empires of Han China, Parthian Persia, and Rome. Includes comparative study of institutional, social, economic, intellectual, and religious developments and trends. Offered fall semester, odd-numbered years. Prerequisites: HST 203 or junior standing. Credits: 3

HST 350 - Classical Greece and Rome

Study of the historical developments of the ancient Greek and Roman civilizations, including examination of the social, religious, economic, literary, and artistic aspects of these cultures. Offered fall semester. Prerequisites: HST 203 or junior standing. Credits: 3

HST 355 - The Middle Ages

Cultural, political, and economic aspects of medieval Europe. Emphasis on the intellectual, social, artistic, and spiritual uniqueness of medieval civilization. Offered winter semester. Prerequisites: HST 203 or 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. Offered winter semester, even-numbered years. Prerequisites: HST 204 or junior standing. 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. Offered winter semester, even-numbered years. Prerequisites: HST 204 or junior standing. Credits: 3

HST 363 - European Social and Cultural History

Survey of European social and cultural history in the period 1300-1800, combining primary sources with modern studies of specific topics such as popular culture, women's history, witchcraft, and peasant rebellions. Offered fall semester, even-numbered years. Prerequisites: HST 203, HST 204, or junior standing. 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

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changes in these areas in Renaissance Italy and Reformation Germany, and on the connections between these changes. Part of Changing Ideas; Changing Worlds theme. Offered fall semester. Prerequisites: Completion of Historical Perspectives Foundation or junior standing. Credits: 3

HST 365 - Early Modern Europe

Major emphases are the development of the early modern state and the crisis of the seventeenth century. Appropriate attention is given to economic, social, and intellectual developments. Offered fall semester, odd-numbered years. Prerequisites: HST 204 or junior standing. Credits: 3

HST 370 - History of Medicine and Health

Survey of medical and health-related topics from ancient Greece through the present. Course units will include disease migration, unorthodox medicine, professionalization, sanitary science, bacteriology, medicalization of deviance, nursing, philanthropy, gender, colonialism, environmental/industrial medicine, Medicare/Medicaid, and AIDS. A supplemental writing skills course. Part of Health, Illness, and Healing theme. Offered fall and winter semesters. Prerequisites: Completion of Historical Perspectives Foundation or junior standing. Credits: 3

HST 371 - History of Gender, Family, Sexuality

Explores the history of gender, family, and sexuality in selected modern European and North American countries. It will examine how men's and women's role, the demographics of and ideas about family life, and understandings of sexuality have changed over time. Part of the Gender, Society, and Culture theme. Offered fall and winter semesters. Prerequisites: Completion of Historical Perspectives Foundation, or junior standing. 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. Part of Freedom and Social Control theme. Offered fall semester. Prerequisites: HST 204, LAS 210, or junior standing. 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. Part of the Continuity and Change in the Americans theme. Offered winter semester. Prerequisites: HST 204, LAS 210 or junior standing. Credits: 3

HST 376 - History of Witches

Examines the wave of witch trials in Europe and New England in the 16th and 17th centuries, from its origins in medieval Christianity and folklore to the Salem witch trials of 1692, from a variety of perspectives, with emphasis on the marginalization of the accused witches within their communities. Part of Marginality and Difference theme. Offered fall and winter semesters. Prerequisites: Completion of Historical Perspectives Foundation or junior standing. 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. Part of the War and Peace theme. Offered fall and winter semesters. Prerequisites: Completion of Historical Perspectives Foundation or 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. Prerequisites: Junior standing. Credits: 1 to 4

HST 384 - Revolutionary Europe, 1789-1900

Europe from the French Revolution to 1900. Topics include thought, politics, foreign affairs, culture, war, and revolution in the age of industrialization and nationalism. Offered winter semester, odd-numbered years. Prerequisites: HST 204, or junior standing. Credits: 3

HST 385 - Europe 1900-1945

Examination of European history from 1900-1945, including Belle Epoque politics, society, and culture; World War I; politics of peace-making; revolution and civil war in Russia; inter-war era; Stalin's rise to power; European fascism, with emphasis on Nazi Germany; diplomacy of the 1930s; and World War II. A supplemental writing skills course. Offered fall semester, odd-numbered years. Prerequisites: HST 204, or junior standing. Credits: 3

HST 386 - Europe since World War II

Examines Europe from the end of the Second World War to the present. Topics include: post-war Europe; the Soviet bloc; the Cold War; decolonization; political, social, and cultural developments in East and West Europe; the European Economic Community; the disintegration of the Communist bloc; contemporary Europe. A supplemental writing skills course. Part of Global Change theme. Offered fall and winter semesters. Prerequisites: Historical Perspectives Foundation or junior standing. 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, post-war division, and reunified Germany. Offered winter semester, odd numbered years. Prerequisites: Historical Perspectives Foundation or junior standing. 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. Offered fall semester, even-numbered years. Prerequisites: HST 203 and HST 204 or junior standing. 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. Offered winter semester, odd-numbered years. Prerequisites: HST 204 or junior standing. Credits: 3

HST 391 - Russian Thought-Ninth to Twentieth Centuries

History of Russian thought from the ninth to the twentieth century, including Byzantine, Mongol, and Western influences. Offered fall semester, odd-numbered years. Prerequisites: HST 203 and HST 204, or junior standing. 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. Prerequisites: Junior standing. Credits: 1 to 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)

Examines the development of historical writing and various approaches to interpretation. Case studies will vary from year to year. Offered fall and winter semesters. Prerequisites: HST 300 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. Prerequisites: Senior standing. Credits: 3

HST 600 - Historiography

An examination of the rise and development of historical writing, problems of historical interpretation, and the philosophy of history. Offered every third year. Credits: 3

HST 605 - Techniques in Local and Archival History

An introduction to techniques of using material from local archives and other nearby sources for research and preparation of classroom materials. Offered summers of even-numbered years. 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 Twentieth 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 - Fundamentals

A study of the food service and lodging industries, their structures and predominant systems as components of tourism, and of tourism as a dominant socioeconomic and political force. Offered fall and winter semesters. Credits: 4

HTM 112 - Food Science and Technology

The application of chemical, physical, safety, and sanitation principles to food preparation, production, and processing. (3-0-4) Offered winter semester. 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 World Perspectives requirement. 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 socio-economic 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. Part of Global Change theme. Offered fall semester. Prerequisites: HTM 101 suggested. Credits: 3

HTM 213 - Food Service Systems

An analytical approach to the design, operation, and monitoring of food service systems, with emphasis on operational efficiency, productivity, and profitability. Field trips. Offered fall semester. Prerequisites: MTH 110 or MTH 122 or MTH 201, HTM 101, or permission; CS 150 recommended. Credits: 4

HTM 222 - Lodging Systems

An analytic approach to lodging flows and integrative operations and systems with emphasis on guest services, front office, housekeeping, asset management, and security. Field trips. Offered winter semester. Prerequisites: HTM 101, or permission; CS 150 recommended. Credits: 4

HTM 235 - Tourism and Commercial Recreation Systems

An introduction to tourism and commercial recreation as one of tourism's largest growth industries, focusing on its strong linkages to leisure and travel services, entrepreneurship, and economic development. Trends in tourism, commercial recreation and the operation of specialty businesses are explored as well as the general tourism system. Offered on sufficient demand. Credits: 3

HTM 253 - Convention Sales and Service

An introductory course exploring 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. Emphasis will be given to allowing students to demonstrate these skills in an actual business environment. Offered winter semester. Prerequisites: 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 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

Course Listing and Descriptions

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 333 - Property Management

The care of the hospitality facility with emphasis on preventive maintenance, energy, management systems, security, and sanitation. Offered fall semester. Prerequisites: HTM 101 or permission. 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 353 - Meeting Planning

A study of the planning, marketing, execution, and follow-up of meetings, conferences, conventions, and package promotions. Offered fall semester. 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. Prerequisites: BUS 201; junior standing. Credits: 3

HTM 368 - Ecotourism

This course introduces students to the history, concepts, principles, marketing, planning and management of ecotourism activities and development which promote cultural and environmental awareness and local economic benefits with an emphasis on non-western cultures. Students compare and contrast principles of ecotourism with traditional commercial tourism in a variety of nature-based environments. Offered fall and winter semesters. Credits: 3

HTM 373 - Hospitality Information Analysis

A systematic approach to the gathering and analysis of data from operations. The course is structured to take the student from accounting system basics through the production of a variety of reports and budgets. The emphasis is on the utilization of the data for improved financial and objective-based decision-making. Offered fall and winter semesters. Prerequisites: CIS 150, ACC 213, and STA 215; junior standing. Credits: 4

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. Prerequisites: Permission. Credits: 1 to 4

HTM 452 - Hospitality Marketing

Applications of basic marketing principles and strategies to hospitality and leisure services. Discussions will define specific hospitality and tourism market segments and address the various personal and nonpersonal sales and promotional tools available to the manager of an intangible product. 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. Prerequisite: Completion of the HTM Core. Credits: 3

HTM 499 - Independent Research

Supervised research in hospitality and tourism management for junior and senior majors. Offered every semester. Prerequisites: permission. Credits: 1 to 4

ICE 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. Offered fall and winter semesters. Credits: 3

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. Prerequisites: 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 non-profit institution. The purpose is to allow the student to apply academic knowledge to a work experience. Offered every semester. Prerequisite: Junior standing and permission of the sponsoring institution. Credits: 2-6

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. Prerequisites: 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 - Elementary Italian I

An introduction to the language with emphasis on understanding, speaking, and reading, complemented by materials available in the language laboratory. Not for credit for students with prior college Italian or more than two semesters of high school Italian. Fall. 4 credits. Offered fall semester. Credits: 4

ITA 102 - Elementary Italian II

Continuation of ITA 101. Required independent lab work. Offered winter semester. Prerequisites: ITA 101 with C (not C-) or better, or permission of instructor. Credits: 4

ITA 201 - Intermediate Italian I

Continuation of ITA 102. The course enhances students' competency in the Italian language (listening, speaking, reading, writing) and culture skills, with an emphasis on real-life communication. Conducted almost exclusively in Italian, with extensive use of authentic materials: literature, newspapers, videos, tapes, and the Internet. Offered fall semester. Prerequisites: ITA 102 with C (not C-) or better, or permission of instructor. Credits: 4

ITA 202 - Intermediate Italian II

Continuation of ITA 201. The course enhances students' competency in the Italian language (listening, speaking, reading, writing) and culture skills, with an emphasis on real-life communication. Conducted almost exclusively in Italian, with extensive use of authentic materials: literature, newspapers, videos, tapes, and the Internet. Fulfills World Perspectives. Offered fall semester. Prerequisites: ITA 201 with C (not C-) or better, or permission of instructor. Credits: 4

ITA 280 - Special Topics in Italian

Class offered on a special topic related to Italian. Credits: 1 to 4

JPN 101 - Elementary Japanese I

An introduction to the language with emphasis on listening, speaking, reading, and writing. Complementary taped material available in the language laboratory. Credits: 4

JPN 102 - Elementary Japanese II

Continuation of JPN 101. Prerequisites: C (not C-) or better in JPN 101. 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

Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Offered fall semester. Prerequisites: C (not C-) or better in JPN 102. Credits: 4

JPN 202 - Intermediate Japanese II

Continuation of JPN 201. Fulfills World Perspectives. Prerequisites: C (not C-) or better in JPN 201. Credits: 4

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. Prerequisites: 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. Prerequisites: JPN 301 or appropriate placement test score. Credits: 3

JPN 380 - Special Topics in Japanese

Offered on sufficient demand. 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

LAS 210 - Exploring Latin America

The indigenous, European, and African cultures forming Latin American and Caribbean civilization are examined through the multidisciplinary lenses of the humanities, the social sciences, and the sciences. Attention is also given to U.S. Latino cultures and to the interrelationship between Latin America and the United States. Fulfills World Perspective requirement. Part of the Continuity and Change in the Americas theme. 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 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. Dual listed with HST 374. Part of the Continuity and Change in the Americas theme. Offered winter semester. Prerequisite: LAS 210. Credits: 3

Course Listing and Descriptions

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. Dual listed with ENG 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 475 - Latinos in West Michigan

Surveys the dynamic yet little-known world of Latinos in the region and guides students through a research project documenting their experiences, achievements, and challenges. Students learn and apply field research and interviewing skills to produce and present original reports on local Latino individuals and issues. Part of the American Mosaic theme. Offered fall semester of odd-numbered years. Prerequisites: LAS 210. Credits: 3

LAS 490 - Latin American Studies Internship

Supervised work experience in a 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. Prerequisites: Completion of 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 summer semester. Prerequisites: 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. Prerequisites: 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. Offered winter semester. Prerequisites: Successful completion of LAT 201, or appropriate high school background. Fulfills World Perspectives requirement. Credits: 3

LAT 350 - Roman Literature and Culture

Readings of selected works from early Latin through the Imperial age with the aim of developing reading proficiency and integrating the works within their cultural contexts. Special attention to the ways in which literature both reflects and shaped Roman social values and institutions.

May be repeated once if content changes. Offered fall semester during odd years. Prerequisite: LAT 202. Credits: 3

LAT 351 - 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. Offered fall semester. Prerequisites: LAT 202. Credits: 3

LAT 352 - Roman Drama

An introduction to Roman drama through a close reading of the comedies of Plautus or Terence or the tragedies of Seneca. Particular attention to the social context, language, and stagecraft of the plays, to their techniques of characterization, and to their place within the wider traditions of western drama. Offered winter semester in odd-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. Offered winter semester, odd years. Prerequisite: LAT 351. Credits: 3

LAT 362 - Medieval and Renaissance Latin

An introduction to Medieval and Renaissance Latin through the close reading of authors such as Augustine, Bede, Hrotsvitha, Petrarch, Pontano, and Erasmus. Special attention to the linguistic features of post-classical Latin and to the development of different forms of writing, including autobiography, drama, history, philosophy, and lyric poetry. Offered winter semester in odd-numbered years. Prerequisite: One 300 level Latin course. 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 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 semester. Credits: 1 to 3

LAT 401 - Roman Poetry

Readings from the works of Roman poets such as Catullus, Lucretius, Horace, Ovid, and Juvenal. Topics include attitudes toward love; the relationship of poets and their patrons; war, power, and politics; poetry as a vehicle of social commentary; and the response of the Roman poets to Greek literature and philosophy. Offered winter semester, odd-numbered years. 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 during even-numbered years. Prerequisite: One 300 level Latin course. Credits: 3

LIB 100 - Introduction to Liberal Education

A study of the nature and importance of liberal education, including the education of the adult free citizen, through extensive reading classical and modern texts and through examination of the contemporary state of liberal education in the university and society. Fulfills Philosophy and Literature Foundation. Offered every semester. Credits: 3

LIB 300 - 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. Part of the Religion theme. Offered alternate years. Prerequisite: Junior standing. Credits: 3

LIB 310 - Creativity

An examination of human creativity and the nature of the creative process. Characteristics of the creative process in artistic and scientific endeavors. Part of Creativity theme. Offered every year. Credits: 3

LIB 311 - Meaning

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. Part of perception theme. Offered once or twice a 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 Journey

A study engaging the perspectives of the humanities on life development from childhood to old age as found in literature and other expressions of various cultures such as mythology, philosophy, art, film, and music. Part of Human Journey theme. Offered every semester. Prerequisites: WRT 150. Credits: 3

LIB 320 - Social Autobiography in the U.S. Civil Rights Movement

An inquiry, through reading and writing, into the dynamics of cultural change and personal development in the U.S. Civil Rights Movement through the genres of biography and social autobiography. Part of the Civil and Human Rights Movements theme. Fulfills U.S. Diversity requirement. Offered every other year. Credits: 3

LIB 325 - Understanding the Gay Life Cycle

A study of the gay life cycle focusing on issues of identity, relationships, and society. Issues are examined through the use of literature, movies, and guest speakers. Students become aware of similarities and differences between homosexual and heterosexual lifestyles. Part of Gender, Society, and Culture Theme. Offered once a year. Credits: 3

LIB 330 - The Idea of Nature

An historical and cross-cultural examination of how nature has been interpreted by science, philosophy, religion, literature, and art. Part of Earth and Environment theme. Offered once a year, winter semester. 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 335 - Scriptures as Literature

A comparative study of Scriptures as literary masterpieces that shape and influence their respective cultural expressions and literary traditions. Readings include Scriptures from major world religions such as The Dhammapada, The Lotus Sutra, The Rig Veda, Upanishad, The Bible, The Koran, and Tao Te Ching. Part of Religion theme. Fulfills World Perspectives requirement. Offered fall semester. Credits: 3

LIB 340 - Utopias: Ideal Worlds

Is freedom really life without external social constraints, or is it unattainable unless we accept some amount of societal control over our actions? This course reviews several utopias and dystopias-some real, some fictional-to probe the proper balance between freedom and both formal and informal means of social control. Part of Freedom and Social Control theme. Offered fall semester. Credits: 3

LIB 345 - War in the Nuclear Age

Interdisciplinary survey of the history and culture of the nuclear age. Exploration of how the development of nuclear weapons and the possibility of nuclear war have influenced relations between nations, shaped the U.S. domestic agenda, and profoundly transformed the lives of individuals. Part of the War and Peace theme. Offered fall semester. Credits: 3

LIB 350 - The Immigrant Experience in the U.S.

This study of immigrant groups in the United States will focus on the marginalized experience of people who have moved from their "home" cultures, how they have adapted to the new world, and how this experience has helped shape U.S. culture. Emphasis on the fine arts, literature, biography, film, history, sociology. Concentration on at least two cultures, one non-European. Part of Marginality and Difference theme. Fulfills U.S. Diversity requirement. Offered fall semester. Credits: 3

LIB 370 - Universities: History, Function, Future

An examination of the changing role of universities in American and non-American societies. Examines the evolution of the university since the 12th century, debates over the proper mission of the university, characteristic aspects of academic culture, and contemporary controversies about the problems and the future of higher education. Offered every other year. Credits: 3

LIB 373 - American Society and Mass Culture

Interdisciplinary approach to how mediated mass culture, including film, television, and popular music, create meaning for people in contemporary American society. Emphasis on the interactive relationship between the mass audience and mass culture. Part of Society and the Media theme. Offered every year. 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 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 - Visionary Thinkers

A variable topics course that focuses on the life and work of a significant contributor to our culture. Figures in the past have included Aristotle, George Orwell, Hannah Arendt, Jean-Paul Sartre, Henry Thoreau, Enrico Fermi, Virginia Woolf, Martin Luther King, Jr., and Richard Feynman. May be repeated for credit. 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. Part of American Mosaic theme. Fulfills U.S. Diversity requirement. May be repeated for credit. This is offered only as an online 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

Course Listing and Descriptions

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. Prerequisites: Senior standing and a 3.0 GPA in the major. 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 the 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. 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, memoranda and trial briefs. Offered Fall and Winter semesters. Prerequisites: LS 201. 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 that will be covered include: marriage, dissolution of marriage, adoption, child support and custody, parental rights and obligations, nontraditional families, and property law. Offered winter semester in odd-numbered years. Prerequisite or Corequisite: LS 201. Credits: 3

LS 370 - Women and the Law

An 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 on these rights; violence against women; and employment discrimination focusing on gender-based influences. Part of Gender, Society, and Culture theme. Offered winter semester. 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. Offered on credit/no credit basis. Credits: 1 to 3

LS 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. Credits: 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 semester. Prerequisites: 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 semester. Prerequisites: LS 201 (may be taken concurrently). Credits: 3

LS 426 - Civil Litigation

Introduction to civil litigation. Particular attention is paid to litigation process including service of process, pleadings, motions, discovery technique, the trial process, jurisdictional and venue concerns, and ethical issues. Offered Fall semester. Prerequisites: LS 201 (may be taken concurrently). Credits: 3

LS 428 - Factual Investigation

An examination of factual investigation techniques used in the practice of law. Topics include obtaining and reviewing government and private records, databases, locating witnesses, interviewing, discovery, and privilege considerations. Offered fall semester. Prerequisites: LS 201 (may be taken concurrently). Credits: 3

LS 490 - Legal Studies Internship

Internship in a government, private, or corporate law office under individual faculty supervision to allow students to apply academic knowledge to professional experience. 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. Credits: 3

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 winter semester. Prerequisites: LS 201, and 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, internship or other legal studies courses. The research will be in the area of the student's interest. Offered on a credit/no credit basis. Offered every semester. Prerequisites: Senior standing and permission of instructor. Credits: 1 to 3

MAT 300 - Music Art & 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

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 World Perspectives requirement. Offered fall and winter semesters. 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 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 - Introduction to Management Information Systems

This course is designed to give the student an understanding of the importance of information systems in modern companies, the components that make up information system and insight into the integration that good information systems foster in a business organization. Enterprise Resource Planning (ERP) Systems will also be covered. Offered every semester. Prerequisites: CIS 150. Credits: 3

MGT 303 - Introduction to International Business

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. Part of the Global Change theme. Fulfills World Perspectives requirement. Offered winter semester. 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. Maybe 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. 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

The historical evaluation, structure, policies, and practices of human resources departments. The work of these departments in acquiring, training, and developing human resources, facilitating corporate communication, motivating employees, setting appropriate wage and salary levels, and facilitating union relations are introduced. Prerequisites: MGT 331. Credits: 3

MGT 334 - Labor and Employment Law

Analysis of major labor and employment laws affecting management practice. Specific topics include National Labor Relations Act, Title VII, Americans with Disabilities Act, Affirmative Action, Fair Labor Standards

Act, and the Occupational Health and Safety Act. Also considers significant tort legislation, including wrongful discharge, privacy and defamation. 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. Prerequisites: 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 339 - Business and Society

Explores the evolving relationship between business institutions and societal institutions through a variety of disciplines (e.g., economic and social history, industrial sociology, organizational theory, business ethics) and a variety of media (e.g., historical narratives, literary materials, articles from academic journals, newspaper reports, and films). Offered every semester. Credits: 3

MGT 340 - Business, Social Change and Ethics

Examines the process of business development and the ethical questions that process raises. Particular attention is paid to the questions raised by market pressures, bureaucratic organization and income stratification. Part of the Ethics theme. Offered every semester. 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. Part of the Creativity theme. 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. Prerequisites: 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. Prerequisites: MGT 268. Credits: 3

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 a consideration is given to the ways in which organizational norms operate to include or marginalize different groups of people. Fulfills U.S. Diversity requirement. Part of Marginality and Difference theme. 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.

Course Listing and Descriptions

Business Process Redesign software will be used extensively. Offered fall semester. Prerequisites: 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, 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 once yearly. 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 once yearly. 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 once yearly. 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 once yearly. Prerequisites: 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 and Planning and Control

Basics course in manufacturing planning and control. Topics include capacity planning, forecasting, production activity control, master productions 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. Prerequisites: 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. Prerequisites: Permission of instructor. 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. Prerequisites: MGT 331. Credits: 3

MGT 431 - Advanced Human Resources Management

The consideration of human resource management from an applications/skills perspective. Includes discussion and analysis of contemporary issues and practices. Students convert concepts into practice through the use of integrative strategic cases and/or professional projects and exercises. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Part of the Ethics theme. Prerequisites: MGT 331. Credits: 3

MGT 451 - Introduction to E-Commerce Applications

An introduction to tools, techniques, concepts and principles related to developing high-impact web-based applications. Offered fall semester. Prerequisites: MGT 350. Credits: 3

MGT 452 - Advanced E-Commerce Applications

This course focuses on advanced, data-driven, interactive e-commerce applications. Topics include database design, user interface design, issues in interactive applications development, and the implementation of security and controls. Offered winter semester. Prerequisites: CIS 333 and MGT 451. 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. Requires senior status or approval of instructor. Part of the Global Change theme. Fulfills World Perspectives requirement. Prerequisite: Senior status. 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. Prerequisites: 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: CIS 160 and MGT 471. 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

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

MGT 510 - Principles of Mgt Information Systems

Management information systems (MIS) are critical to the success of modern organizations. This course provides an introduction to fundamental MIS principles and concepts and the role and importance of information systems in supporting organizational processes and strategies. Offered every semester. Credits: 2

MGT 561 - Production and Operations Management

Develops knowledge of the technical and quantitative aspects of operations management and competitive positioning. Emphasis is placed on applying specific operations management tools/techniques such as project management, forecasting, investor control, and quality management to solving business problems in manufacturing and service environments. Equivalent to MGT 366. Offered fall and winter semesters. Credits: 2

MGT 632 - Contemporary Communications for Managers

Provides a theoretical model for interpersonal communication and applies the model in a variety of written and oral, verbal, and nonverbal exercises. Credits: 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. 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. Prerequisites: BUS 631. Credits: 3

MGT 637 - Employment and Labor Law

An in-depth analysis of the laws, court cases, administrative decisions and policies surrounding employment and labor law. Topics include discrimination law, discipline and discharge, workplace torts, workplace violence, arbitration and mediation, collective bargaining, contract interpretation and unions. Prerequisites: BUS 531 or equivalent. Credits: 3

MGT 638 - International Human Resource Management

Focuses on the issues and dimensions of human resource management practices that confront firms operating in a global environment. Topics include recruitment and selection of international employees, dimensions of international training and development, issues in international performance appraisal, and international compensation and labor issues. Credits: 3

MGT 661 - Operations Management

An examination of complex problems encountered in managing production operations. Use of advanced techniques and systems in the planning, decision-making, controlling, and revising of production plans in real-world manufacturing and service environments. Offered fall and winter semesters. Prerequisites: MGT 561. Credits: 3

MGT 664 - Total Quality Management

A marked shift has occurred in the philosophy of managing quality in the nineties. The "strategic" dimension has gained precedence over the "technical" dimension. This practical course walks students through strategic and technical tools and techniques of quality management that underscore the essentials of the new philosophy. 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 666 - Operations Strategy

Development and implementation of operations strategy and the integration of this strategy with the corporate, business, and other functional strategies of both manufacturing and service organizations. Topics include decisions involving plant location and capacity, systems design, productivity management, and implementation of specific operations strategy such as quality, price, flexibility, technology, time, and product differentiation. Credits: 3

MGT 667 - Service Management

Provides an examination of operating activities in service industries. Emphasis on the principles of design, operation, and control of service delivery systems. Lectures, cases, and assignments focus on such topics as service system design, client interfaces, capacity planning, inventory management, customer service, and quality control. 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 process. Explores SAP's R/3 to determine fundamental work processes supported in SAP's standard client. Offered fall semester. Credits: 3

Course Listing and Descriptions

MGT 672 - Creativity and Entrepreneurship

Examination of personal barriers to creativity and entrepreneurship, and of characteristics and the roles of entrepreneurs in society. Each student completes a business plan to be judged for an award by professionals. Issues of franchising, purchase of a firm, and corporate entrepreneurship are considered. Offered fall semester. Credits: 3

MGT 673 - Small Business Management

This course is about the reality of operation of a small enterprise. Students will meet owners in class and join them at work. Broader issues of ethical pressures, family transitions, and building the organization's culture will also be considered. Course is not a basic introduction to operational aspects but builds on that knowledge. Offered winter semester. Credits: 3

MGT 680 - Special Topics in Management

Analysis and discussion of advanced topics, contemporary problems, new or controversial topics. Specific topics will reflect interest of students and instructors. Prerequisites: 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 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. Prerequisites: 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. Prerequisites: MKT 350. Credits: 3

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. Part of the Society and the Media Theme. 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. Part of the Global Change theme. 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. Prerequisites: 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. Part of Sport and Life theme. 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. Prerequisites: 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. Part of the Ethics theme. 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 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 455 - Business to Business Marketing

Focus on the characteristics of the B2B buyers and sellers. Analyze marketing tools such as strategic planning, pricing, supply and selling chains, promotion, positioning, segmentation, personal selling, and customer service in the business markets. Learn the impact of electronic

commerce and globalization on B2B transactions. Offered fall and winter semesters. Prerequisites: MKT 350. 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. Prerequisites: 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. Prerequisites: 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

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

MKT 551 - Marketing Management: Principles and Institutions

An accelerated learning course covering the principles of marketing in sufficient depth to provide a background for MBA-level marketing studies. Credits: 2

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. Prerequisites: MKT 551 or equivalent. Credits: 3

MKT 652 - E-tailing, Retailing, and Direct Marketing

Enables students to benefit from the e-commerce explosion. Focus is on traditional retail strategy elements including place, product, promotion, pricing, buying, and selling on line and on ground, relationship marketing, partnerships and supply chain management, global challenges, and dynamics for implementing e-commerce strategies. Exploration of the new power of information flows. Offered on demand. Prerequisite: MKT 651 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. Prerequisites: MKT 651 or permission of instructor. Credits: 3

MKT 654 - Marketing Strategy in the New Economy

Provides insights into the process of developing strategic plans and operations to improve competitive position. Focuses on mission and goal development for tomorrow's challenges. Exposes students to Internet tools for researching environmental change in society, economies, and customer preferences. Develops strategies for handling changes in the competitive environment. Offered on demand. Prerequisites: MKT 651. 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. 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. Prerequisites: 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. Prerequisites: MKT 651. Credits: 3

MKT 661 - Internet Marketing

Focus includes dimensions of the Internet (www, e-mail and usenet), users and uses, capabilities and limitations, web site 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 and Internet marketing strategy for an organization. Offered winter semester. Prerequisite: MKT 651. Credits: 3

MKT 667 - Readings in Marketing

This course focuses on reading and discussing non-academic contemporary books which directly or tangentially address marketing related issues. While a few of the books are chosen by the instructor, students are given wide latitude in making their own book selections and in bringing books to the attention of the class. Offered alternate years. Credits: 3

MKT 680 - Special Topics in Marketing

In-depth analysis of selected current topics and problems in marketing. Content will vary from term to term among the many subareas of marketing management, physical distribution, systems analysis/design, application, model building and theory. Prerequisites: MKT 551 or equivalent. 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

MOV 101 - Foundations of Physical Education and Sport

Aims and objectives, professional preparation, professional opportunities, relationship of physical education to health education, recreation, and athletics. (3-0-0) 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 demand. Credits: 1 to 4

MOV 201 - Psycho-social Aspects of Physical Education and Sport

A study of the psycho-social 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

Course Listing and Descriptions

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, societal beliefs and values in sport will be examined. Offered every semester. Credits: 3

MOV 280 - Special Topics in Movement Science

Lecture, discussion, laboratory, or field study on a topic related to Movement Science. Offered on 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)
Prerequisites: BMS 202 or BMS 208. Credits: 3

MOV 304 - Physiology of Activity

Study and investigation of the function of the body systems during activity and the response of these systems to activity. A lecture-laboratory combination. (2-1-0) Prerequisites: BMS 202 or BMS 208. 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; summer on 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. Prerequisites: MOV 304. Corequisites: MOV 321. Credits: 3

MOV 321 - Exercise Testing Lab

Introduction to health and fitness assessments currently used in fitness, rehabilitation, and clinical settings. Prerequisites: MOV 304. Corequisites: MOV 320. Credits: 1

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 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 demand. Credits: 1 to 4

MOV 399 - Independent Readings

Special studies in movement science upon consultation with faculty advisor and approval of department chair. One to three credits. 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 466 - Dynamic Human Performance Lab

Laboratory investigation of human performance capacities using modern techniques of measurement for FB dynamic assessment of anthropometric, biomechanical, physiological, pulmonary, cardiovascular, and metabolic parameters. Prerequisites: STA 215, MOV 309, MOV 404, or BMS 365. Credits: 2

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 or 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 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 to 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. Prerequisites: 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. Designed for students who are unprepared for MTH 110. Credits earned for this course do not count toward the number of credits required for graduation. Please see the Mathematics program for Placement Test details. Offered fall and winter semesters. Prerequisites: Assignment through Grand Valley math placement. 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. May not count toward a group science major or minor. Please see the Mathematics program for Placement Test details. Offered fall, winter, and spring/summer semesters. Prerequisites: MTH 097 or assignment through Grand Valley math placement. Credits: 4

MTH 122 - College Algebra

A study of functions and their graphs, including polynomial, rational, radical, exponential, logarithmic, and inverse functions; equations of circles; sequences and series. Emphasis on applications, problem solving, and using graphic, numeric, and symbolic methods to understand and solve equations, inequalities, and systems of nonlinear equations. Please see the Mathematics program for placement test details. Offered fall and winter semesters. Fulfills Mathematical Sciences Foundation. Prerequisites: MTH 110 or assignment through Grand Valley math placement. 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. Please see the Mathematics program for placement test details. Fulfills Mathematical Sciences Foundation. Offered fall and winter semesters. Prerequisites: Placement into MTH 123 via the calculus readiness test or MTH 122 (may be taken concurrently). Credits: 3

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 Mathematical Sciences Foundation. Offered fall and winter semesters. Prerequisites: MTH 110. Credits: 3

MTH 131 - Introduction to Mathematics

A survey for non-mathematics majors. Topics selected from inductive and deductive reasoning, geometry, statistics, computers, modeling, number theory, numeration systems, the mathematics of decision making, and applications. Fulfills Mathematical Sciences Foundation. Offered on sufficient demand. Prerequisites: MTH 110. Credits: 3

MTH 180 - Special Topics in Mathematics

Readings, lecture, discussions, or lab (or any combination) in specific mathematics topics at an introductory or elementary level. Offered on sufficient demand. Prerequisites: 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 test details. Fulfills Mathematical Sciences Foundation. Offered fall and winter semesters. Prerequisites: (MTH 122 and MTH 123), or placement into MTH 201 via the calculus readiness test. Credits: 5

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. Prerequisites: 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 dimension, differentiation and integration of vector functions of a single variable and scalar functions of several variables. Offered fall and winter semesters. Prerequisites: MTH 202. Credits: 4

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 fulfillment of the composition requirement. Credits: 3

MTH 221 - Mathematics for Elementary Teachers I

Emphasis is on concepts, relationships, problem solving, reasoning, communicating, and connecting ideas in elementary school mathematics: geometry, measurement, patterns and functions, classification, logic, probability and statistics. Does not count toward a major or minor in mathematics. (3-0-2) Offered fall and winter semesters. Prerequisites: MTH 110 or MTH 122 and at least sophomore standing. Fulfills Mathematical Sciences Foundation. Credits: 4

MTH 222 - Mathematics for Elementary Teachers II

Emphasis is on developing and teaching number and operational concepts, modeling, strategies, relationships, algorithms, and problem solving for elementary school mathematics: whole numbers, fractions, decimals, integers, mental arithmetic, and number theory. Fieldwork to include diagnosing and tutoring elementary children. (2-0-2) Offered fall and winter semesters. Prerequisites: MTH 110 or MTH 122 and at least sophomore standing; MTH 221 strongly recommended. Credits: 3

MTH 223 - Mathematics for Elementary Teachers III

Emphasis is on concepts, relationships, problem solving, reasoning, communicating, and connecting ideas in elementary school mathematics: geometry, measurement, patterns and functions, classification, logic, probability, statistics, whole and rational numbers and their operations, mental arithmetic, and number theory. Fieldwork: diagnosing and tutoring. Equivalent to taking MTH 221 and MTH 222. (4-0-2) Offered winter semester. Prerequisites: 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. Offered fall and winter semesters. Prerequisites: MTH 122 or MTH 123 or MTH 201. 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. Prerequisites: 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 - Applied Analysis I

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. Offered fall semester. Prerequisites: 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. Prerequisites: MTH 203. Credits: 4

Course Listing and Descriptions

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, applications in physical, biological, and social sciences. Offered winter semester. Prerequisites: MTH 203 and MTH 227. Credits: 3

MTH 310 - Modern Algebra

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 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 at least one semester per 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 at least one semester per year. Prerequisites: 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 at least one semester per year. Prerequisites: MTH 210 and (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. Prerequisites: MTH 225. Credits: 3

MTH 327 - Linear Algebra II

Vector spaces, bases, dimensions, linear transformations, canonical forms, eigenvalues and geometric applications. Offered spring semester. 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. 20 hours of service-learning with middle grades 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 330 - The Mathematics of Voting and Elections

A study of voting, elections, and social choice from within the framework of mathematical modeling and problem solving. Topics include models of voter preference, election procedures, voting paradoxes, impossibility theorems, power indices, and referendum elections. Offered winter semesters. Prerequisites: MTH 110, WRT 150, and completion of the Mathematical Sciences Foundation. Part of Democracy theme. Credits: 3

MTH 341 - Euclidean Geometry

Critical analysis of Euclidean geometry from transformational, algebraic, and synthetic perspectives in two and three dimensions. 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 345 - 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. Prerequisites: MTH 210. 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. Three credits. Offered fall of even-numbered years. Prerequisites: MTH 227, STA 312; (STA 312 may be taken concurrently). Credits: 3

MTH 380 - Special Topics in Mathematics

Readings, lecture, discussions, or lab (or any combination) in specific mathematics topics. Permission of the instructor required. Offered on sufficient demand. Prerequisites: dependent upon topic selected. Credits: 1 to 4

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 400 - Applied Analysis II

Special topics in applied analysis, including Fourier methods, partial differential equations (heat, wave, and potential equations), calculus of variations, and orthogonal functions. Offered winter semester of even-numbered years. Prerequisites: MTH 300 and either MTH 302 or MTH 304. Credits: 3

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. Offered winter semester of odd-numbered years. 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. Offered fall semester of even-numbered years. Prerequisites: MTH 227, either MTH 302 or MTH 304, and CIS 162. 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 semester. 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. Offered winter semesters of even-numbered years. Prerequisites: MTH 227 and MTH 408. Credits: 3

MTH 410 - 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. Offered winter semester. Prerequisites: MTH 310. 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. Offered fall semester. Prerequisites: MTH 210 and either MTH 341 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. Offered winter semester of odd-numbered years. Prerequisites: MTH 203, MTH 210, and MTH 227. 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, non-determinism, pushdown automata, context-free languages, Turing machines and variants, halting problems, time complexity of algorithms, and NP-Complete problems. Offered fall semester of odd-numbered years. Prerequisites: CS 162 and either MTH 325 or MTH 345. Credits: 3

MTH 480 - Special Topics in Mathematics

Readings, lecture, discussions, or lab (or any combination) in specific mathematics topics. Permission of the instructor required. Offered on sufficient demand. Prerequisites: 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 310, 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: To use 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

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 603 - Foundations of Calculus

Study of the conceptual underpinnings of calculus through situation-based, graphical, and numerical perspectives. The foundations of limit, rate of change, and area under a curve will be explored through examination of the properties of algebraic and transcendental functions. Prerequisites: Certification in secondary mathematics. Credits: 3

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. Prerequisites: Certification in secondary mathematics. Credits: 3

MTH 620 - Modern Algebra

Study of the complex number system and various subsystems in terms of structural characteristics. Proofs of theorems within algebraic structures, such as groups, rings, integral domains and fields. Development of algebraic transformations, including techniques based on the theory of equations. Applications using technology. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: Certification in mathematics. Credits: 3

MTH 680 - Special Topics in Mathematics

Readings, lecture, discussion, or lab (or any combination) in specific topics in mathematics or mathematics education. Offered on sufficient demand. Prerequisite: Permit required. Credits: 1-4

MTH 685 - Mathematics Workshop for Teachers

Activities using quantitative reasoning skills, divergent, and convergent thinking to expand the perspectives on the teaching of mathematics in grades 3-9, strategies and tactics for developing mathematical concepts and problem solutions. Offered on sufficient demand. Prerequisites: Permission of the department. Credits: 1 to 3

Course Listing and Descriptions

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. Prerequisites: 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. There is no special instructional fee for applied music. Students in applied music are expected to play a jury at the end of each semester of study. 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 Arts Foundation. Offered fall and winter semesters. Credits: 3

MUS 101 - Grand Valley Singers

The principal 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. Prerequisites: Permission of instructor. Credits: 1

MUS 106 - Small Jazz Ensemble

Various small jazz groups dedicated to increasing the knowledge of jazz literature and improving skills in improvisation and ensemble playing. Prerequisites: 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 only. Prerequisites: 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 semester. Prerequisite: Permission. 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. Prerequisite: 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. Prerequisites: 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 114 - Grand Valley Cello Ensemble

A chamber music experience for cellists that develop skills necessary for ensemble performance. Prerequisite: Permission of the instructor. Credits: 1

MUS 115 - Grand Valley Chamber Orchestra

The principal 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. 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 non-Western musical cultures. Required of all music majors and minors. Offered winter semester. Prerequisites: MUS 119. Credits: 3

MUS 122 - Non-Major Piano I

Beginning piano instruction for non-music majors in a class setting. Students will spend class time playing the piano and will study the following elements of this skill: note reading, technical skills (scales,

chords), various repertoire, ensemble playing, and elements of music theory for piano playing. Credits: 1

MUS 123 - Non-Major Piano 2

Continuing piano instruction for non-music majors in a class setting. Students will spend class time playing the piano and will build on the skills of the previous semester. Topics covered include: repertoire technique (scales, etc.), sight reading, ensemble playing, the blues, and proper pedaling technique. Credits: 1

MUS 126 - Collaborative Piano

Preparation for performance of piano accompaniments for appropriate soloists or ensembles. Offered fall and winter semesters. Prerequisites: MUS 141. 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 Arts Foundation. 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 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. 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. 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. 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 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 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 Handbook. Offered fall and winter semesters. Prerequisites: Permission of instructor. Students must also be registered in an appropriate ensemble. 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 Handbook. Prerequisites: MUS 144. Students must also be registered in an appropriate ensemble. Credits: 3

MUS 161 - Guitar for the Beginning Player

In this course, students with no prior guitar playing experience will learn basic techniques related to playing folk, popular and classical music on the guitar. Music notation, songs, chords, classical technique and basic music theory will be covered during the semester. Offered fall semester. 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 181 - Technology for Musicians

An introduction to computer programs and software specific to the needs of the performer and music educator. A series of projects will focus on Finale notation program, MIDI sequencing programs, sound recording and manipulation, computer-assisted instruction software, and an introduction to music resources on the Internet. Required of all Bachelor of Music and Bachelor of Music Education students. Offered fall and winter semesters. Credits: 1

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 non-western 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 World Perspectives requirement. Offered fall semester. 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 U.S. Diversity requirements. Offered fall semester. Credits: 3

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. Credits: 3

MUS 231 - Music Theory IV

A study of post-1900 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

Course Listing and Descriptions

selected jazz improvisation. Required of music majors. Offered winter semester. 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. Credits: 1

MUS 234 - Aural Perception and Sight-Singing IV

Intervallic singing and dictation using post-1900 melodies. Aural recognition of contemporary musical techniques. Required of music majors. Offered winter semester. Credits: 1

MUS 236 - Accompanying and Sight-Reading

A skill-development course for pianists covering vocal and instrumental accompaniments. Offered fall semester. Prerequisites: MUS 142 or permission of instructor. Credits: 2

MUS 241 - Private Instruction in Voice and Instruments – Sophomore

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 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 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 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 Handbook. Prerequisites: MUS 244. Students must also be registered in an appropriate ensemble. Credits: 3

MUS 248 - Singing for Non-Majors

This course is designed to provide vocal performance skills to non-music 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 250 - Class Voice

Offered winter 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 261 - Guitar for Intermediate Players

In this course, students who have 1-2 years of experience playing guitar but have little or no music-reading ability will be instructed in both classical and popular styles. Students will learn to read music starting at the beginning level and will learn popular guitar performance starting with basic bar-chord technique. Offered fall semester. Credits: 1

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. 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. 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. 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 requirements of American Mosaic General Education theme. Fulfills U.S. Diversity requirement. Offered fall semester. 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 on sufficient demand of odd-numbered years. Prerequisites: 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. Principal 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 on sufficient demand of even-numbered years. Prerequisites: 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 on sufficient demand of even-numbered years. Prerequisites: 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. Prerequisites: MUS 120. Credits: 3

MUS 306 - Music after 1900

A survey of the development of the new and unique forms of expressive and intellectual 20th Century musical style from circa 1900 to the present including the exploration of such diverse currents in musical thought and ideology as impressionism, atonality, serialism, neo-classicism and other innovations of 20th Century master composers. Offered fall semester. Prerequisites: 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 313 - Vocal Literature

History of the song with emphasis on reading and hearing examples of the song literature for solo voice. Intended for advanced singers. Offered on sufficient demand. Prerequisites: Permission of instructor. 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: Permission of department. Credits: 2

MUS 321 - Instrumental Conducting

Continuation of MUS 320 with an emphasis on techniques relative to the rehearsal and performance of instrumental literature. Required of B.M.E. instrumental majors in the junior year. Offered winter semester. Credits: 3

MUS 322 - Choral Conducting

Continuation of MUS 320 with an emphasis on techniques relative to the rehearsal and performance of choral literature. Required of B.M.E. vocal/choral majors in the junior year. Offered winter semester. Credits: 3

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 335 - Counterpoint

Analysis and composition based on sixteenth-century and eighteenth-century contrapuntal practices. Offered fall semester in even numbered years. 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 339 - Jazz Arranging and Composition

A practical course in the fundamentals of jazz arranging and composition for large and small ensembles; study of jazz harmony, melody, and rhythm as found in the works of representative jazz composers and arrangers. Offered winter semester alternate years. Credits: 3

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 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 Handbook. Prerequisites: MUS 341. Students must also be registered in an appropriate ensemble. Credits: 1

MUS 343 - Half Recital

Preparation for half recital. Prerequisites: Permission of instructor. 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 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 as outlined in the current year Department of Music Handbook. Prerequisites: MUS 344. Students must also be registered in an appropriate ensemble. Credits: 3

MUS 350 - Music for Classroom Teachers

A practical course for elementary-teacher candidates introducing creative principles, methods, and materials of music pertinent to elementary instruction. Closed to music majors and minors. Offered winter semester. 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. Researched-based readings, guided one-on-one instruction of singers from area school music programs, discussion of issues related to young singers. Offered fall semester. 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. Prerequisites: Permission of instructor. Credits: 1

MUS 358 - Vocal Pedagogy

Study of varied methodologies in teaching the individual singer, with emphasis on teacher-pupil relationship. Intended for advanced singers. Requires instructor's permission. Offered on sufficient demand. Credits: 2

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 - Instrumental Literature

Survey of solo instrumental literature representing the style periods typically associated with the applied instrument and the history of the development of the applied instrument. Students will summarize, study and examine appropriate repertoire for their applied instrument. 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

Course Listing and Descriptions

MUS 362 - Marching Band Techniques

Designed to acquaint B.M.E. majors with all aspects of today's marching band. Offered every fall. Prerequisites: Required of all B.M.E. instrumental majors. Credits: 2

MUS 363 - Marching Band Arranging

Development of techniques of arranging music for marching band. A thorough knowledge of all band instruments, including ranges and registers; combinations of instruments; timbre and color of individual instruments as well as sections of instruments. Keyboard and notation skills helpful. Does not count as required upper-level theory course. Offered winter even years. Credits: 2

MUS 370 - Instrumental Pedagogy

Instrumental Pedagogy focuses on teaching fundamentals, pedagogical traditions and techniques, interpretation of selected repertoire and musical progress, current pedagogical research pertaining to student's major instrument, development of a private studio, and the maintenance and adjustment of the instrument. 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

MUS 374 - Jazz Pedagogy

A study of strategies for use in teaching jazz. Required of B.M. students in the jazz performance track. Offered fall semester. Credits: 2

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 life-long 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. Prerequisites: 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 as outlined in the current year Department of Music Handbook. Prerequisite: MUS 342. Students must also be registered in an appropriate ensemble. 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 as outlined in the current year Department of Music Handbook. Prerequisite: MUS 441. Students must also be registered in an appropriate ensemble. Credits: 1

MUS 443 - Full Recital

Preparation for full recital. Prerequisites: Permission of instructor. Credits: 2

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 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 as outlined in the current year Department of Music Handbook. Offered fall and winter. Prerequisites: MUS 444. Students must also be registered in an appropriate ensemble. Credits: 3

MUS 456 - Teaching Music in the Elementary School

Techniques and methods of teaching music to children in elementary school classrooms. Designed for music education majors. Offered fall semester. Credits: 2

MUS 461 - Instrumental Music Methods and Materials

Includes a brief survey of current practices in instrumental music education, techniques and methods of instrumental music education, and introduction to materials of the music industry designed for school use. Restricted to instrumental music education majors; open to others by special permission only. Offered winter semester. Credits: 2

MUS 465 - Choral/General Music in the Secondary School

Techniques, trends, and materials in junior and senior high school general and choral music. The adolescent voice, choral programming, the budget process, musicals, and contests and elective music classes. Restricted to music majors and to vocal minors who want a music teaching minor for secondary certification; open to others by special permission only. Offered winter semester. Credits: 2

MUS 479 - BA Senior Project

The BA 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: 1-2

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. 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 621 - Advanced Instrumental Conducting and Literature

Intensive study of problems and techniques of band conducting; survey of literature for the concert band. Offered summer semester of even years. Credits: 3

MUS 622 - Advanced Choral Conducting and Literature

Intensive study of problems and techniques of choral conducting; survey of choral literature. Offered summer semester of odd years. Credits: 3

MUS 643 - Applied Music

Private instruction on one's principal performing instrument. Offered fall and winter semester. Credits: 3

MUS 651 - Measurement and Evaluation in Music Education

Construction, design, and appraisal of instruments used for measuring musical aptitude and musical achievement in the school setting. Offered winter semester of even years. Credits: 3

MUS 655 - Foundations and Principles of Music Education

Consideration of the historical, philosophical and psychological foundations of music education and their implications for developing practical curricular and instructional approaches in school music programs. Offered summer semester of odd years. Credits: 3

MUS 656 - Introduction to Research in Music Education

The interpretation and application of published studies and reports in music education, an overview of traditional research methodologies used in music education, sources of research literature, basic statistical procedures, and quantitative and qualitative research terminology. Offered summer semester of even years. Credits: 3

MUS 658 - Applications of Technology in Music Education

Detailed study of the role of technology in music instruction. Students will evaluate hardware and software, build multimedia applications, explore music resources on the Internet and work with MIDI technology. Course is geared to today's music educator who needs to adapt to a continually evolving instructional environment. Includes an in-depth analysis of the philosophical and instructional implications of technology. Offered winter semester of odd years. 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

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. Fulfills General Education NS/A. Fulfills Physical Sciences Foundation. (3-0-2) Offered fall and winter semesters. Credits: 4

NRM 150 - Introduction to Natural Resources

Survey of natural resource issues and environmental problems. The course will use an integrated approach involving concepts from natural and social sciences to provide a foundation for understanding past, present, and future natural resource issues including biodiversity, land use, water and air pollution, human population, energy use, and waste management. (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. One to four credits. Credits: 1 to 4

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 field reconnaissance survey and sampling on a quantitative basis, including land survey, mapping, and map interpretation, plot and plotless sampling, and establishment of data points. (2-0-6) Offered fall semester. Credits: 4

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. 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 semester. Prerequisites: Completion of the General Education Life Sciences requirement. Junior standing. Permit required. Credits: 1

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 depositon, climate change, toxicology, and risk assessment. (2-0-3) Offered winter semester. Prerequisites: CHM 109 or 116. Credits: 3

NRM 350 - Aerial Photography and Remote Sensing of the Environment

Theoretical considerations and practical applications in the use of remote sensing in terrain evaluation and environmental inventory, including aerial photography, landsat imagery, thermal infrared, and radar imagery. (2-0-4) Offered winter semester. Prerequisite: NRM 250. Credits: 4

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 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 fall semester. Prerequisites: 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 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. Prerequisites: 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. The evolution of public policies with respect to public land acquisition and disposal, forestry, rangeland, minerals, parks, wilderness, fisheries, wildlife, and water are discussed. Part of Earth and Environment theme. (4-0-0) Offered fall and winter semesters. Credits: 4

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NRM 452 - Watershed and Wetland Management

Theory and application of wild land and urban hydrology, including the values of watersheds and wetlands as domestic ecosystems. (3-0-3) Offered fall semester. Prerequisites: GEO 111, MTH 122, and NRM 250. Credits: 4

NRM 462 - Forest Ecosystem Management

Traditional forestry practices will be introduced, with emphasis on how established practices can be integrated 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. Prerequisite: 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. One to four credits. 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) Prerequisites: NRM 281. Credits: 4

NRM 484 - Land Reclamation

Concepts and processes used in land reclamation, emphasizing soils and landforms disturbed by such activities as mining, construction, and agriculture; the techniques of revegetation of these soils. (3-0-3) Prerequisite: NRM 281. Credits: 4

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. Prerequisites: Junior or senior 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: Completion of 20 credits in NRM, STA 215. Credits: 4

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. Prerequisites: Junior or senior status in resource management. Credits: 1 to 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. One to four credits. Credits: 1 to 4

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. One to four credits. 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 each semester. Prerequisites: BIO 610 and successful completion of qualifying exams. 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 each semester. Prerequisites: BIO 610 and successful completion of qualifying exams. Credits: 3 to 9

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 degree. Offered each semester. Prerequisites: Permission of the student's graduate committee chair, instructor, and department chair. Credits: 1 to 3

NUR 120 - Explorations in Nursing

An introduction to the discipline of professional nursing, including historical, educational, and theoretical development. Designed for both nursing majors and those considering nursing as a career. Opportunities for nurses in the changing health care system will be explored. (2-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Credits: 2

NUR 180 - Special Topics in Nursing

Readings, lecture, discussion, or lab in specific nursing topics. Credits: 1 to 3

NUR 220 - Self-Health and Wellness

A course that emphasizes interdisciplinary theories and models of health and wellness. The student is introduced to concepts of how to change behaviors for health. Self-directed activities to assess and promote personal health will be incorporated. (2-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Credits: 2

NUR 280 - Special Topics in Nursing

Readings, lecture, discussion, or lab in specific nursing topics. Credits: 1 to 3

NUR 310 - Professional Nursing Seminar

Nurses returning to school for the baccalaureate degree will explore issues related to academic preparation for professional practice. The focus will be on intellectual development and the objectives for higher education in nursing curricula. Students will be provided information about university programs and resources. Meets for three sessions. Prerequisites: R.N. status. Credits: 2

NUR 315 - Nursing Health Assessment

Designed for beginning nursing students to develop skills in obtaining health histories and performing physical assessments. Emphasis is on expected normal findings in healthy individuals with use of appropriate communication skills and beginning therapeutic communication skills. (1-0-6-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered

every semester. Prerequisites: Admission to the College of Nursing;
Prerequisites or corequisites: BMS 305 and BMS 310 Credits: 3

NUR 320 - Theoretical Nursing I

Preliminary study of the professional nursing roles of provider of care and coordinator of care and member of the discipline with emphasis on health promotion, risk reduction, disease prevention, and coping with minor limitations in functional capacity. Legal, ethical, sociocultural, spiritual, environmental, research, and professional issues are included. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: NUR 315, BMS 305, BMS 310, and BMS 311 (may be taken concurrently). Credits: 3

NUR 321 - Clinical Practice I

Knowledge from core courses, liberal arts, and nursing is used to formulate clinical judgments about individuals and families. In cooperation with health care team members, students apply abilities in critical thinking, assessment, nursing interventions, communication, and clinical skills. (0-2-2-8) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: NUR 315 and NUR 320 (may be taken concurrently). Credits: 4

NUR 344 - Healthy Aging: A Lifelong Journey

Our journey towards healthy aging does not begin when our hair turns gray, but begins the moment we enter this world. This course will explore factors that affect optimal aging, with an emphasis on how individuals can achieve health and vitality in old age through health promotion throughout life. Part of the Human Journey theme. Offered fall and winter semesters. Credits: 3

NUR 350 - Theoretical Nursing II

Continued discussion of professional nursing roles. Continued emphasis on health promotion, risk reduction, and disease prevention for individuals and families with emphasis on illness and disease management. Legal, ethical, sociocultural, spiritual, environmental, research, and professional issues included. (4-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: NUR 321, BMS 311; Prerequisite or corequisite: NUR 435 and WRT 305. Credits: 4

NUR 351 - Clinical Practice II

Knowledge from core courses, liberal arts, and nursing is used to formulate clinical judgments about individuals and families. Students collaborate with health care team members to further refine abilities in critical thinking, nursing interventions, communication, assessment, and clinical skills. (0-2-4-15) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: NUR 350 (may be taken concurrently). Credits: 7

NUR 354 - An Overview of End of Life Care

This course is intended for persons interested in exploring issues surrounding death and dying. Emphasis is placed on providing the student who is a consumer with critical knowledge that will assist in improving end-of-life care. (3-0-0-0) Offered every semester. Prerequisites: None. Part of Death and Dying theme. Credits: 3

NUR 380 - Special Topics in Nursing

Readings, lecture, discussion, or lab in specific nursing topics. Credits: 1 to 4

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 400 - Health Assessment Skills for Nurses

Designed to help the nurse develop beginning skills in taking health histories and performing physical assessment. The complete health history

and physical assessment related to a chief complaint or specific problem will be addressed. Emphasis is on expected normal findings. (0-0-4-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: R.N. status. Credits: 3

NUR 410 - Professional Role Transition

Assists RN students in their transition to the professional nurse roles of provider and coordinator of care and member of a profession. Through clinical experiences, students attain cognitive, communication, and teaching skills required for critical thinking in health promotion and disease prevention. (2-2-0-2) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Prerequisites: R.N. status; admission to the College of Nursing; NUR 400 and WRT 305. Credits: 4

NUR 420 - Theoretical Nursing III

Expanded discussion of the professional nursing roles of provider of care, coordinator of care, and member of a discipline. Emphasis is on restoration, maintenance, and promotion of health in individuals and families with long term limitations. Legal, ethical, sociocultural, spiritual, environmental, research, and professional issues are included. (4-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: NUR 351, NUR 435 and WRT 305. Credits: 4

NUR 421 - Clinical Practice III

Knowledge from core courses, liberal arts, and nursing is used to formulate clinical judgments about individuals, families, and groups. Students collaborate with health team members to further refine skills in critical thinking, nursing interventions, and communication through seminars, laboratory practice, and experiences in hospitals, clinics, and community settings. (0-2-1-15) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisite: NUR 420 (may be taken concurrently). Credits: 6

NUR 425 - Care of Clients with Chronic Conditions

Professional nurse roles of provider, coordinator of care, and member of a profession are examined. Emphasizes health maintenance and coping with long-term limitations in functional capacity across the lifespan. Refines skills in critical thinking, nursing interventions, and communication through classroom/clinical experiences with individuals and families dealing with chronic conditions (3-2-0-3) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall semester. Prerequisites: NUR 410. Pre- or co-requisite: NUR 435. Credits: 5

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. Prerequisites: NUR 425. Credits: 5

NUR 435 - Research Application in Nursing Practice

Assists students in acquiring the competence necessary to be intelligent consumers of research. Critical reading and understanding of research reports will be emphasized to provide students with the skills necessary to evaluate research findings for applicability to nursing practice. (2-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: STA 215. Credits: 2

Course Listing and Descriptions

NUR 450 - Theoretical Nursing IV (Capstone)

Professional nursing roles of provider and coordinator of care and a member of a discipline are refined. Focus on community health, management, collaboration, leadership, teaching, research utilization, standard setting, evaluation, and advancement of the profession is provided. Legal, ethical, sociocultural, spiritual, environmental, and professional issues are included. (4-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: NUR 421. Credits: 4

NUR 451 - Clinical Practice IV

Knowledge and skills from core courses, liberal arts, and nursing are used to formulate clinical judgments about groups of all ages in a variety of settings. Ability in critical thinking, communication, and technical skills are applied to coordination of care in collaboration with health team members. This course is aimed at providing the student with a broad and comprehensive perspective on the fundamental assumptions, issues, and problems of the nursing discipline. (0-2-0-19) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered every semester. Prerequisites: NUR 450 (may be taken concurrently). Credits: 7

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 a corequisite. Credits: 3

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 CR/NC. 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). Prerequisites: RN status. Credits: 1 to 4

NUR 530 - Advanced Nursing Strategies

Using selected theoretical frameworks to guide decision-making, students develop advanced nursing care strategies for promotion of health and disease prevention throughout the lifespan. Clinical component includes faculty-directed experiences. (2-0-0-3) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall and winter semesters. Prerequisites: NUR 400, NUR 521, NUR 522, NUR 622, and NUR 623 or permission of the Instructor. Credits: 3

NUR 580 - Special Topics in Nursing

Readings, lecture, discussion, or lab in specific nursing topics. Credits: 1 to 3

NUR 601 - Clinical Teaching in Nursing

This course is designed for baccalaureate-prepared registered nurses who want to learn the art of clinical nursing education. It is an introductory course and practicum covering methods for teaching and evaluating students in the clinical setting. Prerequisites: BSN and permission. Credits: 3

NUR 605 - Theoretical Perspectives in Nursing I

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 & 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. Prerequisites: 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

The student will demonstrate the ability to use advanced health assessment skills to elicit a comprehensive history and holistic assessment to improve ability to detect and differentiate abnormal findings and potential diagnoses. Didactic content is based on case study analysis. Laboratory hours involve preempts demonstration and use of the Model Patient Program. (1-0-3-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester. Prerequisites: NUR 400 and NUR 530; Graduate standing or permission of the instructor. Credits: 2

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 micro-system level. A clinical component supports application of course concepts. Offered fall semester. Prerequisites: NUR 608, NUR 620, STA 610. Co-requisite: NUR 613. Credits: 4

NUR 612 - Quality Improvement and Performance Management in Nursing

The 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 611, NUR 613, and permission of the department. Co-requisite: NUR 614. Credits: 4

NUR 613 - Nursing Research & 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. Co-requisite: NUR 611. Credits: 3

NUR 614 - Nursing Research & 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 MSN. Offered winter semester. Prerequisite: NUR 613. Co-requisite: NUR 612. Credits: 1

NUR 615 - Advanced Generalist Clinical Practicum I

This mentored Advanced Generalist practicum is the first in a 2 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 CR/NC. 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 2 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. Offered 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. Prerequisites: 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 biobehavioral diseases. Content areas include disease processes in the following systems: hematologic, renal, neurologic, gastrointestinal, and reproductive. Offered winter semester. Prerequisites: 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 390. 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. Prerequisites: BMS 528. 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 640 - Nursing Education Program Development

Principles of development with application to construction and revision of nursing programs in schools and health care institutions. Includes educational philosophies, patterns of organization, certification and accreditation requirements, and social and political influences. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall semester odd years. Prerequisite: Official admission to the graduate program. Credits: 3

NUR 642 - Teaching Health Professionals

Theories of learning, teaching modalities, planning for classroom and clinical teaching, and evaluation. Emphasis is on strategies appropriate for educating health professionals. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall semester. Prerequisites: NUR 640 or permission of instructor. Credits: 3

NUR 644 - Teaching Practicum

Supervised field experience. Students develop and present a teaching unit related to a program in the setting in which the practicum is being done. Also provide instruction and evaluation for a group of learners as appropriate. (0-2-0-7) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester (even years). Prerequisites: NUR 531, NUR 620, NUR 640 and NUR 642. Credits: 3

NUR 646 - Nursing Administration and Health Care Systems I

Application of relevant theory to the human side of the health care organization. Content includes nurse manager and executive competencies with an emphasis on administrative 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 years. Prerequisites: NUR 530; PA 614; PA 632 or Permission of the instructor. Credits: 3

NUR 647 - Nursing Administration & Health Care Systems II

Application of selected theories to assess, diagnose, plan, and evaluate administrative strategies for nursing phenomena and 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

This course provides students in the nursing administration area of emphasis with knowledge and expertise in organizational and systems administration 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 654 - Practicum I: Adult/Elderly

Application of theories and advanced nursing strategies in managing health care for adults. Focus is on the development, implementation, and evaluation of the APN role. Clinical conferences and case presentations focus on enactment of APN roles in health care. (2-0-0-12) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall semester every third year. Prerequisites: NUR 530, NUR 610. Credits: 6

Course Listing and Descriptions

NUR 655 - Practicum II: Adult/Elderly

Students gain independence in managing health care for adult populations. The focus is on the continued enactment of the APN role across the health continuum. Clinical conferences and case presentations focus on the collaborative role of the APN in health care delivery. (0-4.5-0-13.5) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester every third year. Prerequisites: NUR 654. Credits: 6

NUR 656 - Practicum III: Adult/Elderly

Students develop continued skill and independence in the management of the health care of adult populations. Focus is on enactment of APN roles within the total health care system. Clinical conferences and case presentations focus on the influence and impact of the APN role in health care delivery to adult populations. (0-4.5-0-17.5) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered spring/summer semester every third year. (First time offered: Spring/Summer 2006) Prerequisite: NUR 655. Credits: 7

NUR 663 - Resource Management

Managing resources is a primary Case Management focus. Interest in resources comes from multiple arenas, such as clients, providers, clinicians, and payers. Course will explore in depth the nature, processes, and principles of resource management in health care systems with emphasis on the role of the Case Manager. (3-0-0-0) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered on demand. Prerequisites: Official admission to the graduate program or permission of the instructor. Credits: 3

NUR 670 - Practicum I: Family

Application of theories and advanced nursing strategies in managing primary health care of families. Focus is on development, implementation, and evaluation of the APN roles. Clinical conference case presentations focus on enactment of APN roles in primary health care. (2-0-0-12) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall semester. Prerequisites: NUR 530, NUR 610. Credits: 6

NUR 671 - Practicum II: Family

Students gain independence in managing primary health care for families. Focus is on continued enactment of the APN roles across the health care continuum. Clinical conference case presentations focus on the collaborative role of APN. (0-4.5-0-13.5) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester. Prerequisite: NUR 670. Credits: 6

NUR 672 - Practicum III: Family

Students select a specific population and demonstrate independence in managing the health care of the selected population. Focus is on enactment of the APN roles within the total health care system. Clinical conference case presentations focus on the influence/impact of APN roles within the total health care system. (0-4.5-0-17.5) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered spring/summer semester. Prerequisite: NUR 671. Credits: 7

NUR 673 - Practicum I: Women

Application of theories and advanced nursing strategies in managing health care for women. Focus is on the development, implementation, and evaluation of the APN role. Clinical conferences and case presentations focus on enactment of APN roles in health care. (2-0-0-12) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered fall semester every third year. Prerequisites: NUR 530, NUR 610. Credits: 6

NUR 674 - Practicum II: Women

Students gain independence in managing health care for women's populations. The focus is on the continued enactment of the APN role across the health continuum. Clinical conferences and case presentations focus on the collaborative role of the APN in health care delivery. (1-0-0-12) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester every third year. Prerequisite: NUR 673. Credits: 5

NUR 675 - Practicum III: Women

Students develop continued skill and independence in the management of the health care of women. Focus is on enactment of APN roles within the total health care system. Clinical conferences and case presentations focus on the influence and impact of the APN role in health care delivery to women. (0-3-0-15) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered spring/summer semester every third year. Prerequisite: NUR 674. Credits: 5

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. Prerequisites: 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 678 - Practicum II: Mental Health

Students gain independence in managing mental health care for individual clients. Application of theories and advanced nursing strategies in managing psychiatric-mental health care for groups and families is added. Focus is on continued enactment of the APN roles across the mental health care continuum. (2-0-0-12) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered winter semester every third year. Prerequisite: NUR 677. Credits: 5

NUR 679 - Practicum III: Mental Health

Students select a specific mental health population and demonstrate independence in managing the health care of the selected population. Focus is on enactment of the APN roles within the total health care system. Clinical conference case presentations focus on the influence/impact of APN roles within the total health care system. (2-0-0-12) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered spring/summer semester every third year. Prerequisite: NUR 678. 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 689 - Advanced Pediatric Clinical Practice III

Students demonstrate independence in managing care of selected populations of infants, children, adolescents and families exhibiting unique health care needs. Focus is on enactment of the APN roles in settings throughout the health care environment. Clinical conferences focus on influence/impact of the APN within the health care system. (0-0-0-16) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Offered

spring/summer every third year. Prerequisites: NUR 686, NUR 687; prerequisite or corequisite: NUR 688. Credits: 4

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 semester. Prerequisites: 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 implications of evidence-based advanced nursing practice. Prerequisites: NUR 606, NUR 690, STA 610. Credits: 3

NUR 692 - Nursing Protocol Exploration

Provides experience in the critical, systematic utilization of nursing research. Students identify a nursing problem and explore solutions by identifying and evaluating the applicability and scientific merit of a relevant body of research. Offered every semester. Prerequisites: NUR 690; prerequisite or corequisite: STA 610. Credits: 1 to 2

NUR 693 - Nursing Protocol Development

Continued experience in the critical, systematic utilization of nursing research. Development of a research-based nursing protocol and a plan for implementation and evaluation based on relevant research and critical analysis of the feasibility of implementation in a selected setting. Offered every semester. Prerequisites: NUR 692; permission of instructor. Credits: 1

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. Prerequisites: NUR 690; prerequisite or corequisite: STA 610. Credits: 1

NUR 695 - Master's Thesis

Completion of a formal thesis based on faculty-supervised research initiated in NUR 694. Students will register for this course in the semester in which they expect to complete the thesis and defend it before their thesis committee. A maximum of two credits will count toward program requirements. Offered every semester. Prerequisite: NUR 694 (a minimum of two credits); permission of instructor. Credits: 2

NUR 696 - Nursing Research Practicum

Student will actively participate in an ongoing faculty research project. Student obtains experience in the conduct of research and submits a publishable written report. Offered every semester. Prerequisites: NUR 690, STA 610; Prior approval of instructor. Credits: 2

NUR 697 - Nursing Comprehensive Examination

Mechanism to demonstrate comprehension and synthesis of concepts central to the advanced practice of nursing. Offered every semester. Prerequisites: Completion of required M.S.N. coursework, or in final semester of graduate program; Prior approval of instructor. Credits: 2

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 Administration and Health Services Research

This course examines methods for evaluating the effectiveness, efficiency, and equity of health care services. Approaches to evaluating relevant structure, process, and outcome variables used to address

effectiveness, efficiency, and equity issues are explored. Linkages are made between specific health care policies, nursing administrative practice, organizational planning, and patient outcomes. Offered Summer, even years. Prerequisites: NUR 647, NUR 691; Concurrent enrollment: 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 DNP Program 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 - Acute/Critical Care: Child/Adolescent

This course provides theoretical foundations for management of acute and critical health dysfunctions of children and adolescents, and related family needs, across the acute care health care delivery system. Offered summer semester. Prerequisites: NUR 722, NUR 723. Credits: 3

NUR 725 - Acute/Critical Care Practicum: Child/Adolescent

This course prepares students to apply knowledge and advanced nursing strategies in the management of acute and critical health dysfunctions of children/adolescents, and related family needs, across the acute care delivery system. Offered 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

Course Listing and Descriptions

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 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; concurrent enrollment: NUR 730. Credits: 4

NUR 732 - Management of Chronic Conditions in Adult/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 - Acute/Critical Care: Adult/Older Adult

Provides theoretical foundations for management of acute and critical health dysfunctions of adult/older adults and related family needs, across the acute care delivery system. Offered summer semester. Prerequisites: NUR 732, NUR 733. Credits: 3

NUR 735 - Acute/Critical Care Practicum: Adult/Older Adult

Students apply knowledge and advanced nursing strategies in the management of acute and critical health dysfunctions of adults/older adults, and related family needs, across the acute care delivery system. Offered summer semester. Prerequisites: NUR 732, NUR 733, and NUR 7334 (may be taken concurrently). Credits: 4

NUR 736 - Complex Behavioral Problems: Adult/Older Adult

Intensive study of enactment of Advanced 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. Offered winter semester. 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 summer semester. Prerequisites: NUR 737; NUR 793 (may be taken concurrently). Credits: 4

NUR 740 - Administration Practicum I

In this beginning administrative practicum, students apply theories of administration in an agency setting and analyze an administrative structure within the context of the health care system. An organizational assessment and diagnosis are completed, with recommendations for an advanced administrative intervention. Prerequisites: NUR 625, NUR 647, NUR 702, NUR 703, and PA 643. Credits: 6

NUR 741 - Administration Practicum II

A precepted experience with a nurse executive at a health care organization or system is completed. Students utilize advanced administrative strategies with the guidance of a nurse executive to address an organizational diagnosis intervention project. During this experience students master the competencies essential to the practice of nursing administration. Offered summer semester. Prerequisite: NUR 740. Credits: 6

NUR 742 - Administration Practicum III

The final practicum experience requires intensive enactment of the advanced administrative role. Students demonstrate advanced administrative strategies using a nursing administrator as a resource. During this experience students master the competencies essential to the practice of nursing administration across health care settings. Offered fall, even years. Prerequisites: NUR 741. Credits: 6

NUR 792 - Scholarly Inquiry in Nursing Practice I

This course serves as a preparatory scholarly experience linking practica and scholarship for the DNP 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: Concurrent enrollment in NUR 723 or NUR 733; or NUR 740. Credits: 1-2

NUR 793 - Scholarly Inquiry in Nursing Practice II

This course serves as a culminating scholarly experience linking practica and scholarship for the DNP student. Students will complete a final written project for defense before their scholarly project committee. Offered every semester. Prerequisite: NUR 792. Credits: 2

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) 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. (1-0-4) Credits: 3

OSH 326 - Principles of Industrial Hygiene

A study of industrial hygiene methods, measurement, and equipment. (2-0-2) Prerequisite: completion of one course in chemistry. 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) 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) 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 term of odd numbered years. (3-0-0) 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 term of odd numbered years. 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 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) 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 Analysis, MORT, as these tools relate to an effective ergonomic program. (3-0-0) 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 the chemical hazards found in the workplace, their toxicological influence, and methods of controlling them to limit employee exposure. Prerequisite: OSH 326. 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 term of even numbered years. 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; fundamental of building design, life safety codes, human behavior and fire, and characteristics and behavior of fire. (3-0-0) 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 term of even numbered years. 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) Credits: 3

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. Prerequisites: 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. 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) Prerequisite: Senior-level status. Credits: 3

OSH 499 - Independent Study in Occupational Safety and Health

An individually designed learning project in the field of occupational safety and health. Prerequisites: Permission of instructor. Credits: 1 to 3

OT 400 - Occupational Science for Therapy

An introduction to occupational science. Discusses the scope, practice, and language of occupational science, a review of studies of occupation, along with the relationship of occupation to function and engagement with reality. (2-1-0) Offered summer semester. Credits: 3

OT 401 - Role of Occupation in Human Development

The occupational focus of each phase of the developmental process, from birth to senescence. Explores the use of meaningful occupation related to physical, cognitive/perceptual, and personality development and changes across the lifespan. (2-0-2) Offered summer semester. Credits: 3

OT 402 - Theoretical Foundations of OT

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. (2-2-0) Offered fall semester. Credits: 4

OT 403 - Foundations of Group Occupations

The application of occupational therapy theory as it applies to groups. Includes an examination of occupational therapy theories and their application with groups as well as provision of an opportunity to practice group facilitation, the development of protocols, and group problem solving. (3-0-2) Offered summer semester. Credits: 4

OT 405 - Limitations on Occupation

Examines the physical and psychosocial barriers to functioning presented by inherent and acquired conditions and medical problems. Review of work, self-care, and play/leisure occupations and how performance is affected by these conditions and review of the etiology and symptoms are covered. (2-2-0) Offered fall semester. Prerequisites: OT 400 and OT 401. Credits: 4

OT 414 - Occupational Analysis

Introduces students to the use of analytic skills to examine individual occupations and their inherent and therapeutic traits. Incorporates an introduction to occupations used in intervention, basic tools and their uses, and the relationship of specific occupations to desired therapeutic outcomes. (2-2-0) Offered summer semester. Credits: 3

OT 525 - Occupational Therapy Curriculum Design

Introduces students to the basic concepts related to curriculum development in occupational therapy. Includes the philosophical underpinnings of curriculum, program accreditation, implementation and evaluation (0-2-2) Offered spring/summer semester. Credits: 3

OT 550 - Foundational Perspectives in OT

Provides historical background of the profession, including evolution of theories, practice models, professional ethics and values, and therapist roles. Introduces identification and development of emergent practice areas, using the perspective of individuals, groups and populations.

Course Listing and Descriptions

Reviews knowledge required for recognizing gaps and creating new opportunities for service. (0-2-0) Offered fall semester. Credits: 2

OT 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. Co-requisites: OT 552 and OT 553. Credits: 3

OT 552 - Meaningful Living Laboratory

Laboratory designed to complement the Health and Meaning Perspectives 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. (0-0-4) Offered fall semester. Co-Requisites: OT 551 and OT 553. Credits: 2

OT 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. Co-Requisites: OT 551 and OT 552. Credits: 2

OT 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

OT 560 - Foundations of Child & Adolescent Practice

Provides historical background for the development of professional practice with children and adolescents. Course includes the evolution of theories, practice models and role of the therapist as educator, considering the needs of individuals, groups and populations. Addresses gaps in, and new opportunities for, service. (0-2-0) Offered winter semester. Prerequisites: OT 553. Credits: 2

OT 561 - Child & 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. Prerequisites: OT 553; Co-requisites: OT 562 and OT 563. Credits: 3

OT 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. Prerequisites: OT 553; Co-requisites: OT 561 and OT 563. Credits: 2

OT 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. (0-2-8) Offered winter semester. Prerequisites: OT 553; Co-requisites: OT 561 and OT 562. Credits: 2

OT 564 - Occupational Therapy Research Methods

This course will teach major quantitative and qualitative models of research used by occupational therapists and the process of designing and carrying out research related to practice problems. Students will be introduced to evidence-based practice methods and outcomes research used to validate OT theory and practice. (3-2-0) Offered winter semester. Prerequisites: STA 610. Credits: 4

OT 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: OT 550, OT 551, OT 552, OT 553. Credits: 3

OT 570 - Foundations of Adult Practice

Provides historical background for the development of professional practice with adults. Course includes the evolution of theories, practice models and role of the therapist as educator and consultant, considering the needs of individuals, groups and populations. Addresses gaps in, and new opportunities for, service. (0-2-0) Offered spring/summer semester. Prerequisites: OT 563. Credits: 2

OT 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. Prerequisites: OT 563; Co-Requisites: OT 572 and OT 573. Credits: 3

OT 572 - Adult Laboratory

Laboratory sessions to experience and practice OT assessments and interventions learned in concurrent occupational opportunities course. (0-0-4) Offered spring/summer semester. Prerequisites: OT 563; Corequisites: OT 571 and OT 573. Credits: 2

OT 573 - Level I Fieldwork (Part 3)

This experience is designed to provide students familiarity with the adult 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. (0-2-8) Offered spring/summer semester. Prerequisites: OT 563; Co-requisites: OT 571 and OT 572. Credits: 2

OT 610 - Professional Competencies-Mechanics

Third in a series designed to develop the technical skills that constitute occupational therapy practice. Focuses on the skills necessary for basic splinting, casting, and other mechanics of treatment with clients. Includes an introduction to materials, methods, and rationale for the use of mechanics in treatment, laboratory practice on positioning, splinting, casting, the appropriate use of assistive technology, the grading of occupations, appropriate documentation, collaborating with client, making client referrals. (2-0-2) Offered winter semester. Prerequisites: OT 510; Co-requisites: OT 615 and OT 620. Credits: 3

OT 615 - Interventions Using Work Occupations

The third course in the intervention series. Focuses on the development of comprehensive intervention planning skills using work occupations across the lifespan. Includes regular laboratory practice and practice with appropriate documentation. (3-0-2) Offered winter semester. Prerequisites: OT 515; Co-requisites: OT 610 and OT 620. Credits: 4

OT 620 - Clinical Reasoning III/Level I Fieldwork

Helps students develop professional judgment and clinical decision-making skills. Discussion includes clinical reasoning, the pre-assessment image of a client, and in-depth exploration of one's own clinical reasoning

and the reasoning processes of experienced therapists. Fieldwork experiences provide background for analysis and class discussion. (0-2-8) Offered winter semester. Prerequisites: OT 520; Co-requisites: OT 610 or OT 615. Credits: 2

OT 650 - Foundations of Older Adult Practice

Provides historical background for the development of professional practice with older adults. Course includes the evolution of theories, practice models and role of the therapist as educator and consultant, considering the needs of individuals, groups and populations. Addresses gaps in, and new opportunities for, service. (0-3-0) Offered fall semester. Prerequisites: OT 573. Credits: 3

OT 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) Offered fall semester. Prerequisites: OT 573; Co-requisites: OT 652 and OT 653. Credits: 3

OT 652 - Older Adult Laboratory

Laboratory sessions to experience and practice OT assessments and interventions learned in concurrent occupational opportunities course. (0-0-4) Offered fall semester. Prerequisites: OT 573; Co-requisites: OT 651 and OT 653. Credits: 2

OT 653 - Level I Fieldwork (Part 4)

This experience is designed to provide students familiarity with the older adult 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. (0-2-8) Offered fall semester. Prerequisites: OT 573; Co-requisites: OT 651 and OT 652. Credits: 2

OT 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

OT 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. (0-0-40) Offered spring/summer semester. Credits: 9

OT 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. Prerequisites: Admitted to OT program. Credits: 1 to 6

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 Social and Behavioral Sciences Foundation requirements. 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. Part of Cities theme. Offered every semester. 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 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, 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 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. 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 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 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

Course Listing and Descriptions

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. Prerequisites: PA 270 and senior standing. Credits: 3

PA 449 - Public Policy

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. Credits: 3

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. Prerequisites: 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 Management

An exploration of administrative management function, structures and methods and their intersection in public administration. An introduction to key management systems and processes, an examination of ecological influences on them, and an overview of the behavioral and ethical dimensions of management. Primary focus will be on agencies and issues in the public sector. Prerequisite: Admission to the MPA program or permit. 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. Prerequisite: Admission to the MPA or MHA program or permit. 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. Prerequisites: Admission to the M.P.A. program or permit. Credits: 1 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: Admission to the M.P.A. program or permit. Credits: 1 to 3

PA 610 - Economic Analysis for Public Administrators

Explores the principles and theories of economics as they apply to the public sector, with a focus on the public aspects of economic analysis. The primary purpose of the course is to improve the students' understanding of how basic economic analysis and reasoning can be applied by public administrators. Offered on sufficient demand. Prerequisite: Admission to the MPA or MHA program or permit. Credits: 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 for such research and analysis. Emphasizes the application of research and analysis in public administration. Offered every semester. Prerequisites: PA 520 or 630 (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. Focus is on human values, behavior, ethics, and human interactions in organizations. Offered summer and winter semesters. Prerequisite: Admission to the MPA or MHA program. 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. Prerequisites: PA 520 or 630 (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. Prerequisites: PA 520 or 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. Prerequisites: Completion of 30 credit hours in MPA or MHA 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 summer and fall semesters. Prerequisites: 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. Prerequisites: PA 520 or 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. Prerequisite: Admission to the MPA or MHA program. 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. Prerequisites: 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, and 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. Offered winter semester. Prerequisites: 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. Prerequisites: 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. Prerequisites: PA 520 or PA 630 (may be taken concurrently). 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. Prerequisites: 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 noninstitutional alternatives-home health care and adult day care. Examines principles in the management of institutional and noninstitutional facilities for the chronically, terminally, or mentally ill and the disabled elderly. Offered winter semester. Prerequisites: PA 520 or PA 630 (may be taken concurrently). 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. Prerequisites: PA 520 or PA 630 (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. Prerequisites: 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 MPA or MHA 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. Prerequisites: PA 520 or PA 630 (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 MPA or MHA program. Credits: 3

PA 660 - The Nonprofit Sector: History and Ethics

A comprehensive survey of 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 fund-raising and resource development practices of the sector. Offered fall semester. Prerequisite: Admission to the MPA or MHA program. Credits: 3

Course Listing and Descriptions

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 520 or PA 630 (may be taken concurrently). Credits: 3

PA 662 - Nonprofit Resource and Financial Management

After a brief review of nonprofit finance and accounting, course examines resource development and fundraising. Presents a philanthropic view that fundraising should be "mission driven and volunteer-centered." Topics include direct mail fundraising, planned giving, grant seeking, and philosophies and ethics of fundraising. Offered winter semester. Prerequisites: PA 520 or PA 630 (may be taken concurrently). Credits: 3

PA 663 - Nonprofit Organizations 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. The creation, design, function, and finance of nonprofit organizations are addressed. Offered fall semester. Prerequisites: PA 520 or PA 630 (may be taken concurrently). 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 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. Offered winter and spring/summer semesters. Prerequisites: PA 520 or permission. 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 MPA or MHA 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 MPA or MHA 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. Graded credit/no credit. Offered every semester. Prerequisites: PA 690 and Permission of instructor. Credits: 3

PA 693 - Research Project

Course requires preparation of an extensive research and writing assignment under faculty supervision. Offered on sufficient demand. Prerequisites: Faculty approval of research proposal. Credits: 3 or 6

PA 695 - Master's Thesis

Preparation of an extensive research and writing assignment under faculty supervision. Offered fall and winter semesters. Graded Credit/No Credit. Prerequisites: Faculty approval of research proposal. Requires thesis committee. 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. Prerequisites: 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. Prerequisites: Admission into the Physician Assistant Studies program. Credits: 4

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. Prerequisites: A letter grade of "B" or better in PAS 501. Corequisites: PAS 512, PAS 522, PAS 532, & PAS 542. Credits: 3

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: A letter grade of B or better in PAS 502. Corequisites: PAS 513, PAS 523, PAS 533, and PAS 543. Credits: 3

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 and other semesters as determined by the program director. Prerequisite: A letter grade of B or better in PAS 503. Corequisites: PAS 514, PAS 524, PAS 534, and PAS 544. Credits: 3

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 Physician Assistant Studies program. Credits: 3

PAS 512 - Clinical Medicine I

This course is the first of a three course sequence which 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. Prerequisites: A letter grade of B or better in PAS 511, and successful completion of BMS 461. Corequisites: PAS 502, PAS 522, PAS 532, and PAS 542. Credits: 6

PAS 513 - Clinical Medicine II

This course is a second of a three course sequence which 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. Prerequisites: A letter grade of B or better in PAS 512. Corequisites: PAS 503, PAS 523, PAS 533, and PAS 543. Credits: 6

PAS 514 - Clinical Medicine III

This course is the third of a three course sequence which 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. Prerequisites: A letter grade of "B" or better in PAS 513. Co-Requisites: PAS 504, PAS 524, PAS 534, & PAS 544. 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 Physician Assistant Studies 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: A letter grade of B or better in PAS 521. Corequisites: PAS 502, PAS 512, PAS 532, and PAS 542. 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: A letter grade of B or better in PAS 522. Corequisites: PAS 503, PAS 513, PAS 533, and PAS 543. 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: A letter grade of B or better in PAS 523. Corequisites: PAS 504, PAS 514, PAS 534, and PAS 544. 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: A letter grade of B or better in PAS 511. Corequisites: PAS 502, PAS 512, PAS 522, and PAS 542. 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: A letter grade of B or better in PAS 522. Corequisites: PAS 503, PAS 513, PAS 523, and PAS 543. 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: A letter grade of B or better in PAS 533. Corequisites: PAS 504, PAS 514, PAS 524, and PAS 544. 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: PAS 511. Corequisite: PAS 512. 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. Prerequisites: PAS 512 and PAS 542. Corequisite: PAS 513. 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. Prerequisites: PAS 513 and PAS 543. Corequisite: PAS 514. 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

Course Listing and Descriptions

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: A letter grade of B or better in PAS 551. Credits: 1

PAS 608 - Surgery

Clinical rotation in which students will integrate with surgical teams and supervising surgical staff. Students will participate in clinic, ward rounds, operating room cases, and any staff meetings related to the care of surgical patients. Lectures, case presentations, seminars, and practical application are stressed throughout the rotation. Prerequisite: Completion of all professional didactic coursework. Credits: 3

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. Prerequisites: 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. Prerequisites: 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. Prerequisites: Successful completion of all professional didactic coursework. Credits: 12

PAS 640 - Clinical Practicum

Final course to transition students from didactic to clinical application of their physical assessment skills and critical thinking. Students will be assigned to a variety of clinical rotations and clinical electives. (4-3-45) Offered every semester. Prerequisites: Completion of PAS 630. Credits: 12

PAS 680 - Special Topics in Physician Assistant Studies

Study of selected topics in PAS. Credits: 1-3

PED 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. Credits: 1

PED 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. Credits: 1

PED 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. Credits: 1

PED 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 student's physique, self-discipline and self-confidence. Credits: 1

PED 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. Credits: 1

PED 108 - Tai Chi II

This course assumes some knowledge of a Tai Chi form (preferably Yang style) and offers more detailed instruction in doing mid-length form in Traditional Yang style. Prerequisites: Tai Chi I or permission from instructor. Credits: 1

PED 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. Credits: 1

PED 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, breath techniques, and meditations will be applied to daily lives to improve health and reduce stress. Credits: 1

PED 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. Credits: 1

PED 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. Credits: 1

PED 120 - Bowling

Course is graded credit/no credit. (0-1-0) Credits: 1

PED 121 - Golf

Course is graded credit/no credit. Credits: 1

PED 122 - Weight Training

Course is graded credit/no credit. Credits: 1

PED 123 - Golf II

This advanced course builds upon previously learned basic golf. Advanced shot making and course strategy will be emphasized. Credits: 1

PED 126 - Conditioning & Flexibility-Beginning

Course is graded credit/no credit. Credits: 1

PED 128 - Rock Climbing

Course is graded credit/no credit. Credits: 1

PED 130 - Volleyball

Course is graded credit/no credit. Credits: 1

PED 131 - Basketball

Course is graded credit/no credit. Credits: 1

PED 132 - Lacrosse

Course is graded credit/no credit. Credits: 1

PED 133 - Softball

Course is graded credit/no credit. Credits: 1

PED 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. Credits: 1

PED 140 - Beginning Racquetball

Course is graded credit/no credit. Credits: 1

PED 142 - Beginning Tennis

Course is graded credit/no credit. Credits: 1

PED 143 - Intermediate-Advanced Tennis

Course is graded credit/no credit. Credits: 1

PED 144 - Badminton

Course is graded credit/no credit. Credits: 1

PED 146 - Martial Arts for Fitness

An introduction to the conditioning, skill, and discipline of martial arts. Basic skills of kicking, punching, and self defense are taught within a framework that emphasizes the physical fitness aspects of martial arts. Credits: 1

PED 147 - Power Lifting for Sport

This course is designed to develop the strength and power related fitness levels necessary to participate in any sport. Credits: 1

PED 148 - SPINNING®

This course encompasses the background of SPINNING® and how to implement the SPINNING® program to develop personal fitness. Credits: 1

PED 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. Credits: 1

PED 150 - Beginning Swimming

Course is graded credit/no credit. Credits: 1

PED 151 - Intermediate-Advanced Swimming

Course is graded credit/no credit. Credits: 1

PED 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. Credits: 1

PED 153 - Sailing-Large Boat

This course introduces students to the basics of sail handling, docking, tacking, and directing a crew on a large sailboat. Credits: 1

PED 154 - Sailing-Small Boat

This course introduces students to the basics of sail handling, docking, and tacking a small sailboat. Credits: 1

PED 155 - Coastal Kayaking

This course is designed to introduce students to the basic skills and techniques of coastal kayaking. Emphasis will be placed on basic strokes, entries and exits, and rescues. After the completion of this course, students should feel comfortable paddling a kayak in calm water. Credits: 1

PED 160 - Beginning Jazz Dance

Course is graded credit/no credit. Credits: 1

PED 161 - Intermediate-Advanced Jazz Dance

Course is graded credit/no credit. Credits: 1

PED 162 - Beginning Tap Dance

Course is graded credit/no credit. Credits: 1

PED 163 - Intermediate-Advanced Tap Dance

Course is graded credit/no credit. Credits: 1

PED 164 - Beginning Modern Dance

Course is graded credit/no credit. Credits: 1

PED 165 - Intermediate-Advanced Modern Dance

Course is graded credit/no credit. Credits: 1

PED 166 - Beginning Ballet

Course is graded credit/no credit. Credits: 1

PED 167 - Intermediate-Advanced Ballet

Course is graded credit/no credit. Credits: 1

PED 168 - Aerobic Dance Exercise

Course is graded credit/no credit. Credits: 1

PED 170 - Wrestling

Course is graded credit/no credit. Credits: 1

PED 171 - Pointe Ballet I

Pointe work in ballet is the perfect blend of mind and body founded on technical principles of ballet. This course will explore the anatomy of the foot and the Pointe shoe, the proper use of the foot and Pointe shoe, and Pointe related injuries and remedies. Credits: 1

PED 172 - Pointe Ballet II

Pointe work in ballet is the perfect blend of mind and body founded on technical principles of ballet. This advanced course will explore the anatomy of the foot and the Pointe shoe, the proper use of the foot and Pointe shoe, and Pointe related injuries and remedies. Credits: 1

PED 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. Credits: 1

PED 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. Credits: 1

PED 180 - Special Topics in Physical Education

Lecture, discussion, laboratory, or field study on a topic related to Physical Education. Offered on demand. 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 - Conditioning Activities, Body Mechanics, and Dynamics

Physical inventory to appraise body condition, function, and ability to relax. Basic techniques to attain goals for improving and/or maintaining body image. How to look better, feel better and do better. (1-1-0) 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

Course Listing and Descriptions

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 pre test. 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 217 - Modern Principles of Athletic Training

Lecture and laboratory experiences relating to the prevention, recognition and management of injuries and illnesses commonly experienced by athletes and those engaging in physical activity. (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 230 - Team Sports K-12

Technique 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. 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 256 - Wrestling 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 261 - Rowing 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 Ed

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 sessions. Credits: 2

PED 270 - School Health Ed: Curric & Eval

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 280 - Special Topics in Physical Education

Lecture, discussion, laboratory, or field study on a topic related to Physical Education. Credits: 1 to 3

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 305 - Movement Education

Focuses on developing understanding of the role of movement education and physical education in the elementary school curriculum, providing the skills to design and implement age appropriate learning experiences. (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

This course examines the role and influence of sport in society. Students explore social aspects in contemporary sport via examination of sport entertainment media and through participation in a co-requisite sport course experience. Part of Sport and Life theme. (2-0-0) Corequisite: Student must select a Movement Science Department PED 100-level individual sport or team sport activity course. Credits: 2

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 Management

The study of contemporary issues in Sport Management. Guided by NASSM standards, students will gain knowledge in topics such as, ethics in sport, marketing and communication, sport law, sport governance and other diverse aspects of the profession. Offered fall and winter semesters. Prerequisites: BUS 201, MOV 202. 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 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, to include 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 460 - Fieldwork in Sport Leadership

Supervised, part-time work experience in a school, university, community, or business setting involving observation and assistance to a sport leadership professional. This experience is directed and evaluated by faculty member and on-site professional. Offered fall and winter. Prerequisites: MOV 102, PED 355 or 356, Junior Status, Instructor permission. 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 Leadership

A culminating, full-time work experience in a sport leadership profession. This experience is actual work in a sport setting in which management practices are applied. Internship is directed and evaluated by faculty member and on-site supervisor. Offered fall and winter semesters. Prerequisites: PED 460, Senior status. Credits: 6-12

PED 495 - Administration in Sport Leadership

Develops a thorough and fundamental base for the administrative framework; fiscal management, facilities and event planning, public relations, risk management and policy development, leadership philosophy and ethics, human resources management, organizational behavior, and time management. SWS Course. Capstone course. Offered every semester. Prerequisites: Senior status and Instructor permission. 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

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 Philosophy and Literature Foundation. 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 Philosophy and Literature Foundation. 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 Mathematical Sciences Foundation. Offered fall and winter semesters. 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. Prerequisites: PHI 103, or CIS 160, or CIS 162, or (MTH 110 or MTH 122 or MTH 201). Credits: 3

Course Listing and Descriptions

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 World Perspectives requirement. 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 Arts Foundation. Offered fall and winter semesters. Credits: 3

PHI 230 - American Philosophy

Focuses on figures from the classical period of American philosophy such as Peirce, James, Royce, Dewey, Santayana, and Whitehead. Works from the Colonial period and from the Romantic and Transcendental movements, together with selected current sources, provide an historical and intellectual context for understanding these focal figures. 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 World Perspectives requirement. Offered winter semester, even-numbered years. Prerequisites: Prior work in Philosophy or permission of instructor. 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 Human Journey theme. Offered fall, winter, spring and summer semesters. Credits: 3

PHI 306 - Eastern Great Philosophers

A study of one or several Eastern great philosophers, such as Lao Zi, Chuang Zi, Confucius, Mencius, The Buddha, Nagarjuna, Zhu Xi, Wang Yangming. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. Offered Winter semester. Prerequisites: 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 pre-Socratics, Plato, Aristotle, Lucretius. Focus will be on the philosophers' writings, but attention will also be given to context and tradition. May be repeated if content differs. 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, Maimonides. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. Part of Religion theme. May be repeated for credit if content varies. 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, Locke, Berkeley, Hume, 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 varies. 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, Marx. Focus will be on the philosopher's writings, but attention will also be given to context and tradition. 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

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, Marx. Part of Freedom and Social Control theme. Offered fall and winter semesters. Prerequisites: Prior work in philosophy or political science or permission of instructor. 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 Ethics theme. Offered fall and winter semesters. Credits: 3

PHI 330 - Legal Philosophy

Introduction to the nature of law, law and morality, principles and practice, freedom and determinism, common sense and science, punishment, necessity, and coercion, mental disease, all arising directly from the careful study of a substantive body of law. Especially valuable for pre-law students. Offered fall semester, even-numbered years. Prerequisites: Prior work in philosophy or permission of instructor. 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. Part of Democracy theme. 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? Our place in the universe? Classical and contemporary writings, East and West, will be examined. Part of Death and Dying theme. 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 Religion theme. Prerequisite: 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 odd 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. Prerequisites: 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. Prerequisites: Prior work in philosophy or permission of instructor. Credits: 3

PHI 370 - Feminist Philosophy

What do we mean by “feminist philosophy”? The aim of this course is to acquaint students with the various ways in which feminists have replied to this question, both in terms of the tradition of philosophy and in light of the diversity of views held by feminists themselves. Part of Gender, Society, and Culture theme. Offered fall semester. Prerequisites: PHI 101 or PHI 102. 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. Prerequisites: Permission of instructor. Credits: 4

PHI 376 - Community Working Classics II

Continuation of PHI 375. Students will continue to develop their organizing and facilitating skills in the context of a philosophy service-learning seminar, but special emphasis will be placed on researching and writing an integrative essay of considerable length. Offered winter semester. Prerequisites: Permission of instructor. Credits: 3

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. Prerequisites: 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. Prerequisites: 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. Part of the Perception theme. Offered winter semester. Prerequisites: 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 non-Western metaphysical thought. Offered fall semester, odd-numbered years. Prerequisites: 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. Prerequisites: Prior work in philosophy or permission of 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 Life Sciences with lab Foundation. 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

One semester. Physics topics particularly applicable to occupations in safety, health science, biology, medicine, and industry. A practical survey of physics also applicable to humanities and non-science 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 fall and winter semesters. Prerequisites: 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 Physical Sciences Foundation. Offered fall semester. Credits: 4

PHY 204 - Inquiry: Electricity, Magnetism, and Optics

Study of concepts based on readily observable phenomena in electricity, magnetism, and optics. Focuses on understanding fundamental concepts and reasoning and critical thinking skills through Discovery learning/ Socratic dialog. Topics include current, resistance, voltage, power and energy; magnets, electromagnets, motors, generators; introduces optics. (Ideal for students preparing themselves for careers in education.) Fulfills Physical Sciences Foundation. Offered winter semester. Credits: 4

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 a science majors or minors. Content reflects national and Michigan science standards. Offered fall and winter semesters. Credits: 2

Course Listing and Descriptions

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 non-calculus 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 co-requisite). 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 non-calculus 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 non-calculus 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. Physical Science with lab Foundation Course. Offered fall, winter, and spring semesters. Prerequisites: MTH 122 and MTH 123. Credits: 5

PHY 221 - General Physics II

The second half of a standard one-year non-calculus 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 and winter semesters. Prerequisites: 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. Physical Science with lab Foundation Course. Offered fall and winter semesters. Prerequisites: MTH 201 (MTH 202 is recommended as a co-requisite). 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. 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 Schrodinger equation with applications. Offered winter semester. Prerequisite: PHY 231. Credits: 4

PHY 303 - The World After Einstein

How the revolution of ideas in physics started by Einstein's theories have changed not only science but also the way we view the world and the universe. Writing and discussion of changes in physics and

resulting changes in other fields initiated by Einstein's ideas. (3-0-0) Part of Changing Ideas: Changing Worlds Theme. Offered fall and winter semesters. Prerequisites: Junior standing. Credits: 3

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) Part of Sport and Life Theme. Offered fall and winter semesters. Prerequisites: Completion of Science Gen. Ed. Foundation course requirements. Credits: 3

PHY 307 - Light and Sound

Much of our information about the world comes to us through light and sound. This course focuses on the creation, behavior, and perception of light and sound waves and concludes with the application of wave concepts to electrons (the quantum description of matter). Format includes lecture and hands-on activities. Part of the Perceptions Theme. (3-0-0) Offered fall and winter semesters. Prerequisites: Completion of Science Gen. Ed. 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 winter of even years. Prerequisites: 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 non-conservative forces, velocity-dependent forces, work and energy, linear oscillations, central forces, and non-inertial reference frames. Offered fall semester. Prerequisites: PHY 230, or permission of instructor and MTH 302 or MTH 304. 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 - Intermediate Modern Physics

An intermediate-level study of relativistic and quantum phenomena. The theory of quantum physics is presented as a mathematical description of natural phenomena. Computer techniques will be used. (4-0-0) Offered winter 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 fall semesters.

Prerequisites: PHY 231. Credits: 4

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 of odd 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. Prerequisites: 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. (3-0-0) 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. (3-0-0) 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. (3-0-0) Prerequisites: PHY 350 and MTH 300. 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. Prerequisites: PHY 485. Credits: 2

PHY 499 - Research in Physics

Investigation of current ideas in physics for upperclass 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. Prerequisite: 25 credits in physics and permission of the department chairman. Credits: 1 to 4

PHY 555 - Physics Content Enhancement

Structured study of one particular field of physics, intermediate to advanced level (Mechanics, Optics, E&M, Solid State, etc.) Students complete a project adapting material learned to the middle school, high school, or introductory college level classroom. Program of study arranged with physics advisor. May be repeated for credit with different topic. (3-0-0) Offered fall and winter semesters. Prerequisites: PHY 230 and PHY 231 or equivalent and department permission. Credits: 3

PHY 601 - Physics by Inquiry I

Focuses on the development of fundamental concepts, reasoning and critical thinking skills through inquiry-based instruction and laboratory experience, using materials based on research in physics education. Introduces teachers to inquiry-based instruction by immersing them in it as students. Topics include light, color, optics and astronomy. (2-0-2) Offered summer semester of even-numbered years. Prerequisites: Permission of instructor. Credits: 3

PHY 605 - General Astronomy

A general study of astronomy. Historical overview, the solar system and its origin, formation, evolution and death of stars, galaxies, and some basic ideas about the origin and evolution of the universe. A laboratory component includes observations of the sky. (2-0-3) Offered summer semester of even-numbered years. Prerequisites: PHY 220 and PHY 221 or equivalent. Credits: 3

PHY 610 - Measurement and Instrumentation in the Physics Lab

Experimental laboratory experience in the metric system, measurement techniques, presentation of data, theory of significant figures and error analysis, and mastery of basic measurement and diagnostic instruments. Construction of elementary AC and DC circuits. Construction and calibration of a simple temperature, pressure, or light meter. (2-0-3) Offered summer semester of odd-numbered years. Prerequisites: PHY 220 and PHY 221 or equivalent. Credits: 3

PHY 620 - Methods and Materials for Physics Demonstrations

A survey of easy-to-make-and-use physics demonstrations. Stimulates creativity for inventing appropriate classroom demonstrations for general science and beginning physics courses. Development and presentation of demonstrations as well as how and when demonstrations fit into the classroom will be discussed. (3-0-0) Offered summer semester of odd-numbered years. Prerequisites: PHY 220 and PHY 221 or equivalent. Credits: 3

PHY 630 - Teaching Conceptual Physics

A study of each area of traditional physics topics focused on teaching techniques that will promote conceptualization by the students. Topics include methods of visualization, real life examples, nonmathematical techniques, small groups, and the role of Socratic dialog. (3-0-0) Offered fall semester of odd-numbered years. Prerequisites: PHY 220 and PHY 221 or equivalent. Credits: 3

PHY 650 - Software and Interactive Physics

How to use physics software appropriate to junior high and high school physics courses. Software ranges from demonstration material and simulations of physical phenomena to interactive and computer based laboratory exercises. Students also study ways to effectively incorporate the software into the secondary curriculum. (2-0-3) Offered winter semester of even-numbered years. Prerequisites: PHY 220 and PHY 221 or equivalent and basic computing skills. Credits: 3

PHY 660 - Readings in Physics Education Research

An introduction to physics education research. Students read about and discuss developments in physics education. (3-0-0) Offered fall semester of even-numbered years. Prerequisites: PHY 220 and PHY 221 or equivalent. Credits: 3

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

Course Listing and Descriptions

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 Social and Behavioral Sciences Foundation. 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 Social and Behavioral Sciences Foundation. Part of World Perspectives Cultures category. Offered every semester. 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. Prerequisites: 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

Examination of the major theories and fields of study in international relations, focusing on conflict and cooperation among nations. Topics include power, alliances, national security, and international political economy. Special attention is devoted to the causes of war and the use of international law and organization to mediate international conflict. Part of the War and Peace theme. 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 semester. 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. Also offered as HP 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 World Perspectives requirement. Offered fall semester of even-numbered years. Credits: 3

PLS 282 - Government and Politics of Russia and Eastern Europe

An analysis of the socioeconomic factors which influence the political processes, through a comparison of the political system in the United States with Russia and Eastern Europe. Fulfills World Perspectives requirement. Offered winter semester. Credits: 3

PLS 283 - Chinese Politics and US-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 World Perspectives requirement. 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 World Perspectives Requirement. 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. Prerequisites: STA 215. 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. Part of Democracy Theme. 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. Part of the Civil and Human Rights Movements theme. Offered winter semester. Prerequisite: PLS 102 or junior standing. Part of Civil Rights theme. 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. Students will develop an understanding of the historical context, institutions, participants, and issues that structure health policy. Special emphasis on the politics of health care reform in the 1990s. Offered fall semester. Prerequisite: PLS 102 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. Part of the War and Peace theme. Offered fall and winter semesters. Prerequisites: PLS 211 or junior standing. Part of Making War and Peace theme. Credits: 3

PLS 312 - US 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 practice of government and nongovernment organizations in addressing issues such as poverty, human rights, and the environment. Offered winter semester of even-numbered years. Prerequisites: 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. Prerequisites: PLS 211 or junior standing. Credits: 3

PLS 315 - International Political Economy

Empirical analysis of the politics of international economic relations, including the impact of domestic and international political variables on international economic cooperation and conflict. Part of the department's B.S. cognate. PLS students must have also taken STA 215 and PLS 300 (for B.S. cognate). Part of Global Change theme. Offered fall and winter

semesters. Prerequisites: PLS 211 or ECO 200 or 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. Offered fall semester. Prerequisites: 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 World Perspectives. Offered fall semester. Prerequisite: PLS 103. 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. Prerequisites: PLS 221 or permission of Instructor. 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. Prerequisites: 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. Part of Religion theme. Credits: 3

PLS 333 - Contemporary Political Thought

An examination of political thought from roughly the beginning of the twentieth century to present. Schools of thought under study may include pragmatism, neo-conservatism, critical theory, post-structuralism, philosophical hermeneutics, feminism, neo-liberalism, and communitarianism. Offered fall semester. Prerequisites: PLS 231 or 232 or junior standing. 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. Part of Ethics theme. Offered fall and winter semesters. Prerequisite: Junior standing. Credits: 3

Course Listing and Descriptions

PLS 339 - Comparative Democratization

Seminar course assesses theories and approaches used to explain the comparative politics of democratization. Focuses on democratic transition, consolidation, the social and institutional bases of democracy, and the role of individual choices in shaping democracy. Examines case studies of democratization in East Asia, Latin America, Europe, and Middle East. Offered fall semester. Prerequisites: PLS 103 or junior standing. Part of Democracy theme. 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. Part of the Society and the Media theme. 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. Part of the department's B.S. cognate. Offered winter semester. Prerequisites: PLS 102, STA 215, and PLS 300. 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 382 - Politics of Post-Communist Europe

A comparative empirical and theoretical analysis of government and politics in the former communist countries of the Baltic region, Central Europe, and the Balkans. Topics include the collapse of communism, parties, elections, political economy, nationalism and ethnic conflict, social welfare policy, and relations with the European Union. Fulfills World Perspectives requirement. Offered fall semester. Prerequisite: PLS 103 or junior standing. Credits: 3

PLS 385 - Russian and Post-Soviet Politics

A comparative empirical and theoretical analysis of government and politics in post-Soviet Russia, Ukraine, Belarus, Georgia, Azerbaijan, Armenia, and the Central Asian republics. Topics include the collapse of communism, patterns of regime change, parties, elections, political economy, nationalism and ethnic conflict, social welfare policy, and foreign relations. Fulfills World Perspectives requirement. Offered winter semester of even years. Prerequisite: PLS 103 or junior standing. 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 status 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 status 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. Complimentary taped material is available in the language lab. Offered winter semester. Prerequisites: POL 101 with C (not C-) or better, or permission of instructor. Credits: 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. Prerequisites: 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 World Perspectives. Offered fall semester. Prerequisites: 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 and role of scientists in public and private sectors, their responsibilities, and emerging ethical and professional issues. Offered spring/summer semester. Pre-requisites: Admission to a professional science masters (PSM) program. Credits: 3

PSM 661 - Seminar in Professional Science Practice I

Seminar course designed to broaden the students professional foundation in the practice of applied sciences. Offered spring/summer semester. Prerequisites: Admission to a professional science masters (PSM) program. Credits: 1

PSM 662 - Seminar in Professional Science Practice II

Seminar course designed to enhance students' internship experiences. Offered spring/summer semester. Co-requisite or prerequisite: PSM 691. Credits: 1

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 core courses and PSM 661. 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 Social and Behavioral Sciences Foundation requirement. Offered every semester. 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 semester. Prerequisites: PSY 101 or HNR 234, and 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. 1 to 3 credits. Offered every semester. Prerequisites: PSY 101. Credits: 1 to 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 every semester. Prerequisites: 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 semester. Prerequisites: 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 fall and winter semesters. Prerequisites: PSY 101 and PSY 301. Credits: 3

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 winter semester. Prerequisites: 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 semester. Prerequisites: 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 semester. 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. Offered winter semester. 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. Offered fall semester. Prerequisites: 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 fall and winter semesters. Prerequisites: PSY 101 and PSY 301. 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 semester. Prerequisites: PSY 101 and PSY 301. Credits: 3

PSY 326 - Mental Retardation

Identification, classification, and etiology of mental retardation and associated problems. Methods of care, treatment, and education are considered. Field observation required. Offered spring and winter semesters. Prerequisites: PSY 101 and PSY 301. 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 summer and fall semesters. Prerequisites: PSY 101. Credits: 3

PSY 332 - Adult Development and Aging

A review of post-adolescent development from young adulthood through old age. Changes in family and work roles, personality, cognition, perception, and health will be discussed. Field observation required. Offered once a year. Prerequisites: 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. Part of Society and the Media theme. Offered fall and winter semesters. 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 World Perspectives requirement. Offered fall and winter semesters. Prerequisites: 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

Course Listing and Descriptions

relationship between language and thought. Offered spring and fall semesters. 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 semester. Prerequisites: 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. Part of Perception theme. Offered fall and winter semesters. Prerequisites: 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 winter semester. Credits: 3

PSY 363 - Learning

Major theoretical views of learning (behavioristic, cognitive, humanistic, etc.) will be evaluated for their ability to resolve questions about the learning process. Projects will engage students in the analysis of the important factors influencing learning. Laboratory. Offered winter semester. Prerequisites: PSY 101 or HNR 234, and PSY 300 or SS 300 or BMS 301 or CJ 300 or PLS 300 or NUR 435 or SW 430. 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. Part of the Human Journey theme. Offered every semester. Prerequisites: 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 semester. Prerequisites: 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. Part of the Human Journey theme. Offered winter semester. Prerequisites: 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. Offered fall semester. Prerequisites: PSY 101. 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. Part of Health, Illness, and Healing theme. Offered every semester. Prerequisites: PSY 101. 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 winter semester. Prerequisites: PSY 101. Credits: 3

PSY 377 - The Psychology of the Quest

Explores the concept of "questing" as one of the stories that humans use to explain human life. The field of Jungian archetypal psychology will serve as the primary organizing structure for studying these meaning-making stories. Part of the Human Journey theme. Offered every semester. Prerequisites: Junior standing. 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 on sufficient demand. 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 winter semester. Prerequisites: PSY 101 or SOC 201. 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. Part of Religion theme. Offered winter semester. Prerequisites: PSY 101. Credits: 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 semester. 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 fall and winter semesters. Prerequisites: PSY 101, PSY 300, and course in relevant content area, or permission of instructor. 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 fall semester. Prerequisites: PSY 101, and PSY 300 or SS 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. Offered fall semester. Prerequisites: PSY 101 or HNR 234, and 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 semester. Prerequisites: PSY 101. Credits: 3

PSY 430 - Physiological Psychology

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 fall and winter semesters. Prerequisites: PSY 101 or HNR 234, and PSY 300 or SS 300 or BMS 301 or CJ 300 or PLS 300 or NUR 435 or SW 430. 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 or HNR 234, and PSY 300 or SS 300 or BMS 301 or CJ 300 or PLS 300 or 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. Offered fall semester. Prerequisites: PSY 101 or HNR 234, and PSY 300 or SS 300 or BMS 301 or CJ 300 or PLS 300 or NUR 435 or SW 430. 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 winter semester. Prerequisites: 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 winter semester. 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. Offered every semester. Prerequisites: PSY 101, permission of instructor. Graded credit/no credit. Credits: 1 to 6

PSY 492 - Advanced General (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 semester. Prerequisites: Senior standing. 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 399 and 499 toward a major in psychology. Offered every semester. Prerequisites: PSY 101 and permission of instructor. Credits: 1 to 4

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. Prerequisites: 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 winter semester. Prerequisites: Permit only. 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. Permission of the respective program directors or the psychology department chair. Credits: 3

PT 380 - Special Topics in Physical Therapy

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 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 DPT 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. Prerequisites: Admission to Physical Therapy program. Credits: 3

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. Prerequisites: 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. Prerequisites: Admission to physical therapy program. Credits: 1

PT 517 - Clinical Kinesiology

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. Prerequisites: 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

Course Listing and Descriptions

referral strategies. Offered winter semester. Prerequisites: Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT curricular sequence. Credits: 4

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, orthopaedic surgical and medical management, and pharmacology, where appropriate. Offered winter semester. Prerequisites: Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT curricular sequence. Credits: 2

PT 528 - Clinical Biomechanics

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. Prerequisites: Successful completion of all previously required courses in the DPT curricular sequence. Credits: 3

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. Prerequisites: Successful completion of all previously required courses in the DPT 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 multi-systems approach for wound prevention and wound treatment will be presented. Offered spring/summer semester. Prerequisites: Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT 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 semester. Prerequisites: 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. Prerequisites: Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT 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 above listed groups. Offered fall semester. Prerequisites: Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT 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 non-manual based therapeutic approaches may be applied clinically. Issues of injury prevention, including basic workplace and ergonomic issues will be addressed. Offered winter semester. Prerequisites: Successful completion of all previously required courses in the DPT curricular sequence. Credits: 4

PT 652 - Geriatric Practice Management

The physical therapy needs of the geriatric population, ranging from the well elderly to the frail elderly will be examined. PT management, including diagnosis, prognosis and intervention and medical/pharmacological will be explored. Offered winter semester. Prerequisites:

Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT 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, reflection and synthesis when the student returns to campus. Emphasis is on managing patients/clients with neuromuscular and musculoskeletal impairments and related functional limitations. Offered winter semester. Prerequisites: PT Faculty recommendation. Course is graded credit/no credit. Credits: 5

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. Prerequisites: Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT 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. Prerequisites: Successful completion of all previously required courses in the DPT 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. Offered fall semester. Prerequisites: PT 656 and PT Faculty recommendation. Graded credit/no credit. 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. Offered fall semester. Prerequisites: PT 675 (may be taken concurrently) and PT Faculty recommendation. Graded credit/no credit. Credits: 6

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. Offered winter semester. Prerequisites:

Successful completion of all previously required courses in the DPT curricular sequence. Course is graded credit/no credit. 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. Prerequisites: Successful completion of all previously required courses in the DPT 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. Offered winter semester. Prerequisites: Successful completion of all previously required courses in the DPT curricular sequence or licensed physical therapist. Course is graded credit/no credit. 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. Prerequisites: Successful completion of all previously required courses in the DPT curricular sequence. Credits: 2

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. Offered winter semester. Prerequisites: Successful completion of all previously required courses in the DPT curricular sequence or licensed physical therapist. Course is graded credit/no credit. 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. Offered winter semester. Prerequisites: Successful completion of all previously required courses in the DPT curricular sequence or licensed physical therapist. Course is graded credit/no credit. Credits: 3

PT 696 - 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. Offered spring semester. Prerequisites: PT 677 and PT Faculty recommendation. Course is graded credit/no credit. 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

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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 DPT curricular requirements. Credits: 2

RAD 380 - Special Topics in Radiation Therapy

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

REC 110 - Foundations of Recreation and Leisure

An introductory course providing an overview of the history, philosophy, and concepts of recreation and leisure in modern society; leisure service delivery; health and wellness promotion; cross-cultural comparative studies of leisure lifestyles. (2-1-0) Offered fall semester. Credits: 3

REC 111 - Foundations of Therapeutic Recreation

Acquaints students with the history, philosophy, theories, and professionalism of therapeutic recreation and factors influencing service delivery. (2-1-0) Offered fall semester. Credits: 3

REC 200 - Leisure Education

To develop the knowledge and skills necessary to facilitate the development of leisure awareness, leisure skills, social skills, and leisure resources for persons with disabilities and the general public. The student will learn the leisure education process, activities, and facilitation techniques by going through the leisure education process themselves. (2-1-0) Offered winter semester. Credits: 3

REC 253 - 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. Prerequisites: REC 110 and REC 111. Credits: 3

REC 256 - Therapeutic Recreation Programming

Emphasis on systematic program planning and general recreation programming in therapeutic recreation settings. Important components in program planning include assessment, activity analysis, developmental and age appropriate activities, adaptations and modifications, and program evaluation. (2-1-0) Offered fall semester. Prerequisites: REC 253. Credits: 3

REC 308 - Recreation Leadership

Overview of theories and principles of leadership and the group dynamics process. Leading individual and small groups in a therapeutic environment. Practical experience in leading special events. (2-1-0) Offered fall semester. Corequisites: REC 256. 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. Prerequisites: REC 256 and REC 308. 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 310 or permission of instructor. 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 310 or permission of instructor. 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. Prerequisites: REC 310 or permission of instructor. 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. Credits: 3

REC 318 - 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 in a supervised program under the direction of an off-campus cooperating agency. Offered every semester. 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. Prerequisites: Permission of instructor. Credits: 1 to 4

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 - Issues in Recreation and Leisure (capstone)

An overview of current issues in parks, and recreation and therapeutic recreation. (2-1-0) Offered winter semester. 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 Evaluation in Therapeutic Recreation

Provides an opportunity for students to study a variety of assessment and evaluation models in therapeutic recreation to ensure accountability and documentation. Offered fall semester. Prerequisites: REC 310. Credits: 3

REC 490 - Internship in Therapeutic Recreation

Fifteen-week, (600 hours) 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: 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

RI 401 - Computer Applications

Information related to fundamental concepts of medical and bioinformatics methods and techniques involved in the integration of computers systems in medical centers. Introduction to biomedical information systems, data representation, modeling, and management.

Focus on radiologic and imaging sciences applications. Offered fall semester. Prerequisite: Permission of instructor. Credits: 3

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: 3

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. Co-requisite: RIE 330. Credits: 1

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, RIE 360, and co-requisite: 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. Co-requisite: RIE 332. Credits: 2

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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Co-Requisite: 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 summer semester. Prerequisites: RIE 330, RIE 331, 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 summer semester. Prerequisites: RIU 320, RIU 321, RIE 330, RIE 331, 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 summer session. Prerequisites: RIE 332, RIE 333. Co-requisite: RIE 362. Credits: 2

RIE 380 - Special Topics in Echo & Vascular Sonography

Special topics in echocardiography and vascular sonography. Offered every semester. Prerequisites: Faculty approval to assure students have appropriate experiential backgrounds in didactic, laboratory, and/or clinical areas of study. Credits: 1-5

RIE 432 - Vascular Sonography Procedures I

Study of concepts of vascular ultrasound imaging and physiological testing of the arterial system by ultrasound and cardiac and vascular interventional procedures. Offered fall semester. Prerequisites: RIU 320, RIU 321. Co-requisite: RIE 433. Credits: 2

RIE 433 - Vascular Sonography Procedures I Laboratory

Demonstrations, practice, physiological testing, and laboratory evaluation of arterial vasculature by ultrasound and cardiac and vascular interventional procedures including duplex imaging. Offered fall semester. Prerequisites: RIE 333 or RIU 333. Co-requisite: RIE 432. Credits: 2

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. Co-requisite: 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. Co-Requisite: RIE 434. Credits: 1

RIE 436 - Vascular Sonography Procedures II

Study of concepts of vascular ultrasound imaging and physiological testing of the venous and abdominal arterial system relevant to radiologic and imaging sciences studies by ultrasound and cardiac and vascular interventional procedures. Offered winter semester. Prerequisites: RIE 340, RIE 432. Co-requisite: RIE 437. Credits: 2

RIE 437 - Vascular Sonography Procedures II Lab

Demonstrations, practice, physiological testing, and laboratory evaluation of venous and arterial vasculature by ultrasound and cardiac and vascular interventional procedures including duplex imaging. Offered winter semester. Prerequisite: RIE 433. Co-requisite: 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

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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. Co-requisite: 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. Co-requisite: 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 495 - Advanced Clinical Problems in Echo 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. Co-requisite: RIE 464 or RIE 467. Credits: 3

RIR 320 - Computed Radiography Systems

This course will cover digital image processing with a focus on computed radiography direct and indirect system, including receptor characteristics and quality parameters. Offered winter semester of odd-numbered years. Prerequisite: Permission of instructor. Co-requisite: RIR 321. Credits: 2

RIR 321 - Computed Radiography Systems Lab

This course will provide laboratory experience in digital image processing with a focus on computed radiography direct and indirect systems, including receptor characteristics and quality parameters. A series of laboratory activities covering digital image processing parameters will be required. Offered winter of odd-numbered years. Prerequisite: Permission of instructor. Co-requisite: RIR 320. Credits: 1

RIR 330 - Adaptive Radiographic and Orthopedic Procedures

This course provides an advanced comprehensive study of medical imaging of musculoskeletal disease with an emphasis on adapting and modifying standardized procedures and projections. Offered winter semester of even numbered years. Prerequisite: Permission of instructor. Credits: 2

RIR 420 - Advanced Radiologic Dosimetry

This course is designed to provide advanced study of theoretical and clinical applications of radiographic physics with a special emphasis on protecting patients from biological effects of ionizing radiation. Offered fall semester of odd numbered years. Prerequisite: Permission of instructor. Credits: 2

RIR 461 - Advanced Radiography Clinical Education

Advanced clinical education course in which the student performs both basic and advanced radiographic procedures in the clinical setting, under indirect supervision. This course is designed to enhance clinical expertise and judgment of student in clinical radiography. Offered winter semester of even numbered years. Prerequisites: RIR 320, and RIR 321. Credits: 1-5

RIS 308 - Radiologic and Imaging Sciences Facilities Management

Administrative concepts that form the basis of radiologic and imaging sciences facilities management are explored with special emphasis on clinical applications. Offered fall semester of even numbered years. Prerequisite: Permission of instructor. Credits: 3

RIS 310 - Radiologic & 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 317 - Radiologic and Imaging Sciences Instructional Methodologies

This course provides information on the use of various instructional methodologies in radiologic and imaging sciences clinical education with emphasis on mastery learning and competency based systems. Offered fall of even numbered semesters. Prerequisite: Permission of instructor. Credits: 3

RIS 320 - 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: Admissions to a Radiologic and Imaging Sciences major. Credits: 3

RIS 322 - Radiation Protection Physics

The characteristics that allow radiation to be used successfully in the clinic can result in dangerous outcomes for patients, general public or radiation technologists. This course will familiarize students with the nature of ionizing radiation that allow it to be exploited for desired characteristics while minimizing potentially undesirable effects. Offered fall semester. Prerequisite: Admission to a Radiologic and Imaging Sciences major. Credits: 2

RIS 331 - Mam Bone Densitometry Procedures Lab

Laboratory practice of mammography and bone densitometry based on standardized procedures and examination techniques. Offered fall of odd-numbered years. Prerequisite: Permission of instructor. Co-requisite: RIS 431. Credits: 1

RIS 380 - Special Topics Radiologic & Imaging Science

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: 1-5

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: 1-5

RIS 415 - Magnetic Resonance Imaging Physics

This course will provide a fundamental understanding of the physical principles underlying the operation of magnetic resonance imaging units. Offered winter of odd numbered years. Prerequisite: Permission of instructor. Credits: 2

RIS 417 - Radiologic and Imaging Sciences Performance Assessment

This course provides health care systems performance assessment theory. It is designed to strengthen the foundations for evidence-based policies to promote health systems development. Offered winter of even numbered years. Prerequisite: Permission of instructor. Credits: 3

RIS 421 - Mammary Bone Density Instrumentation

This course provides information on equipment and instrumentation for performing mammography and bone densitometry studies. Offered winter of even numbered years. Prerequisite: Permission of instructor. Credits: 2

RIS 422 - Cardiac Inter Tech Instrumentation

The course will present theory and concepts related to instrumentation used for angiography and interventional procedures. Equipment required to produce and acquire the images and for monitoring the patient will be explained. Patient care procedures, medical and legal implications, and pharmaceutical agents will be discussed. Offered fall of odd numbered years. Prerequisite: Permission of instructor. Credits: 2

RIS 423 - Vascular Intervention Tech Instrumentation

This course will present theory and concepts related to the instrumentation used for vascular interventional procedures. Specialized equipment required to produce and acquire the images and for monitoring the patient will be explained. Patient care procedures, medical and legal implications, and pharmaceutical agents specific to each examination will be discussed. Offered fall of even years. Prerequisite: Permission of instructor. Credits: 2

RIS 424 - Computed Tomography Instrumentation

Study of computed tomography instrumentation necessary for competent operation of current equipment. Offered winter of even numbered years. Prerequisite: Permission of instructor. Credits: 2

RIS 425 - MRI Instrumentation

Information in the use and manipulation of the hardware and technical parameters used in the generation of MRI images. Included are a review of safety and special applications such as advanced imaging techniques. Offered fall of odd numbered years. Prerequisite: RIS 415. Credits: 2

RIS 426 - Quality Management Instrumentation Lab

This course provides theory and application of quality management principles related to equipment used for imaging and therapeutic procedures, including information, standards, and procedures for a diverse range of digital radiographic and fluoroscopic, computed tomography, and magnetic resonance imaging. Offered fall semester of even numbered years. Prerequisite: Permission of instructor. Co-requisite: RIS 436. Credits: 1

RIS 431 - Mammography and Bone Densitometry Procedures

The course will present theory and concepts related to standardized mammography and bone densitometry procedures and examination techniques. Offered fall semester of odd numbered years. Prerequisite: Permission of instructor. Co-requisite: RIS 331. Credits: 2

RIS 432 - Cardiac Interventional Tech Procedures

This course emphasizes cardiac anatomy and physiology. The course will present theory and concepts related to instrumentation for electrocardiography (ECG) and procedural information for cardiac interventional technology studies. Diagnostic imaging studies and interventional therapies related to coronary disease and dysfunction are also presented. Offered winter of even numbered years. Prerequisite: RIS 422. Credits: 2

RIS 433 - Vascular Intervention Tech Procedures

This course emphasizes vascular anatomy and physiology, theory and concepts of electrocardiography (ECG) instrumentation, and procedural information for vascular interventional technology studies. Diagnostic imaging studies and interventional therapies related to peripheral vascular disease and dysfunction are also presented. Offered winter of odd numbered years. Prerequisite: RIS 423. Credits: 2

RIS 434 - Computed Tomography Procedures

Study of concepts and theories of computed tomography procedures necessary for competent clinical practice. Offered fall of even numbered years. Prerequisite: Permission of instructor. Credits: 2

RIS 435 - MRI Procedures

Study of magnetic resonance imaging procedures. This course presents the variations in the imaging parameters for specific body regions and the resultant effect on the signal characteristics. Includes evaluation criteria for determining the quality of images. Offered winter of even numbered years. Prerequisite: RIS 425. Credits: 2

RIS 436 - Quality Management Administration

Concepts of quality management standards and procedures for a diverse range of conventional and digital radiographic, fluoroscopic, computed tomography, and magnetic resonance imaging equipment. Offered winter semester of odd numbered years. Prerequisite: Permission of instructor. Co-requisite: RIS 425. Credits: 2

RIS 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, abdominal, pelvic, and extremity anatomy in a clinical environment. Cadaver correlation to diagnostic medical sonography, echocardiography, computed tomography, and magnetic resonance imaging is emphasized. Offered winter semester. Prerequisite: BMS 309. Credits: 4

RIS 450 - Head & Brain Clinical RIS

This course will focus on head and brain clinical radiologic and imaging sciences procedures with in-depth focus on specific selected patient cases. Offered winter semester. Prerequisite: Admission to any Radiologic and Imaging Sciences major. Credits: 3

RIS 451 - Musculoskeletal Clinical RIS

This course will focus on musculoskeletal clinical radiologic and imaging sciences procedures with in-depth focus on specific selected cases. Offered winter semester. Prerequisite: Admission to a Radiologic and Imaging Sciences major. Credits: 3

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 454 - Obstetric-Gynecologic RIS

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 any Radiologic and Imaging Sciences major. Credits: 3

RIS 455 - Cardiac Clinical RIS

This course will focus on multi-modality cardiac diagnostic procedures with an in-depth focus on specific selected cardiac pathologies and abnormal morphologies. Offered winter semester. Prerequisite: Admission to any Radiologic and Imaging Sciences major. Credits: 3

Course Listing and Descriptions

RIS 456 - Chest Clinical RIS

This course will focus on chest clinical radiologic and imaging sciences procedures with in-depth exploration of specific selected cases. Offered winter semester. Prerequisite: Admission to any Radiologic and Imaging Sciences major. Credits: 3

RIS 457 - Neurologic Clinical RIS

This course will focus on neurologic clinical radiologic and imaging sciences procedures with in-depth focus on specific selected cases. Offered fall semester. Prerequisite: Admitted to a Radiologic and Imaging Sciences major. Credits: 3

RIS 458 - Neoplastic Clinical RIS

Overview of the pathologic foundations of neoplasms and the radiation/imaging practitioners' role in the health care delivery system. This course will introduce common sites of benign conditions, malignant lesions as well as typical treatment regimens, including those for breast, prostate, ovary, colon, stomach, lymphoma, CNS, and skin. Offered fall semester. Prerequisite: Admission to any Radiologic and Imaging Sciences major. Credits: 3

RIS 459 - Vascular Clinical RIS

This course will focus on the clinical presentation, diagnosis, and therapies for vascular pathologies, trauma, and anomalies as related to ultrasound and vascular interventional procedures. An in-depth discussion of select cases specific to vascular ultrasound imaging and physiological testing will be presented. Offered fall semester. Prerequisite: Admission to any Radiologic and Imaging Sciences major. Credits: 3

RIS 461 - Mammary Bone Densitometry Clinical Education

This course will provide advanced clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in mammography and bone densitometry. Content is supported by a weekly discussion session at the university. Offered fall semester of odd numbered years. Prerequisites: RIS 331, RIS 421, RIS 431. Credits: 1-5

RIS 462 - Cardiac Interventional Technology Clinical Education

This course will provide advanced clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in cardiac interventional technology. Content is supported by a weekly discussion session at the university. Offered every semester. Prerequisites: RIS 422, RIS 432. Credits: 1-5

RIS 463 - Vascular Intervention Technology Clinical Education

This course will provide advanced clinical practice experiences designed for sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in vascular interventional technology. Content is supported by a weekly discussion session at the university. Offered every semester. Prerequisites: RIS 423, RIS 433. Credits: 1-5

RIS 464 - Computed Tomography Clinical Ed

This course will provide clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in computed tomography. The skills practiced in this course are required proficiencies for the practice of computed tomography. Content is supported by a weekly discussion session at the university. Offered every semester. Prerequisites: RIS 424 and RIS 434. Credits: 1-5

RIS 465 - MRI Clinical Education

This course will provide clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in magnetic resonance imaging. Offered upon sufficient demand. Prerequisites: RIS 425 and RIS 435. Credits: 1-5

RIS 466 - Quality Management Clinical Education

This course will provide advanced clinical practice experiences designed for sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiologic and imaging sciences quality management. Content is supported by a weekly discussion session at the university. Offered as needed. Prerequisites: RIS 426, RIS 436. Credits: 1

RIS 477 - Radiation and Imaging Sciences Comprehensive Evaluation

This course is designed to provide educational assessment theory consistent with competency based evaluation of clinical skills for both education and health care accreditation systems. Offered fall of odd numbered years. Prerequisites: RIS 426, RIS 436. Credits: 2

RIS 478 - Organizational Behavior

An exploration of the impact of organizational behavior and cultures on administrative issues in the radiologic and imaging sciences. Offered winter semester of odd numbered years. Prerequisites: Permission of instructor. Credits: 3

RIS 495 - Advanced Clinical Problems in RIS

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 radiation or 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: Permission of instructor. Credits: 3

RIS 499 - Independent Research in RIS

Supervised research in radiologic and imaging sciences. Offered every semester. Prerequisite: Permission of instructor. Credits: 1-5

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 the basic foundations of radiation therapy including identification and application of ethical and legal issues, patient assessment, nutritional needs of patients, basic treatment techniques and patient setup. An introduction to patient simulation, oncology pharmacology, treatment side effects and patient care for the oncology patient will be presented. Offered fall semester. Prerequisite: Admission to the Radiation Therapy major. Co-requisites: RIT 331 and RIS 322. Credits: 4

RIT 331 - Radiation Therapy Principles and Practices I Lab

Overview of the basic foundations of radiation therapy including identification and application of ethical and legal issues, patient assessment, nutritional needs of patients, basic treatment techniques and patient setup. An introduction to patient simulation, oncology pharmacology, treatment side effects and patient care for the oncology patient will be presented. Offered fall semester. Prerequisite: Admission to the Radiation Therapy major. Co-requisites: RIS 322, 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 neoplasms of the skin, central nervous system, genitourinary system, gynecologic system, gastrointestinal system and respiratory system. Offered winter semester. Prerequisites: RIS 322, RIT 330, and RIT 331. Co-requisite: RIT 333. Credits: 3

RIT 333 - Radiation Therapy Principles and Practices II Lab

This course provides intermediate laboratory sessions presenting concepts of radiation therapy treatment principles and practices for skin, CNS,

genitourinary, gynecologic, gastrointestinal, ocular, endocrine and respiratory neoplasms. Offered winter semester. Prerequisites: RIS 322, RIT 330, and RIT 331. Co-requisite: RIT 332. Credits: 1

RIT 361 - Radiation Therapy Clinical Ed 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 322, 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 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: 1-5

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 430 - Radiation Therapy Principles and Practices III

Lecture sessions presenting advanced concepts of radiation therapy treatment principles and practices for breast, head & neck region, leukemia, lymphoma, pediatric neoplasms, HIV related malignancies, adult sarcomas & benign conditions. Offered fall semester. Prerequisites: RIS 322, RIT 330, RIT 331. Co-requisite: RIT 431. Credits: 3

RIT 431 - Radiation Therapy Principles and Practices III Lab

Laboratory sessions presenting advanced concepts of radiation therapy treatment set ups and procedures for breast, head & neck region, leukemia, lymphoma, pediatric neoplasms, HIV related malignancies, adult sarcomas, & benign conditions. Offered fall semester. Prerequisites: RIT 322, RIT 331, and RIT 331. Co-requisite: 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 patient prognosis, treatment results and the effects of combined therapies through clinical case studies. An overview of common clinical problems for patients, families and caregivers during end of life care are also covered. Offered winter semester. Prerequisites: RIS 322, RIT 330, RIT 331. Co-requisite: 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, patient care skills, proper filming technique and review, equipment manipulation

and conventional simulation. Offered winter semester. Prerequisites: RIT 330, RIT 331, RIS 322. Co-requisite: RIT 432. Credits: 1

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 weekly discussion session. Offered fall semester. Prerequisites: RIS 322, 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 weekly discussion session. Offered winter semester. Prerequisites: RIS 322, RIT 330, RIT 331, RIT 332, RIT 333, RIT 361, RIT 362, RIT 420, RIT 422, RIT 430, RIT 431, 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. Co-requisites: 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. Co-requisite: 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 co-requisite laboratory. Offered winter semester. Prerequisites: RIT 470, RIT 471. Co-requisite: 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 co-requisites lecture course. Offered winter semester. Prerequisites: RIT 470, RIT 471. Co-requisite: 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, 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. Co-requisite: 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. Co-requisite: 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

Course Listing and Descriptions

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. Co-requisite: 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. Co-requisite: RIU 320. Credits: 1

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, bascular, 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 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

This course includes 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. Offered winter semester. Prerequisite: RIU 360. Co-requisite: RIU 333. Credits: 4

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. Co-requisite: 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 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 weekly discussion session at the university. Offered 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: 1-5

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. Prerequisites: 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, RIU 331. Co-requisite: 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, RIU 331. Co-requisite: 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 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, 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, RIU 460. Credits: 3

RIU 464 - Breast Sonography Clinical Education

This course will provide clinical practice experiences in breast sonography. The course is designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in breast ultrasonography. Content is supported by a weekly discussion session at the university. Offered fall semester of odd numbered years. Prerequisite: RIU 434. Credits: 1-5

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. Co-requisite: RIU 461. Credits: 3

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 World Perspectives requirement. Offered spring semester in 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 331 - Russian Literature in Translation, 1800-1880

Survey of major writers of the period, including Pushkin, Lermontov, Gogol, Turgenyev, Dostoevsky, and Tolstoy. Supplemental writing skills course. Fulfills Philosophy and Literature Foundation. Offered fall semester of odd-numbered years. Prerequisites: WRT 150. Credits: 3

RST 332 - Russian Literature in Translation, 1880-1932

Survey of Russian literature in its period of transition from the era of the tsars to the age of the commissars. A supplemental writing skills course. Offered winter semester of even-numbered years. Prerequisites: WRT 150. Credits: 3

RST 333 - Russian Literature in Translation, 1932 to the Present

Survey of Russian literature in the Soviet period, including works of Socialist Realism, Bulgakov, Pasternak, Solzhenitsyn, and contemporary writers. A supplemental writing skills course. Fulfills Philosophy and Literature foundation. Offered fall semester of even-numbered years. Prerequisites: WRT 150. Credits: 3

RST 380 - Special Topics in Russian Studies

Credits: 1 to 3

RST 399 - Independent Reading

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

Credits: 1 to 4

RUS 101 - Elementary Russian I

An introduction to Russian pronunciation and grammar. Offered fall semester. Credits: 4

RUS 102 - Elementary Russian II

Continuation of RUS 101. Offered winter semester. Prerequisites: 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

Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Offered fall semester. Prerequisites: C (not C-) or better in RUS 102, or credit. Credits: 4

RUS 202 - Intermediate Russian II

Continuation of RUS 201. Fulfills World Perspectives. Offered winter semester. Prerequisites: C (not C-) or better in RUS 201, 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 301 - Advanced Russian Grammar I

Continued study of grammar and vocabulary. Offered fall semester. Prerequisites: RUS 202 or equivalent. Credits: 3

RUS 302 - Advanced Russian Grammar II

Continuation of RUS 301. Offered winter semester. Credits: 3

RUS 304 - Russian Conversation and Composition I

Practice in oral and written Russian; development of listening and reading skills. Offered fall semester. Prerequisites: Successful completion of RUS 302 (C or better) or permission of instructor. Credits: 3

RUS 306 - Russian Conversation and Composition II

Continuation of RUS 304. Offered winter semester. Prerequisites: Successful completion of RUS 304 (C or better) or permission of instructor. Credits: 3

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

Course Listing and Descriptions

RUS 401 - Introduction to Russian Literature I

A brief survey of nineteenth-century Russian literature. Course taught in Russian. Offered fall semester. Prerequisites: RUS 302 or equivalent. Credits: 3

RUS 402 - Introduction to Russian Literature II

A brief survey of Russian literature of the twentieth century. Course taught in Russian. Offered winter semester. Prerequisites: RUS 401. Credits: 3

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

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 Life Sciences with lab Foundations. Prerequisite: MTH 221. 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 Physical Sciences Foundation. Course meets Physical Science non-lab Foundation requirement. Prerequisite: MTH 221. Credits: 3

SCI 319 - Science in Elementary Education

Designed for integrated science majors to practice preparing and presenting science lessons, demonstrations, and hands-on activities for use in teaching science at the elementary (K-8) level. Prerequisites: ED 200, 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 pre-service 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 495 - Teaching Science in the 21st Century

A study of four key aspects of biology-genetics, ecology, plant, and animal life cycles and how these can be used to teach integrated 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, BIO 205, SCI 319 and SCI 336 (one may be taken concurrently). 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

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 201 - 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 Social and Behavioral Sciences Foundation. Offered every semester. 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. Part of Marginality and Difference theme. 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. Equivalent to CJ 301. Students may only receive credit for either class. Offered on sufficient demand. Credits: 3

SOC 255 - Sociology of Work and Employment

Examines the social forces changing the organization of work and the occupational structure as well as the tensions and conflicts associated with labor and management relations. Reviews the effects of work on attitudes and behavior. Discusses current trends in management, labor, and work processes. Offered fall semester. Credits: 3

SOC 280 - Special Topics in Sociology

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 Social and Behavioral Sciences Foundation. Fulfills U.S. Diversity requirement. Offered every 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 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 winter semester. Prerequisite: STA 215, SOC 201, and 3 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 semester. Prerequisites: STA 215, SOC 201, and 3 additional credits in Sociology. Credits: 3

SOC 323 - 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 U.S. Diversity requirement. Part of the Human Journey theme. Offered every semester. 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. Part of the Civil and Human Rights Movements theme. 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. Prerequisites: SOC 201, ANT 204, or permission from the instructor. Credits: 3

SOC 346 - 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. Part of Creativity: Ideas and Innovation theme. Offered winter semester. Credits: 3

SOC 351 - Urban Sociology

Explores urban theory, including Chicago School, political economy, pluralist and postmodern approaches; the evolution of U.S. cities; suburbanization, immigration, race relations, street life, redevelopment, urban politics and planning, and international comparison. Readings focus on urban theory, specific cities, and methods. Part of Cities theme. Offered winter semester. Prerequisites: SOC 201. Credits: 3

SOC 356 - 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. Part of Health, Illness, and Healing theme. Offered fall and winter semesters. Credits: 3

SOC 357 - 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; includes attention to non-Western influences. Part of Religion theme. Offered winter semester. 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. Prerequisites: SOC 201. SOC 360 is not equivalent to PSY 360. Students may receive credit for both courses. Credits: 3

SOC 366 - Sociology of Media

Critically examines the production and consumption of mass media. The roles that mass media play in shaping values, ideology, and human interaction will be studied through examination of the economic and social organization of the mass media, media content, and the ways audiences interact with media. Part of Society and the Media theme. Offered fall semester. Credits: 3

SOC 375 - Perspectives on Masculinity

Discusses and analyzes social and political perspectives on men and the men's movements. Engages students to look critically at men and sports, sexuality, work, and friendship. A dual listing of WGS 375. Part of Gender, Society and Culture theme. Offered winter semester. 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 macro-level institutions that shape globalization, social conflicts arising from its effects, and the consequences of global change on individuals, groups, and organizations. Offered winter semester. Prerequisites: SOC 201 or SOC 280. Credits: 3

SOC 379 - Love, Sex, and Gender

Considers the way in which ideas and values are socially constructed and contextually grounded. Focus on the historical, socioeconomic, psychological, and political construction of love, sex, and gender in the United States. A comparative aspect is also provided. Part of Gender, Society, and Culture theme. Offered fall and winter semesters. Prerequisites: Junior standing. Credits: 3

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

Studies the meaning of difference in contemporary society. Focus on the interplay of structure and agency in relation to class, race, gender, and sexuality regarding life opportunity, privilege, and inequality. Fulfills U.S. Diversity requirement. Part of the American Mosaic theme. Offered fall and winter semesters. Prerequisites: SOC 201 or SOC 280. Credits: 3

SOC 382 - 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 U.S. Diversity requirement. Offered every semester. Prerequisites: SOC 201. Credits: 3

SOC 383 - Sociology of Women

Examines the social and cultural construction of gender differences and sociological theories of gender. Explores both the historical and contemporary status of women. Offered on sufficient demand. Credits: 3

SOC 384 - 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 385 - 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. Part of Marginality and Difference theme. Offered fall and winter semesters. Prerequisites: 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. Prerequisites: SOC 201. 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 winter semester of even-numbered years. 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

Course Listing and Descriptions

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. Part of Freedom and Social Control theme. Offered winter 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 201 and consent of the instructor before registration. Credits: 1 to 3

SOC 400 - 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: Six hours in sociology. Credits: 3

SOC 401 - 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: Six hours in sociology. Credits: 3

SOC 420 - 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. Part of The American Mosaic theme. Offered fall semester. Prerequisites: STA 215 and SOC 201 or GPY 220. Credits: 3

SOC 490 - Practicum: Career-Service

Agency experience in the community relating practical training and independent study in a specialized area. Limited to 9 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 400 or SOC 401, 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 - Elementary Spanish I

An introduction to the language with emphasis on understanding, speaking, and reading, complemented by taped materials available in the language laboratory. Not for credit for students with prior college Spanish or more than two semesters of high school Spanish. Offered fall and winter semesters. Credits: 4

SPA 102 - Elementary Spanish II

Continuation of SPA 101. Students may not receive credit for both SPA 102 and SPA 150. Offered fall and winter semesters. Prerequisites: C (not C-) or better in SPA 101, or credit, or appropriate placement test score. Credits: 4

SPA 150 - Intensive Elementary Spanish

One-semester review of elementary Spanish for students with prior study but who are not adequately prepared for 200-level courses. Covers the same material as SPA 101 and SPA 102. Not open to students with credit in SPA 101 or SPA 102 or their equivalent. Offered fall and winter semesters. Prerequisites: Appropriate high school background or placement test score. 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

Special emphasis on oral and reading practice based on literary texts; review of grammar supplemented with taped materials in the language laboratory. Required independent lab work assigned by instructor. Minimum of 50 minutes weekly. Offered fall and winter semesters. Prerequisites: C (not C-) or better in SPA 102 or SPA 150, or credit, or appropriate placement test score. Credits: 4

SPA 202 - Intermediate Spanish II

Continuation of SPA 201. Introduction of writing techniques. Fulfills World Perspectives requirement. Offered fall and winter semesters. Prerequisites: C (not C-) or better in SPA 201, or credit, 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 semesters. Prerequisites: 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 fall semester. Prerequisites: 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 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. Part of the Creativity: Ideas and Innovations Theme. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Part of Death and Dying theme. Offered winter semester. Prerequisite: WRT 150 and the completion of the Philosophy and Literature General Education Foundation. Credits: 3

SPA 308 - Spanish Phonetics

Introduction to the sound system of Spanish. Phonetic transcription of texts in Spanish. Offered fall semester. Prerequisites: Completion of SPA 202 with a grade of C (not a 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. Prerequisites: Completion of 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. Fulfills World Perspectives requirement. Offered winter semester. Prerequisites: Completion of 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. Fulfills World Perspectives requirement. Offered fall semester. Prerequisites: Completion of 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. Fulfills World Perspectives requirement. Offered winter semester. Prerequisites: Completion of 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 U.S. Diversity requirement. Offered fall semester. Prerequisites: Completion of 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 winter semester. Prerequisites: Completion of 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 winter semester of odd numbered years. Prerequisite: SPA 202. 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 semester. Prerequisites: C (not C-) or better in SPA 202, 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 winter semester. Prerequisites: C (not C-) or better in SPA 321. Credits: 3

SPA 324 - Spanish-American Novel in Translation

A study of the twentieth-century Spanish-American novel. Offered on sufficient demand. 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 326 - Modern Spanish Literature in Translation

A survey of Spanish literature of the nineteenth and twentieth centuries. 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 semesters in even-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, dialectal variation, Spanish in contact with other languages, and Spanish as a component of individual and group identity. Offered fall semester. Prerequisites: Completion of 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: Completion of 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 principal literary works and movements of Spain. Offered fall semester. Prerequisite: Completion of

Course Listing and Descriptions

SPA 322 plus three credits at the 300 level with a grade of C (not C-) or better. May be taken in conjunction with SPA 330. Credits: 3

SPA 332 - Survey of Spanish American Literature

A historically grounded survey of the principal literary works and movements of Spanish America. Offered winter semester. Prerequisite: Completion of SPA 322 plus three credits at the 300 level with a grade of C (not C-) or better. May be taken in conjunction 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 winter semester. Prerequisites: 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 in odd numbered years. Prerequisite: C (not C-) or better in SPA 202. 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 semesters in 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 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 twentieth century. Offered fall semester in even-numbered years. 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 around 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, The Language of Desire in Early Prose and Poetry. Offered winter semester in 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 in 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 in 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 nineteenth- and twentieth-century Spain. Special emphasis on the realists and the generation of 1898. Offered fall semester

in 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. Offered fall semester in even-numbered years. Prerequisites: Completion of SPA 330, and 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

SS 180 - Special Topics in Social Studies

Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Credits: 3

SS 300 - Research Methods in the Social Sciences

Examination of basic investigative methods in the social sciences. Focus on logic and theory of social research, including formulating and testing hypotheses, research design, sampling procedures, data collection techniques, and the ethics of conducting research. Offered every semester. Prerequisites: STA 215. Credits: 3

SS 324 - Urbanization

Examines the process of urbanization and its impact on various cultures. Considers the dynamic growth of urbanization in third world countries and the significant increase in global urbanization, emphasizing the evolution of cities over time, space, and vastly different social, political, and cultural environments. Fulfills World Perspective requirement. Part of Cities Theme. Offered summer semester. Credits: 3

SS 351 - Family & 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 World Perspectives. Part of the Gender, Society, and Cultural theme. Offered winter semester. Credits: 3

SS 381 - 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. Part of Death and Dying theme. Offered summer and winter semesters. Prerequisites: Junior standing. Credits: 3

SST 309 - Social Studies for Elementary Teachers

An introduction to important issues, materials, best practices and research related to elementary level education in each of the social studies disciplines: history, geography, economics, and political science. In addition, students will learn about current state and national standards and frameworks regarding teaching and assessment in the social studies. Offered fall and winter semesters. Prerequisites: Junior standing or permission of instructor. Credits: 3

SST 310 - Strategies for Social Studies Teachers

Introduces students to numerous strategies, methods, and issues that relate to social studies disciplines. Students will study current frameworks and design lessons to achieve appropriate objectives. Required of students seeking certification in social studies. Offered every term. Prerequisites: Junior standing or consent of the instructor. Credits: 3

SST 495 - Education in Plural Societies (capstone)

Examines the models used to interpret and explain the system of public education in the United States and other countries. Explores questions related to the role of public education as a transmitter of social and cultural values. Seminar format. Offered every term. Prerequisites: Senior standing in the major; one semester fieldwork in school (may be concurrent). Credits: 3

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. Offered every semester. Prerequisites: MTH 110 or equivalent. Fulfills Mathematical Sciences Foundation. 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, non-parametric statistics. Offered fall and winter semesters. Prerequisites: 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. Prerequisites: MTH 201. Co-requisite: EGR 220. Credits: 2

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 semesters on sufficient demand. Prerequisites: STA 216. Credits: 3

STA 311 - Introduction to Survey Sampling

A project-oriented overview of topics related to survey sampling. Topics include sampling and non-sampling errors, questionnaire design, non-probability 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 semesters. Prerequisites: 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. Prerequisites: MTH 201. Credits: 3

STA 313 - Probability and Stochastic Processes

Introduction to probability and stochastic processes for engineering applications. Topics include probability models in electrical and computer engineering, probability theory, random variables, stochastic processes, random signal processing, renewal processing, and Markov chains. Offered winter semester. Prerequisite: MTH 203. 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 fall and winter semesters. Prerequisites: STA 215 or EGR 103. 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 semesters. Prerequisites: 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 semesters on sufficient demand. Prerequisites: 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. Prerequisites: STA 215. Credits: 3

STA 319 - 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 winter semesters. Prerequisites: STA 216. 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 semesters on sufficient demand. Prerequisites: STA 216. 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. Part of Sports and the Sporting Life theme. Offered fall and winter semesters. Prerequisites: 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 412 - Mathematical Statistics I

A theoretical study of the following topics: sample space, conditional probability, independence, Bayes' Theorem, Bernoulli Trials, discrete and continuous random variables and their distributions, Chebyshev's inequality, joint distribution, expectation, variance, and moment generating functions. Offered fall semester. Prerequisites: either STA 215 or STA 312, and MTH 202. Credits: 4

Course Listing and Descriptions

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 416 - Multivariate Data Analysis

Multivariate analysis with emphasis on application using a statistical package such as SAS or SPSS. Topics include principal components analysis, factor analysis, discriminant analysis, logistic regression, cluster analysis, multivariate analysis of variance, and canonical correlation analysis. Offered fall semesters on sufficient demand. Prerequisites: 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 semesters on sufficient demand. Prerequisites: STA 312 and MTH 202. 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 semesters in the 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 580 - Selected 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 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 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 winter semesters on even numbered years. Prerequisites: 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; producing reports. Offered winter semesters. 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, principal components analysis, factor analysis, discriminant analysis, and cluster analysis. Offered fall semester. Prerequisites: 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, model building diagnosis. Applications in biological and biomedical problems. A computer package will be used. Offered winter semesters. Prerequisites: 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 semesters. 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 fall 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 semesters. Prerequisites: STA 610 and one of the following: PSM 650, HPR 610, BIO 610, BMS 601, or NUR 690. Credits: 2

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 fall semesters. Prerequisite: STA 621. 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. Prerequisites: 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 Social and Behavioral Sciences Foundation. 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 US diversity will be a primary focus. Part of the American Mosaic theme. 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. Prerequisites: SW 317. Co-requisite: SW 318. Credits: 3

SW 317 - Generalist Practice I

This course provides students with knowledge, values, and skills for multilevel generalist practice. It prepares students for direct and indirect service delivery involving intervention models including micro, mezzo, and macro skills, planning, risk management and crisis intervention, termination, evaluation, and follow-up. Three hours per week of volunteer service in an approved social agency are required. Offered fall semester. Prerequisites: SW 150, SOC 201, PSY 101, PLS 102, SOC 280 or SOC 384, ECO 210 or ECO 211 or SOC 385. 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. Prerequisites: SW 317. Corequisites: SW 316, 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, 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. Credits: 3

SW 322 - Health Care and Social Services

This course provides an overview of the health care and the social consequences of health care in the United States. Social values and cultural, political, and economic issues that affect the development and implementation of health care policy and practices are examined. The biopsychosocial effects of illness and the possible roles of a generalist

social work practitioner are investigated. Part of the Health, Illness, and Healing theme. Offered fall and winter semester. 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 macro-settings (groups, organizations, communities and society). Offered fall semester. Prerequisites: SW 150, BIO 103, PSY 201, SOC 201, PSY 303, PSY /SOC 360, SOC 392 or SW 300, and SOC 280 or SOC 384. Corequisites: SW 317. 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 and 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. Prerequisites: SW 340; Corequisites: SW 316, SW 318, and SW 348. Credits: 3

SW 348 - Field Education Preparation

In preparation for the field education experience, students examine how social work knowledge, values, and skills that are required of generalist practitioners are implemented in a variety of social work practice areas. Socialization to professional demeanor in behavior, appearance, and communication, as well as professional roles and boundaries are emphasized. Offered fall semester. Credits: 2

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 session. Prerequisite: Accepted into the BSW 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 session. 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. Prerequisites: SW 317, SW 319, and SW 340, and SW 348. Credits: 1 to 4

SW 430 - Social Work Research

This is a foundation course in social work research. Its purpose is to present the ethical considerations, 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, with an emphasis on the problem identification and formulation stages of the research process, i.e., selecting and defining a reasonable problem, describing the relation of the problem to a theoretical framework, and formulating hypotheses or research questions. These, then are related to an overview of the various designs for research, data collection, and analysis

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procedures for generalist practice and in preparation for application in field education. 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. Prerequisites: SW 317; Corequisites: SW 318 and SW 341. 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 bio-psycho-social 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. Prerequisites: SW 317. 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. Prerequisites: SW 348, SW 318, PSY 303, PSY 360 or SOC 360, SOC 382 or SW 300, SOC 201, PSY 101, PLS 102, SOC 385. Co-requisite: 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 show evidence of skill acquisition through supervisor assessment and evaluation. Offered winter semester. Prerequisites: 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. Corequisites: SW 490. Credits: 1

SW 493 - Field Practicum in Social Work 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 in American society. 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 fall, spring/summer, and winter semesters. Credits: 3

SW 601 - Foundations of Social Work Practice

Examined are the development of 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 intervention with individuals, families, groups, organizations, and communities. Offered fall and winter semester. 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 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: SW 610. Credits: 3

SW 616 - Law, Ethics, and Social Welfare

Examines the relationship between law and social welfare as it impacts on human rights and social work practice. Evaluates major value positions in social work practice from personal, philosophical, historical, and political perspectives. Major ethical dilemmas in the practice of social work are outlined and models for ethical decision making will be presented. Offered every other year. Prerequisites: SW 610. Credits: 3

SW 618 - Contemporary Social Policy for Elders

Students will build on past knowledge, investigate and evaluate current policy, services and ideology for older Americans in this pluralistic society. Policy issues and trends that may challenge conventional standards and thinking are explored for utility and appropriateness in the context of the rapidly changing demographics of aging. Offered winter semester. Prerequisites: SW 610. Credits: 3

SW 619 - Comparative Social Welfare Policy

Analysis of U.S. and Host Country's Welfare Policy/Practice. Offered summer semester. Prerequisites: SW 610. Credits: 3

SW 620 - Human Behavior and the Social Environment

This course focuses on the interactions between the person and the social system in which human development and maturation take place. The unique effects of life-cycle, lifestyle, and culturally diverse lives are considered in relation to several major theories for assessing human behavior and their relationship to the advanced generalist perspective. 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 studentbreak 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 MSW Generalist Perspective. Taken concurrently with 1 credit field seminar SW 651. Prerequisites: SW 600, SW 601, SW 603, and SW 620. Corequisites: SW 651. Credits: 3

SW 651 - Field Education Seminar I

Field Seminar focused on integrating coursework with foundation field experiences. 1 credit course (for a total of 15 class hours) that meets

bi-weekly with students concurrently enrolled in SW 650. Co-requisite: SW 650. Credits: 1

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 1 credit field seminar. Offered fall semester. Prerequisites: SW 650 and SW 651. Co-requisite: SW 653. Credits: 3

SW 653 - Field Education Seminar II

Field Seminar focused on integrating coursework with second semester advanced field experiences. 1 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. Co-requisite: 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 1 credit field seminar. Prerequisites: SW 652 and SW 653. Co-requisites: 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. 1 credit course (for a total of 15 class hours) that meets bi-weekly with students concurrently enrolled in SW 654. Offered winter semester. Prerequisites: SW 652. Co-requisites: 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

Course Listing and Descriptions

development through mind, body, and spirit dynamic application for holistic health and self-actualization. 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 semester. 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Addressed is 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. Prerequisites: 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 application. Includes focus on power, influence, inter-organizational relationships and action strategies, development and use of structure and leadership. Offered fall semester. Prerequisites: 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 summer semester. Prerequisites: 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 that differentiate human service organizations from other

organizational species. Offered fall semester. Prerequisites: SW 603. Credits: 3

SW 679 - Program Planning, Monitoring & 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. Prerequisites: 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. Offered spring/summer and fall semesters. Prerequisites: SW 690. 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 and consent of thesis Advisor. 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 201 - Diversity in the United States

Examines the multicultural nature of the United States. Focus is on the demography and cultural heritage of multiple racial groups in the United States and on multiculturalism as an issue. Students also study different conceptual ways of explaining relations between diverse groups of people. Fulfills U.S. Diversity requirement. Part of the American Mosaic theme. Offered fall and winter semesters. Credits: 3

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

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 Social and Behavioral Sciences foundation. Offered fall and winter semesters. Credits: 3

WGS 236 - Introduction to Writing by Women

Introduction to the tradition of women writing in English. Emphasis on the cultural and historical contexts of British, American, and Anglophone women's writing. Course will include a variety of texts and authors, including significant attention to minority women writers. A dual-listing of ENG 236. Offered fall semester, odd years. Prerequisites: Fulfillment of the Freshman Writing requirement. Credits: 3

WGS 280 - Special Topics in Women and Gender Studies

A variable course emphasizing the study of women and gender 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

WGS 300 - Women/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. Prerequisites: WGS 200. 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. A dual listing of CJ 310. Part of the Gender, Society, and Culture Theme. Offered winter semester. 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. A dual listing of PSY 315. Offered winter semester. Credits: 3

WGS 316 - Human Intimacy & Sexuality

A comparative analysis of sexual practices, reproductive strategies, and intimate relationships using competing view points (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. Prerequisite: PSY 101. Credits: 3

WGS 320 - Crimes Against Women

An in-depth study of crimes committed almost exclusively against women, including sexual harassment, rape, and certain types of murder.

The course is taught within the framework of feminist theory and research. Part of the Gender, Society and Culture theme. A dual-listing of CJ 320. Offered fall semester. Credits: 3

WGS 324 - Introduction to Lesbian and Gay Studies

Introduces the historical background, theoretical and psychological perspectives, literary and artistic expression, biological and health matters, politics, community life, and other issues relevant to the study of gay, lesbian, bisexual, and transgendered life. Offered winter semester. Credits: 3

WGS 335 - Women, Health & 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 Earth & Environment theme. Offered fall semester in even-numbered years. Credits: 3

WGS 351 - Family & 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 World Perspectives. Part of the Gender, Society and Culture theme. A dual-listing of SS 351. Offered winter semester. Prerequisites: completion of the social sciences foundation category of general education. 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 Gender, Society and Culture theme. A dual listing of AAA 352. Offered fall semester. 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 minors. Offered winter semester. Prerequisite: WGS 200 or permission of instructor. Credits: 3

WGS 370 - Women and the Law

An 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 on these rights; violence against women; and employment discrimination focusing on gender-based influences. Part of Gender, Society, and Culture theme. Offered winter semester. Credits: 3

WGS 373 - Women and Minorities in Film and Television

An examination of American film and television from the perspective of those social groups whose participation in the industry has been restricted both in front of and behind the camera. Offered every other year. A dual listing of COM 373. Credits: 3

WGS 375 - Perspectives on Masculinity

Discusses and analyzes social and political perspectives in men and on the men's movements. Engages students to look critically at men and sports, sexuality, work, and friendship. Part of the Gender, Society and Culture theme. Offered winter semester. A dual listing of SOC 375. Credits: 3

WGS 380 - Special Topics in Women and Gender 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

Course Listing and Descriptions

WGS 399 - Independent Readings

Independent supervised readings in selected topics. Offered every semester. Prerequisites: Permission of program coordinator. Credits: 1 to 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. A dual-listing of SPA 460. Offered fall semester in odd-numbered years. Prerequisites: SPA 330 and 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. A dual-listing of ENG 461. Offered winter semester. Prerequisites: ENG 261. Credits: 3

WGS 490 - Women's 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, non-profit theory and sociology. Offered winter semester. Prerequisites: Junior standing or permission of instructor. Credits: 3

WGS 491 - Contemporary Theory and Practicum

Examination and application of contemporary feminist and gender theory. Includes student-designed practicum which might be an internship, case study, or presentation at a conference. Final paper evaluates theory and practice of feminism. Offered fall semester. Prerequisites: WGS 360. 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 each semester. Prerequisites: WGS 300 and WGS 360. Credits: 3

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 Writing Center. 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 Writing Center and in a computer classroom. Students must receive a grade of C (not C-) or better to fulfill this part of the University Writing requirement. 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

Situation-based writing assignments and related readings introduce students to business writing, media writing, and technical writing. Typical assignments include business correspondence, reports, reviews, reportage, feature articles, user instructions, brochures, and technical documentation. Offered fall and winter semesters. Prerequisites: Fulfillment of the Freshman Writing requirement. 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 semester. Prerequisites: Fulfillment of the Freshman Writing requirement. 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. Offered fall and winter semesters. Prerequisites: Fulfillment of the Freshman Writing requirement. Part of Creativity theme. Credits: 3

WRT 251 - 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 winter semester. 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: Fulfillment of the Freshman Writing requirement and current employment by the Writing Center. May be repeated one time for credit. Credits: 1

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 semester. Prerequisites: 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. Prerequisites: WRT 219. Credits: 3

WRT 340 - Intermediate Drama Workshop

Theory and practice of playwriting. Students will read and write scenes and short plays. Some discussion of markets for production. Offered fall semester. Prerequisites: 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. Prerequisites: Completion of the Freshman Writing Requirement. 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 semester. Prerequisites: Completion of the Freshman Writing requirement. Credits: 3

WRT 360 - Intermediate Nonfiction Workshop

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: Fulfillment of First-Year Writing requirement and one 200-level WRT course. 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. Part of the Sport and Life General Education theme. Offered fall semester. Prerequisites: Fulfillment of the Freshman Writing requirement. 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. Prerequisites: Fulfillment of the Freshman Writing Requirement. Credits: 1 to 4

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. Prerequisites: 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. Prerequisites: WRT 330. Credits: 3

WRT 440 - Advanced Drama Workshop

Advanced theory and practice of playwriting. Students will read a broad range of contemporary scripts and write a full-length play. Discussion of how to get work produced. May be repeated once for credit. Offered winter semester. Prerequisites: WRT 340. Credits: 3

WRT 460 - Advanced Nonfiction Workshop

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. Prerequisites: WRT 360. 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 winter semester. 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's degree: A degree granted after completing at least four years of fulltime academic study beyond the completion of high school and fulfillment of graduation requirements.

Board: A term used for the meal plan (i.e., room and board) at a college or university.

Capstone course: A senior-level course within each undergraduate major. Normally it is among the last courses taken for degree completion.

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.

Co-curricular: 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.

Concluding period: A period at the end of a semester when final examinations are given.

Concentration: A subset of courses within a major

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/No Credit: A method used to evaluate performance in courses, separate from the grade point system.

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.

Deadline: The date by which certain information must be received by any given office or unit. (Current deadline dates are printed in the class schedule.)

Dean: An administrator in charge of a division of a university or college.

Deans' 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.

Degree analysis: A report that shows the requirements for specific degree programs and details a student's progress toward completion of the degree.

Degree student: A student who has been admitted to a degree category and is seeking a bachelor's, master's, or doctoral degree in a planned course of study.

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 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 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 Traditional Course: A Course where the content is delivered face-to-face on campus during class meetings. Web technologies may be incorporated into the course delivery.

GVSU Hybrid Online Course: A Course that blends online and face-to-face on campus meetings. At least 50% of the content is delivered online.

GVSU – Online Course: A course where all of the content is delivered online. There are no face-to-face on campus meetings.

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 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 involve receiving payment.

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.

Nondegree student: A student who has been admitted to a non-degree category (sometimes referred to as a continuing

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.

SWS section: A section of a Grand Valley course that requires extensive writing in order to teach students both 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.

Undergraduate: A university student who has not yet received a first degree

Writing skills requirement: A requirement that a student demonstrate proficiency in writing skills by examination and/or by successfully completing the appropriate course.

Campus Security Information

Grand Valley State University, a community of approximately 26,000 people, consists of a 1,280-acre campus in Allendale, a 37-acre campus in downtown Grand Rapids, a 20-acre campus in Holland, and approximately one acre of waterfront property in Muskegon. The campuses are considered to be safe. They are, however, subject to many of the same problems that occur in the surrounding communities. Grand Valley's crime rate is very low in comparison to the national average, as well as to other state universities.

Grand Valley is concerned about the well-being of everyone on its campus and has prepared this information to increase your awareness of the current programs that exist for your protection.

The university employs a professionally trained, licensed police force. We also encourage students to take responsibility for their own belongings and safety.

Emergency Contact

Occasionally the university needs to inform students, faculty, and staff of urgent information, such as closure due to inclement weather and issues related to public safety or health. It is important that each student submits their contact information at www.gvsu.edu/emergencycontact/.

Messages will be sent only when the university believes that the information is vital and that it must be disclosed immediately. If you have questions about the emergency notification service, please contact the GVSU Telephone Business Office at 616-331-2145.

Timely Warning Policy

In the event a situation arises, either on or off a university campus that, in the judgment of the Director of Public Safety or designee (after consultation with the Crisis Response Coordinators if time and availability permit), constitutes an ongoing or continuing threat, a university-wide "timely warning" will be issued. The warning will be issued via the university website, www.gvsu.edu, email and other means deemed appropriate. Depending on the particular circumstances of the crime or threat, additional notices may be posted in each residential facility and within academic buildings.

Anyone with information warranting a timely warning should report the circumstances to the Department of Public Safety by telephone (616) 331-3255 or in person at the Service Building on the Allendale campus or the Pew Security Office at 102 Eberhard Center on the Robert C. Pew campus.

Crime Rates and Statistics

In compliance with the Student Right-to-Know and Campus Security Act of 1990, GVSU annually provides information on security procedures and crime statistics to all its employees and enrolled students.

The university Department of Public Safety reports all incidents to the Uniform Crime Reporting program. The department makes reasonable efforts to monitor and record, through local police agencies, criminal activity of students at off-campus locations of student organizations recognized by the University. This includes student organizations with off-campus housing facilities. Crime statistics for the most recent three-year period are shown below. The crime rate is calculated by dividing the total number of incidents reported by the number of students enrolled in the fall semester. Enrollment figures reflect students who take one or more classes at listed site.

Grand Valley State University – Allendale Campus

Criminal Offenses – On-Campus	2007	2008	2009
a. Murder/Non-negligent manslaughter	0	0	0
b. Negligent manslaughter	0	0	0
c. Sex offenses - Forcible	4	1	2
d. Sex offenses - Non-forcible (incest and statutory rape only)	0	0	0
e. Robbery	0	0	0
f. Aggravated assault	0	0	0
g. Burglary	5	7	1
h. Motor vehicle theft	0	0	0
i. Arson	0	0	0
j. Larceny	80	119	83

Criminal Offenses – On-Campus Residence Halls

(Residence Halls are a subset of On-Campus)	2007	2008	2009
a. Murder/Non-negligent manslaughter	0	0	0
b. Negligent manslaughter	0	0	0
c. Sex offenses - Forcible	3	1	1
d. Sex offenses - Non-forcible (incest and statutory rape only)	0	0	0
e. Robbery	0	0	0
f. Aggravated assault	0	0	0
g. Burglary	3	3	1
h. Motor vehicle theft	0	0	0
i. Arson	0	0	0
j. Larceny	12	22	21

Criminal Offenses – Public Property

	2007	2008	2009
a. Murder/Non-negligent manslaughter	0	0	0
b. Negligent manslaughter	0	0	0
c. Sex offenses - Forcible	1	0	1*
d. Sex offenses - Non-forcible (incest and statutory rape only)	0	0	0
e. Robbery	0	0	0
f. Aggravated assault	0	0	0
g. Burglary	0	1	0
h. Motor vehicle theft	0	0	0
i. Arson	0	0	0
j. Larceny	0	0	0

*Incidents reported in this report occurred in 2007

Hate Offenses – On-Campus	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

Hate Offenses – On-Campus Residence Halls (Residence Halls are a subset of On-Campus)	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

Hate Offenses - Public Property	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

Arrests - On-Campus	2007	2008	2009
a. Illegal weapons possession	0	0	0
b. Drug law violations	23	29	34
c. Liquor law violations	241	207	191

Arrests – On-Campus Residence Halls (Residence Halls are a subset of On-Campus)	2007	2008	2009
a. Illegal weapons possession	0	0	0
b. Drug law violations	20	19	26
c. Liquor law violations	183	151	146

Disciplinary Actions/Judicial Referrals – On-Campus	2007	2008	2009	Arrests – On-Campus	2007	2008	2009
a. Illegal weapons possession	0	0	0	a. Illegal weapons possession	0	0	0
b. Drug law violations	1	0	1	b. Drug law violations	1	1	0
c. Liquor law violations	2	0	0	c. Liquor law violations	0	0	0
Arrests – Public Property	2007	2008	2009	Arrests – On-Campus Residence Halls (Residence Halls are a subset of On-Campus)	2007	2008	2009
a. Illegal weapons possession	0	0	0	a. Illegal weapons possession	0	0	0
b. Drug law violations	0	1	0	b. Drug law violations	1	1	0
c. Liquor law violations	11	5	1	c. Liquor law violations	0	0	0
Disciplinary Actions/Judicial Referrals – Public Property	2007	2008	2009	Disciplinary Actions/Judicial Referrals – On Campus	2007	2008	2009
a. Illegal weapons possession	0	0	0	a. Illegal weapons possession	0	0	0
b. Drug law violations	0	0	0	b. Drug law violations	0	0	0
c. Liquor law violations	0	0	0	c. Liquor law violations	0	0	0
Grand Valley State University – Pew Campus				Arrests - Non-Campus	2007	2008	2009
Criminal Offenses – On-Campus	2007	2008	2009	a. Illegal weapons possession	0	0	0
a. Murder/Non-negligent manslaughter	0	0	0	b. Drug law violations	0	0	0
b. Negligent manslaughter	0	0	0	c. Liquor law violations	0	0	0
c. Sex offenses - Forcible	0	0	0	Disciplinary Actions/Judicial Referrals – Non-Campus	2007	2008	2009
d. Sex offenses - Non-forcible (incest and statutory rape only)	0	0	0	a. Illegal weapons possession	0	0	0
e. Robbery	0	0	0	b. Drug law violations	0	0	0
f. Aggravated assault	0	0	0	c. Liquor law violations	0	0	0
g. Burglary	1	0	0	Arrests – Public Property	2007	2008	2009
h. Motor vehicle theft	1	0	0	a. Illegal weapons possession	0	0	0
i. Arson	0	0	0	b. Drug law violations	0	0	0
j. Larceny	40	40	25	c. Liquor law violations	1	0	0
Criminal Offenses – Noncampus	2007	2008	2009	Disciplinary Actions/Judicial Referrals – Public Property	2007	2008	2009
NO CRIMINAL OFFENSES REPORTED	0	0	0	a. Illegal weapons possession	0	0	0
Criminal Offenses – On-Campus Residence Halls (Residence Halls are a subset of On-Campus)	2007	2008	2009	b. Drug law violations	1	0	0
Larceny	0	2	1	c. Liquor law violations	2	0	0
Criminal Offenses – Public Property	2007	2008	2009	Grand Valley State University – Holland Campus			
a. Murder/Non-negligent manslaughter	0	0	0	Criminal Offenses – On-Campus	2007	2008	2009
b. Negligent manslaughter	0	0	0	NO CRIMINAL OFFENSES REPORTED	0	0	0
c. Sex offenses - Forcible	0	0	0	Criminal Offenses – On-Campus Residence Halls (Residence Halls are a subset of On-Campus)	2007	2008	2009
d. Sex offenses - Non-forcible (incest and statutory rape only)	0	0	0	NO CRIMINAL OFFENSES REPORTED	0	0	0
e. Robbery	1	0	1	Criminal Offenses – Public Property	2007	2008	2009
f. Aggravated assault	0	0	0	NO CRIMINAL OFFENSES REPORTED	0	0	0
g. Burglary	0	0	0	Hate Offenses – On-Campus	2007	2008	2009
h. Motor vehicle theft	0	0	0	NO HATE OFFENSES REPORTED	0	0	0
i. Arson	0	0	0	Hate Offenses – On-Campus Residence Halls (Residence Halls are a subset of On-Campus)	2007	2008	2009
j. Larceny	0	1	0	NO HATE OFFENSES REPORTED	0	0	0
Hate Offenses – On-Campus	2007	2008	2009	Hate Offenses – Public Property	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0	NO HATE OFFENSES REPORTED	0	0	0
Hate Offenses – On-Campus Residence Halls (Residence Halls are a subset of On-Campus)	2007	2008	2009	Arrests – On-Campus	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0	NO ARRESTS	0	0	0
Hate Offenses – Noncampus	2007	2008	2009				
NO HATE OFFENSES REPORTED	0	0	0				
Hate Offenses – Public Property	2007	2008	2009				
NO HATE OFFENSES REPORTED	0	0	0				

Campus Security Information

**Arrests – On-Campus Residence Halls
(Residence Halls are a subset of On-Campus)**

	2007	2008	2009
NO ARRESTS	0	0	0

Disciplinary Actions/Judicial Referrals – On-Campus

	2007	2008	2009
NO DISCIPLINARY ACTIONS	0	0	0

Arrests – Public Property

	2007	2008	2009
NO ARRESTS	0	0	0

Disciplinary Actions/Judicial Referrals – Public Property

	2007	2008	2009
NO DISCIPLINARY ACTIONS	0	0	0

Grand Valley State University – Muskegon Campus

Criminal Offenses – On-Campus

	2007	2008	2009
NO CRIMINAL OFFENSES REPORTED	0	0	0

**Criminal Offenses – On-Campus Residence Halls
(Residence Halls are a subset of On-Campus)**

	2007	2008	2009
NO CRIMINAL OFFENSES REPORTED	0	0	0

Criminal Offenses – Public Property

	2007	2008	2009
NO CRIMINAL OFFENSES REPORTED	0	0	0

Hate Offenses – On-Campus

	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

**Hate Offenses – On-Campus Residence Halls
(Residence Halls are a subset of On-Campus)**

	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

Hate Offenses – Public Property

	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

Arrests – On-Campus

	2007	2008	2009
NO ARRESTS	0	0	0

**Arrests – On-Campus Residence Halls
(Residence Halls are a subset of On-Campus)**

	2007	2008	2009
NO ARRESTS	0	0	0

Disciplinary Actions/Judicial Referrals – On-Campus

	2007	2008	2009
NO DISCIPLINARY ACTIONS	0	0	0

Arrests – Public Property

	2007	2008	2009
NO ARRESTS	0	0	0

Disciplinary Actions/Judicial Referrals – Public Property

	2007	2008	2009
NO DISCIPLINARY ACTIONS	0	0	0

Grand Valley State University – Traverse City Campus

Criminal Offenses – On-Campus

	2007	2008	2009
NO CRIMINAL OFFENSES REPORTED	0	0	0

**Criminal Offenses – On-Campus Residence Halls
(Residence Halls are a subset of On-Campus)**

	2007	2008	2009
NO CRIMINAL OFFENSES REPORTED	0	0	0

Criminal Offenses – Public Property

	2007	2008	2009
NO CRIMINAL OFFENSES REPORTED	0	0	0

Hate Offenses – On-Campus

	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

**Hate Offenses – On-Campus Residence Halls
(Residence Halls are a subset of On-Campus)**

	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

Hate Offenses – Public Property

	2007	2008	2009
NO HATE OFFENSES REPORTED	0	0	0

Arrests – On-Campus

	2007	2008	2009
NO ARRESTS	0	0	0

**Arrests – On-Campus Residence Halls
(Residence Halls are a subset of On-Campus)**

	2007	2008	2009
NO ARRESTS	0	0	0

Disciplinary Actions/Judicial Referrals – On-Campus

	2007	2008	2009
NO DISCIPLINARY ACTIONS	0	0	0

Arrests – Public Property

	2007	2008	2009
NO ARRESTS	0	0	0

Disciplinary Actions/Judicial Referrals – Public Property

	2007	2008	2009
NO DISCIPLINARY ACTIONS	0	0	0

FBI Definitions of Crime Categories

Murder: The willful (non-negligent) killing of one human being by another.

Negligent Manslaughter: The killing of another person through gross negligence.

Non-negligent Manslaughter: The willful non-negligent killing of a human being by another. As a general rule, any death due to injuries received in a fight, argument, quarrel, assault, or commitment of a crime.

Forcible Sex Offense: Any sexual act directed against another person, forcibly and/or against that person's will; or not forcibly or against the person's will where the victim is incapable of giving consent due to age and mental impairment.

Nonforcible Sex Offense: Unlawful, nonforcible sexual intercourse consisting of person(s) who are related to each other or who are under statutory age of consent.

Robbery: The taking of money and/or other valuables under the threat of physical harm or force, with or without a threat.

Aggravated Assault: An unlawful attack by a person(s) upon another for the purpose of inflicting severe or aggravated bodily injury.

Arson: Any willful or malicious burning or attempting to burn with or without intent to defraud a dwelling, house, public building, motor vehicle, aircraft, or personal property of another.

Burglary: The breaking and entering, with no personal threat involved and usually no confrontation between burglar and victim.

Larceny: The act of stealing in which neither illegal entry nor the threat or use of force is present.

Motor Vehicle Theft: The theft or attempted theft of a motor vehicle.

Liquor Law Incidents: Prohibits the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages.

Drug Abuse Incidents: Prohibits the production, distribution and/or use of certain controlled substances and the equipment or devices utilized in their preparation and/or use.

Weapons Possessions: The violation of laws prohibiting the possession, concealment, and use of a firearm or other deadly weapon.

Hate Crimes: Any of the above crimes that manifest evidence of prejudice based on race, religion, sexual orientation, or ethnicity.

Sexual Assault Procedures

Grand Valley State University recognizes the importance of support and encouragement in dealing with instances of sexual assault. A variety of support services are available at the university and in the community to assist students in dealing with sexual assault. The following information outlines a variety of options that are open to victims of sexual assault.

Law Enforcement Options/Considerations

Victims of sexual assault are encouraged to contact the Campus Police. Officers can assist victims in connecting with a variety of services including contacting the Counseling Center, transportation to a nurse examiner program, obtaining a personal protection order, or contacting other police agencies in the event that the assault did not occur on campus.

Victims should be aware that just because they contact the Campus Police Department, this does not mandate they make an official police report. Officers will assist victims by notifying them of various options they have in reporting the incident and will respect the choices made by the victim, including non-reporting. If the victim wants an investigation, officers will contact appropriate personnel to assist. If the victim prefers to speak with a female officer, every reasonable attempt will be made to make one available.

The university will make all reasonable efforts to ensure the preservation of confidentiality, restricting information to those with a legitimate need for it. The university Counseling Center may notify the victim about university and community resources and students are strongly encouraged to connect with this support.

Health/Personal Safety Considerations

It is highly recommended that victims seek medical treatment from a nurse examiner program following a sexual assault. Nurse examiner programs have the ability to collect the evidence that is necessary for medical and/or forensic evaluation and court testimony if the accused is prosecuted. Both Ottawa and Kent Counties have nurse examiner programs (see addresses below). In some cases, a victim may prefer to be treated at a hospital closer to their home.

Hospital treatment is recommended in situations where there is serious physical harm including loss of consciousness or blow to the head, continual vaginal bleeding following the assault, possible broken bones, a laceration requiring stitches, abdominal or chest pain present, pregnancy, or other serious medical or emergency conditions.

Although it is not an absolute deadline, it is strongly encouraged that physical evidence be collected within 48 hours or as soon as is reasonably possible. The collection of medical evidence does not presume that charges will be filed against the assailant; the filing of a criminal charge is always the choice of the victim. To protect important physical evidence, victims should not shower, bathe, brush their teeth, or change clothing prior to going to a nurse examiner program or the hospital. If possible, the student should maintain the scene exactly as it was at the occurrence of the assault if they intend to report the incident to the police. Even if a victim has showered or a time lapse of five days has occurred, it is still strongly encouraged that an assault victim seeks medical treatment.

Nurse Examiner Programs

Victims are encouraged to call in advance before going to either location. Someone is on call 24-hours a day.

YWCA of Grand Rapids
25 Sheldon Blvd.
Grand Rapids, MI 49503
(616) 776-RAPE (776-7273)
(24-hour crisis hotline)

Center for Women in Transition
411 Butternut Drive
Holland, MI 49424
(616) 392-1970 or (800) 848-5991

University Judicial Options/Considerations

Victims of sexual assault that occur on university property and/or by another GVSU student may file a judicial referral with the Coordinator for University Judiciary. This referral can be filed regardless of whether the victim decides to file criminal charges. With regard to the University Judicial Process, victims will be treated with respect and sensitivity at all times.

When a victim expresses a concern about sexual assault, they will be informed of the availability of a university employee, designated to provide support. The role of the sexual assault support person includes the following: to share resources (both on and off campus), to explain the university's sexual assault policy; to assist with the filing of a complaint (internal and external to the university); to accompany the individual to any meetings related to the complaint; and to help the individual sort through their options and choices.

If the accused student denies the charges and requests a hearing, the victim will be notified of the hearing. The victim may present written evidence to be used at the hearing, may testify at the hearing, and is entitled to a copy of the written decision and sanction. If the incident was reported to the Campus Police, an officer may attend the hearing and assist in presenting facts learned during the investigation.

The accused student and the victim may each have one advisor present at the hearing. If the accused student admits the policy violation, the victim is entitled to a copy of the written sanction. The victim or the accused student may appeal the decision and/or sanction.

Sanctions for students found responsible through the University Judicial Process for committing sexual assault may include one or more of the following: warning; restitution; work assignment/community service; probation; loss of privileges; loss of the right to live in university housing; counseling; denial or revocation of a university honor; scholarship or degree; suspension; and/or dismissal from the university.

Michigan Law

Under Michigan law, sexual assault is called "criminal sexual conduct" (CSC). There are four degrees or categories. First, second, and third degree CSC are felonies. Fourth degree CSC is a misdemeanor. Assault with intent to commit criminal sexual conduct is a felony. Conviction of any CSC charge can carry a substantial prison term. However, severity of the sentencing depends on a number of factors. These laws can be very complicated. Additional information about Michigan Law can be found at <http://www.michiganlegislature.org>. Sections 750.520A-750.520L are specific to sexual assault.

Sexual Assault Programs

Programs dealing with rape, acquaintance rape, and other sex offenses are presented on a regular basis at a variety of student educational activities, including orientation prior to classes, on-campus residential life programs and first-year orientation classes. Most of the programs are sponsored by the Counseling Center, the Office of Housing and Residential Life, the Women's Center, Public Safety Services or Eyes Wide Open Peer Sexual Assault Education Student Group. In addition, self-defense classes are offered each semester through a program called R.A.D. (Rape Aggression Defense System). The sessions are taught by community police officers and other employees who are nationally certified R.A.D. instructors.

Campus Security Information

The Grand Valley State University Counseling Center provides counseling for victims of sexual assault. Students are also made aware of counseling and support services in the community for victims of sexual assault.

Sex registry information is available at www.mipsor.state.mi.us/.

Safety and Security Services

The primary responsibility for law enforcement on the Allendale campus rests with Grand Valley State University's Department of Public Safety Services (GVSU DPS). All Grand Rapids facilities owned or controlled by Grand Valley are served by the Grand Rapids Police Department. The Holland, Muskegon, or Traverse City police departments serve Holland, Muskegon, and Traverse City facilities owned or controlled by Grand Valley respectively.

All Grand Valley Department of Public Safety Services officers are licensed by the Michigan Commission on Law Enforcement Standards. Public Safety officers have full law enforcement authority and responsibilities. They work closely with the Ottawa County Sheriff's Department, Michigan State Police, and other law enforcement agencies.

Grand Valley employs a fully equipped and trained university police department providing 24-hour police services and assistance. The Department of Public Safety Services maintains a non-emergency dispatch service and office hours on the Allendale campus and relies on 24-hour emergency service from Ottawa County Central Dispatch Authority. In addition to law enforcement officers, the Grand Valley DPS employs a number of student personnel on a part-time basis. Student security personnel provide crowd control, monitor pedestrian crosswalks, direct traffic, and enforce traffic ordinances.

Criminal incidents and emergencies at the Pew Grand Rapids Campus are reported to the Grand Rapids Police Department and Pew Security. Criminal incidents and emergencies at the Holland, Muskegon, and Traverse City campuses are reported to the Holland, Muskegon, and Traverse City police departments as well as to Pew Campus Security.

Policies and Procedures

Approximately 1,960 faculty and staff and 24,400 students work and study at Grand Valley. More than 6,300 students live in housing on the Allendale Campus. Students and employees have access to campus facilities. Students may have guests visit in their room or apartment, provided they have made specific arrangements with the roommate(s) and have received their permission. Visitation does not mean cohabitation and a guest's stay should never exceed two nights in a given week. The university reserves the right to limit the frequency of guest visits. Guest must observe all university regulations and must be accompanied by his/her host at all times. The student whom the guest is staying with is responsible for any infractions or damage caused by his/her guest. Guests may also be asked to leave the community if their behavior is inappropriate. Guests are welcome on the university's campuses. Visitors have access to buildings that are open to the public and to those in which events are scheduled.

The Grand Valley State University DPS enforces laws concerning alcohol consumption and the use of controlled substances. The unlawful possession, use or distribution of illegal narcotic or hallucinogenic drugs or alcohol by faculty, staff, and students on Grand Valley property or as a part of a university activity is specifically prohibited by Grand Valley policy and by state and federal law. Grand Valley will impose sanctions for violation of the Standards of Conduct consistent with state and federal law (see Student Code).

Any student, faculty, or staff member may report criminal incidents by calling Grand Valley's Department of Public Safety Services at (616) 331-3255. Medical, police, and fire emergencies should be reported by calling 911. Public Safety officers are dispatched by the Ottawa County Central Dispatch Authority (911), as well as through the Department of Public Safety Services office. Criminal activities may be reported anonymously to Silent Observer at 1-800-825-0221.

Counseling Services

The Grand Valley Counseling Center provides individual and group counseling throughout the academic year on such topics as alcohol and substance abuse, rape, personal and relationship concerns, and career planning. More information can be obtained from the Counseling Center or by calling (616) 331-3266.

Security on Campus

The Allendale campus has three traditional-style living centers housing approximately 866 students, 11 suite-style living centers housing 987 students, seven apartment style living centers housing 1,034 students and the Ravines, Laker Village, Calder Art, Murray, South B, C, D, E, Grand Valley apartments and the Glenn A. Niemeyer Learning and Living Center, which accommodate 3,081 students. Secchia and Winter Hall on the Pew Grand Rapids Campus house 379 students. Off-campus housing consists of private apartment complexes located near both the Allendale and Grand Rapids campuses.

Non-academic living center entrances are always locked. The Glenn A. Niemeyer Learning and Living Center is open for classes inside the building Monday through Friday, 8:00 a.m. until 8:00 p.m. Residents of the Ravines, Laker Village, and Grand Valley apartments are responsible for locking their own doors. Secchia and Winter Hall entrances are locked at all times. Students living in the living centers are allowed to have visitors of the opposite gender during visiting hours, which are 10 a.m. to 2 a.m., Sunday through Thursday and open visitation in all areas with their roommates' consent on Friday and Saturday. In other housing facilities, residents are allowed open visitation with the roommates' consent.

Special security procedures are in effect during low-occupancy periods. Students staying in on-campus housing over Thanksgiving, winter holiday, and spring break periods must register with a Housing and Resident Life staff member to do so. (For more information on housing security, refer to www.gvsu.edu/housing/.)

The Department of Facilities Services maintains the university buildings and grounds, with concern for safety and security. Parking lots are illuminated at night, as are all main campus walkways and building entrances. Overnight parking is prohibited except in residence lots. Landscape plantings are arranged and maintained so that building entrances are easily visible from a distance.

Individual Responsibility

A safety program such as the one at Grand Valley could not reach its highest potential without student cooperation. Students must take responsibility for themselves and their belongings by using common sense and by taking advantage of the programs that are available to them.

Larceny is the most frequent crime on campus, many of which could be prevented. Do not leave book bags, books, purses, bikes, or other personal effects unattended in the living centers, classrooms, or other public areas. When parking on campus close your vehicle's windows and lock your doors.

The information in this catalog is accurate as of the date of printing. This catalog is intended to be informational and is not a guarantee of services. The university reserves the right to modify its programs, services, and levels of staffing.

Phone numbers to call to receive assistance:

Police, Fire, Emergency	911
Public Safety Services	(616) 331-3255
Pew Campus Security	(616) 331-6677
University Judicial	(616) 331-3585
Counseling Center	(616) 331-3266
GVSU Women's Center	(616) 331-2748
Assault Center	(616) 776-7273
Center for Women in Transition	(616) 392-2829

Drug and Alcohol Policy

Philosophy

Consistent with Grand Valley State University's commitment to provide the safest environment for the highest quality education, the university has set forth a policy regarding the use of alcohol and other drugs on all properties and in all facilities owned or operated by Grand Valley.

The university upholds and enforces local, state, and federal laws and the alcohol and drug policies of all collegiate governing bodies that are responsible for the activities of their Grand Valley affiliates. Grand Valley State University encourages a campus environment where healthy lifestyle choices are made and where the use of alcohol or other drugs will not be permitted to interfere with learning.

The university recognizes the right of legal adults to choose to use or abstain from alcoholic beverages. However, abusive consumption of alcohol is discouraged because it can pose a threat to property and the health and safety of others.

Chemical-free activities are encouraged and programs that lead to informed decision-making are supported. Recognizing that an individual with an alcohol and drug problem may be rehabilitated, Grand Valley State University offers counseling and referral to its faculty, staff, and students.

Standards of Conduct

The unlawful manufacture, possession, use, distribution, or dispensation of illicit drugs and the unlawful possession, use, or distribution of alcohol by faculty, staff, and students on Grand Valley property or as part of a university activity is specifically prohibited by Grand Valley policy and by state and federal law.

I. Legal Sanctions and Summary of Laws

Local, state, and federal laws make unlawful manufacture, possession, use, distribution, or dispensation of drugs and alcohol serious crimes. Violations of local, state, or federal law may result in conviction of a misdemeanor and/or felony that can lead to imprisonment, fines, confiscation of real and personal property, and/or assigned community service, or any combination of these penalties. As a general rule, courts do not excuse persons convicted of drug or alcohol abuses from jail to go to college or to get to their jobs. Even more importantly, a record of a felony conviction will prevent an individual from entering many careers. Further, the university may impose sanctions pursuant to its policies.

The following summary covers sections of the Michigan Liquor Control Act, MCLA 436.1 et seq., relating to the possession, consumption, and sale of alcoholic beverages.

Laws and administrative rules governing establishments licensed by the Michigan Liquor Control Commission, as well as sections of the law dealing with licensure, importation, taxation, wholesaling, and manufacture of alcoholic liquor are not included in the summary. Also excluded from this summary are Michigan's drunk driving laws.

It is possible that not all laws relevant to a particular situation are included in this brief summary; therefore, no one should take action in reliance upon it. The summary is intended strictly as an educational tool and should not be construed as legal advice.

A. Alcoholic Liquor Defined

"Alcoholic liquor" means any spirituous, vinous, malt, or fermented liquor, liquids, and compounds, whether or not medicated, proprietary, patented, and by whatever name called, containing *one-half of one percent or more* of alcohol by volume which are fit for use for beverage purposes. In this document, the terms "alcoholic liquor," "alcoholic beverage," and "beverage alcohol" are used interchangeably.

B. Drinking Laws

It is illegal for a person under 21 years of age to *purchase* alcoholic liquor, consume alcoholic liquor in a licensed premises, or *possess* alcoholic liquor except in the following circumstances:

1. The law does not prohibit a person less than 21 years old from possessing alcoholic liquor during regular working hours and in the course of his/her employment if employed by an organization possessing a liquor license, by the Liquor Control Commission, or by the Commission's agents if the alcoholic liquor is not possessed for his/her personal consumption.

2. The law does not prohibit the consumption of alcoholic liquor by a person under the age of 21 years who is enrolled in a course offered by an accredited college or university in an academic building and under the supervision of a faculty member if the purpose is solely educational and a necessary ingredient of the course.

A person under the age of 21 years who violates this law is liable for misdemeanor penalties, which may include jail. If under 18 years of age, parents will be notified.

a. **First offense:** a fine of not more than \$100.00. May be ordered to perform community service and undergo substance abuse screening and assessment. Subjects may petition the court for a deferred judgment

b. **Second offense:** a fine of not more than \$200.00. May be placed on probation and ordered to participate in substance abuse prevention or substance abuse treatment and rehabilitation services, to perform community service, and to undergo substance abuse screening and assessment. Judges have discretion to order jail time (no more than 30 days in the event of a prior MIP conviction with violations of probation. The person's driver's license will also be suspended for 90-180 days, with a restricted license available after 30 days.

c. **Third and subsequent offense:** a fine of not more than \$500.00. May be ordered to participate in substance abuse prevention or substance abuse treatment and rehabilitation services, to perform community service, and to undergo substance abuse screening and assessment. Judges have discretion to order jail time (no more than 60 days) in the event of a prior MIP conviction with violation of probation. The person's driver's license will also be suspended for 180 days-1 year, with a restricted license available after 60 days.

PBT: A peace officer who has reasonable cause to believe that a person under 21 has consumed alcoholic liquor may ask that person to submit to a preliminary breath test (PBT). If the blood alcohol level is .02 or more, there is a presumption that the person has consumed or possessed alcoholic liquor.

C. Fraudulent Identification

A person who furnishes fraudulent identification to a person less than 21 years old or a person under the age of 21 who uses fraudulent identification to purchase alcoholic liquor is guilty of a misdemeanor. In addition to penalties pursuant to the misdemeanor, the driver's license of a person convicted of using fraudulent identification shall be suspended for 90 days.

D. Regulation of Sale Laws

Under Michigan law, the sale, trade, or giving away of alcoholic liquor, including alcoholic liquor for personal use, requires a license or other prior written authorization from the Liquor Control Commission. A person who conducts any activity for which a liquor license is required without first obtaining the requisite license is guilty of a felony, punishable by imprisonment for not more than one year, and/or by a fine of not more than \$1,000.

Administrative Directory

E. Open Container Laws

The consumption of alcoholic liquor on the public highways of Michigan is forbidden by law. It is unlawful to transport or possess any alcoholic liquor in a container which is open, uncapped, or upon which the seal is broken, within the passenger compartment of a motor vehicle on the highways of Michigan.

II. Health Risks Associated with the Use of Illicit Drugs and the abuse of Alcohol

Health (and other) risks associated with the use of alcohol and other drugs include, but are not limited to: impaired academic or work performance; lost potential; absenteeism from class or work; financial problems; doing things one later regrets; conflicts with co-workers, classmates, families, friends, and others; sexual assault and other unplanned sexual relationships; unwanted pregnancies; sexually transmitted diseases; unusual or inappropriate risk-taking which may result in physical or emotional injury, or death; blackouts; hangovers; long-term health problems, including cirrhosis of the liver, organic brain damage, high blood pressure, and heart disease; and legal problems, including imprisonment.

III. Drug and Alcohol Prevention, Counseling and Rehabilitation, and Re-entry Programs

Grand Valley State University is concerned about the effect of alcohol and/or drugs on students, faculty, and staff members, their families, and the university community as a whole. The university recognizes that an individual with an alcohol and/or drug problem may be rehabilitated. Grand Valley will continue to make efforts to increase the awareness about the dangers of drugs.

Grand Valley encourages students, faculty, and staff with alcohol or other drug dependency problems to use the services of the university or community counseling centers for assistance. Assistance for students is available through the Office of Alcohol Education located in the Counseling Center and for faculty and staff through the Faculty Staff Assistance Program, administered at a confidential off-campus location by the Employee Assistance Center.

If treatment for drug and/or alcohol dependency is needed, students are encouraged to contact the Office of Alcohol Education (331-3220), and faculty and staff are encouraged to contact the Faculty Staff Assistance Program (EAC) at 458-8540, the Human Resources office at 331-2215, or their insurance carrier to obtain information concerning coverage.

IV. Sanctions

Grand Valley will impose sanctions for violation of the Standards of Conduct consistent with state and federal law, and with applicable university policies, collective bargaining agreements, and faculty and staff handbooks and the Student Code. Violations will result in disciplinary action, up to and including expulsion, termination of employment, and referral for prosecution. Sanctions imposed will depend upon the severity and frequency of the violation. In addition to, or in lieu of, discipline, violators may be required to complete an appropriate rehabilitation program. All university faculty and staff will abide by this policy as a condition of their employment.

If you have any questions or concerns about the university's Drug and Alcohol Policy, please contact the Human Resources Office or the Dean of Students Office.

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- Olsson, Roy H. Jr.** (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.
- Oppenheim, Keith** (2010), Assistant Professor of Communications. B.A., Brown University; M.S., Columbia University.
- Orosz, Joel** (2001), Distinguished Professor of Philanthropic Studies. B.A., Kalamazoo College; M.A., Ph.D., Case Western Reserve University.
- Osborn, William P.** (1988), Professor of English. B.A., University of California-San Diego; M.F.A., Bowling Green State University; Ph.D., State University of New York at Binghamton.
- Ostrow, Bruce** (2002), Associate Professor of Biology. B.A., Boston University; Ph.D., Northwestern University.
- Otieno, Sango Bennett** (2003), Associate Professor of Statistics. B.S., M.S., Egerton University; Ph.D., Virginia Polytechnic Institute and State University.
- Ott, Michael R.** (2002), Assistant Professor of Sociology. B.A., Western Michigan University; M.Div., Princeton Theological Seminary; Ph.D., Western Michigan University.
- Owen-DeSchryver, Jamie** (2004), Associate Professor of Psychology. B.A., Kalamazoo College; M.S., 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.
- Padilla, James** (2009), Assistant Professor of Movement Science. B.A., Northern Illinois University; J.D., Southern Illinois University; Certificate in Sport Management, Loyola University.
- Page, Pamela** (2001), Affiliate Professor of Education. B.S., Michigan State University; B.A., Grand Valley State University; M.A., Western Michigan University.
- Parikh, Chirag** (2007), Assistant Professor of Engineering, B.E., Fr Agnel College of Engineering, Mumbai, University; M.S., and Ph.D., University of Texas at San Antonio.
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- Parker, Kelly A.** (1992), Associate Professor and Chair of Philosophy. B.A., Texas A&M University; M.A., Ph.D., Vanderbilt University.
- Parker, Tonya** (2006), Assistant Professor of Movement Science. B.S., Texas Christian University; M.S., Ph.D., University of Oregon.
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- Patel, Osman** (2008), Assistant Professor of Cell and Molecular Biology. B.S., University of Zambia; M.S. University of Glasgow; Ph.D., University of Tokyo.
- Payne, Michael** (1990), Professor of Public and Nonprofit Administration. B.S., University of Missouri-St. Louis; M.A., Ph.D., The Maxwell School, Syracuse University.
- Pazdernik, Charles F.** (2001), Associate Professor of Classics. B.A., Cornell University; M.Phil., Oxford University; M.A., Ph.D., Princeton University.
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- Peck, John** (1997), Professor of Physical Therapy. B.A., The Johns Hopkins University; B.S., University of Central Arkansas; M.S., Ph.D., University of Maryland.
- Pednekar-Magal, Vandana** (1999), Associate Professor of Communications. M.A., Bombay University; Ph.D., Bowling Green State University.
- Penn, James** (2003), Assistant Professor of Geography and Planning. B.A., University of Illinois; M.A., Ph.D., University of Florida.
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- 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.
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- Peterman, Teresa M.** (2001), Instructor of Computing and Information Systems. B.S., M.S., Central Michigan University.
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- Peterson, Valerie** (2004), Associate Professor of Communications. B.A., University of Virginia; M.A., University of Virginia; Ph.D., University of Iowa.
- Peterson, Virginia** (2003), Associate Professor of Geology. B.A., Grand Valley State University; M.S., Ph.D., University of Massachusetts.

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Pool, Ellen (1983), Associate Professor of Music. B.M., M.M., University of Michigan.

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- Richardson, Mary** (2002), Associate Professor of Statistics. B.S., Southwest Missouri State University; M.A., Ph.D., University of Missouri.
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- Riemersma, Peter E.** (1999), Associate Professor of Geology. B.S., University of Michigan; M.S., University of Utah; Ph.D., University of Wisconsin - Madison.
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- Robbins, Donijo** (2001), Associate Professor of Public Administration. B.S., Central Michigan University; M.A., Ph.D., Rutgers University.
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- Rogers, William** (1998), Associate Professor of Psychology. B.A., University of Michigan; M.A., Ph.D., Michigan State University.
- Rogness, Neal** (1994), Professor of Statistics. B.S., University of Minnesota; M.S., University of Houston; Ph.D., University of Northern Colorado.
- Rood, Scott A.** (2005), Assistant Professor of Hospitality and Tourism. B.S., University of Michigan; M.P.A., Central Michigan University
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- Rosales, Steve** (2007), Assistant Professor of History. B.A., University of California, San Diego; University of California, Irvine.
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- Ross, Debra E.** (2003), Associate Professor of Criminal Justice. B.A., Eckerd College; M.S., Northeastern University; Ph.D., Rutgers University.
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- Rowe, Patricia** (1987), Professor of Movement Science. B.S., M.A., Central Michigan University; Ph.D., Michigan State University.
- Rowe, Stephen C.** (1972), Professor of Philosophy. B.A., Colgate University; M.Th., A.M., Ph.D., University of Chicago.
- Royer, Dan** (1995), Associate 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.
- Rudolph, Bennett L.** (1973), Professor of Marketing. B.S., Roosevelt University; M.S., Ph.D., University of Illinois.
- Rudolph, Kelli C.** (2008), Assistant Professor of Classics. A.B., Princeton University; M.Phil, Ph.D., University of Cambridge.
- Rueth, Heather** (2003), Associate Professor of Biology and Natural Resources Management. B.S., University of Wisconsin-Madison; Ph.D., Colorado State University.
- Ruetz III, Carl** (2002), Assistant Professor of Water Resources. B.S., Lake Superior State University; M.S., University of Georgia; Ph.D., University of Minnesota.
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- Ryan, Bill** (2005), Assistant Professor of Music. B.M. SUNY Potsdam; M.M. and 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.
- Rydel, Christine A.** (1970), Professor of Russian. B.A., Mundelein College; M.A., Ph.D., Indiana University.
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- Sá, Walter** (1999), Associate Professor of Psychology. B.A., University of Western Ontario; M.A., Ph.D., University of Toronto.
- Sanchez, Carol** (1995) Professor of Management. B.I.S., School for International Training; D.B.A., Southern Illinois University.
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Shan, Patrick Fuliang, (2003), Assistant Professor of History, B.A., Henan University, M.A., Liaoning University, M.A., McMaster University, Ph.D., McMaster University.

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- Shoultz, Gerald** (2005), Assistant Professor of Statistics. B.S., University of Alabama; M.S., Texas Tech University; M.S., Florida State University; Ph.D., University of South Carolina.
- Shupe, Ellen** (1997), Associate Professor. B.S., Eckerd College; M.A., Ph.D., University of Illinois at Urbana-Champaign.
- Sicilian, Paul** (1987), Associate Professor of Economics. B.A., Tulane University; M.S., Ph.D., University of Illinois.
- Simons, Gerald** (1995), Associate Professor of Economics. B.Soc.Sci., University of Birmingham, England; M.A., Ph.D., University of Kansas.
- Singh, Harinder** (1995), Professor of Economics. M.A., DAV College, India; Ph.D., University of Illinois at Chicago.
- Sisco, William** (2001), Assistant Professor of Occupational Therapy. B.S., United States Air Force Academy; M.A., University of Colorado; M.S., Western Michigan University.
- Sisson, Lisa G.** (2005) Assistant Professor of Hospitality and Tourism Management. B.S. Central Michigan University; M.M. Aquinas College.
- Smart, Robert** (1996), Professor of Chemistry. B.A., Albion College; Ph.D., Michigan State University.
- Smith, Christine** (1995), Professor of Psychology. B.A., Indiana University; M.A., Ph.D., Loyola University.
- Smith, Claudia** (2006), Assistant Professor of Economics. B.A. and M.S., University of the West Indies, Jamaica; Ph.D., Syracuse University.
- Smith, Curits D.** (1998), Associate Professor of Chinese. B.A., University of Wisconsin-Madison; M.A., University of Hawaii; Ph.D., National Taiwan Normal University.
- Smith, Cynthia** (2008), Assistant Professor of Education. B.S., Grand Valley State University; M.A., Michigan State University; Ph.D., Michigan State University.
- Smith, Mack** (1994), Professor of English. B.A., M.A., University of Houston; Ph.D., Rice University.
- Smith, Regina M.** (2002), Associate Professor of German. B.A., Washington University of 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.
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- Spencer, Larry** (2001), Affiliate Professor of Education. B.A., M.A., Michigan State University.
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- Stansbie, Paul** (2003), Assistant Professor of Hospitality and Tourism Management. B.S., Southern New Hampshire University; M.B.A., University of Nottingham.
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- Stark, Gary D.** (1998), Professor of History. B.A., Hamline University; M.A., Ph.D., Johns Hopkins University.
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