

2007

GVSU Undergraduate and Graduate Catalog, 2007-2008

Grand Valley State University

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GRAND VALLEY STATE UNIVERSITY

www.gvsu.edu



2007-2008

Undergraduate and Graduate Catalog

Some Facts about Grand Valley

Location: Main Campus: Allendale, Michigan; Robert C. Pew Campus: Grand Rapids, MI; Regional Centers: Holland, MI., Muskegon, MI., and Traverse City, MI.

Established: 1960. First class in 1963. **Campus:** 1,275 acres.

Type of Institution: Four-year public university, undergraduate and graduate programs. Undergraduate degrees: bachelor of arts (B.A.), bachelor of science (B.S.), bachelor of fine arts (B.F.A.), bachelor of music (B.M.), bachelor of music education (B.M.E.), bachelor of social work (B.S.W.), bachelor of business administration (B.B.A.), bachelor of science in engineering (B.S.E.), bachelor of science in nursing (B.S.N.). Graduate degrees: master of business administration (M.B.A.), master of health administration (M.H.A.), masters in physician assistant studies (M.P.A.S.), master of science (M.S.), master of education (M.Ed.), master of science in engineering (M.S.E.), master of health sciences (M.H.S.), master of science in nursing (M.S.N.), master of science in nursing/master of business administration (M.S.N./M.B.A.), master of public administration (M.P.A.), master of social work (M.S.W.), master of the science of taxation (M.S.T.), master of the science of accounting (M.S.A.) and doctorate in physical therapy (D.P.T.).

Tuition: Undergraduate lower-division tuition is \$315 per credit hour for 11 to 15 credits, \$7,240 total per year for 12 to 15 credits, and \$315 per credit hour over 15 hours for Michigan residents. For upper-division Michigan residents, tuition is \$330 per credit hour for 1 to 11 credits, \$7,600 per year for 12 to 15 credits, and \$330 per credit hour over 15 hours. Nonresident lower-division tuition is \$532 per credit hour for 1 to 11 credits, \$12,510 per year for 12 to 15 credits, and \$532 per credit hour over 15 hours. Nonresident upper-division tuition is \$550 per credit hour for 1 to 11 credits, \$12,932 per year for 12 to 15 credits, and \$550 per credit hour over 15 hours. Graduate tuition for Michigan residents is \$375 per credit hour for 500 and 600 level courses, and \$330 per credit hour for courses below the 500 level; for non-Michigan residents, \$600 per credit hour for 500 and 600 level courses, and \$550 per credit hour for courses below the 500 level.

Parking: Students wishing to park on either the Allendale or Robert C. Pew Grand Rapids Campus must purchase a parking permit. Permits can be ordered electronically at www.gvsu.edu/publicsafety.

Room and Board: Traditional Living Centers: \$3,400; Suite Style Living Centers: \$3,524; Living Center Apartments: \$2,701 plus meal plan and \$3,401 plus meal plan; Ravine Apartments: \$1,336 (two-bedroom), \$1,600 (one-bedroom); Laker Village Apartments: \$1,672–\$2,380, depending on size of apartment and number of roommates; Grand Valley Apartments: \$1,600–\$2,980, depending on size of apartment and number of roommates; Secchia Hall: \$2,204–\$3,308, depending on size of apartment and number of roommates; Pew Campus (Winter Hall) housing: \$2,648–\$3,100, depending on size of apartment and number of roommates; Mark A. Murray and South B: \$2,404–\$3,428.

Note: Rates stated for tuition and room and board are in effect for 2007–2008 and are subject to change by the Board of Trustees.

Enrollment: 23,295. **Faculty** (regular): 734. **Support staff:** 1,020.

Academic year: Two 15-week semesters; fall semester, August 23, 2007, to December 15, 2007; winter semester, January 7, 2008, to April 26, 2008. Summer session: 12 weeks.

Library: More than 708,000 volumes; more than 34,314 periodical subscriptions in print and electronic format; 23,800 reels of microfilm; 842,900 microsheets.

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.

Accreditation: The Higher Learning Commission; Member of the North Central Association, 30 N. LaSalle Street, Suite 2400, Chicago, IL 60602-2504; telephone: (800) 621-7440. Associate member of the National Association of Schools of Art and Design (NASAD) and the National Association of Schools of Music (NASM). Seidman College of Business accredited by AACSB International — The Association to Advance Collegiate Schools of Business. Accounting and Taxation programs accredited by AACSB International — The Association to Advance Collegiate Schools of Business. Clinical Laboratory Sciences/Medical Technologist Program: National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Michigan SBDC (MiSBDC): Association of Small Business Development Centers (ASBDC). Clinical Laboratory Science program accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS). Chemistry Department accredited by the Committee on Professional Training of the American Chemical Society. School of Education accredited by the National Council for Accreditation of Teacher Education (NCATE). Bachelor of science in engineering program accredited by the Accreditation Board for Engineering and Technology (ABET). Nursing program accredited by the Commission on Collegiate Nursing Education (CCNE). Occupational Therapy program accredited by the Accreditation Council for Occupational Therapy Education (ACOTE). Physical Therapy program accredited by the Commission on Accreditation in Physical Therapy Education (CAPTA). Athletic Training: Joint Review Committee on educational programs in Athletic training (JRC-AT). The Athletic Training Program in the Department of Movement Science accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Physician Assistant Studies program accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). School of Public and Nonprofit Administration accredited by the National Association of Schools of Public Affairs and Administration (NASPAA). School of Social Work accredited by the Council on Social Work Education (CSWE).

For more information about Grand Valley, write or telephone the Admissions Office: 1 Campus Drive, Grand Valley State University, Allendale, Michigan 49401-9403. Telephone: (616) 331-2025 or toll-free (800) 748-0246. Web: www.grsu.edu/admissions. Email: admissions@gvsu.edu.

Maps of the Grand Valley campuses can be found at the back of the Grand Valley State University Undergraduate and Graduate Catalog.

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

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

The University and Its Objectives

Vision

Grand Valley State University is a public institution with a local, regional, and state commitment, and a global perspective. We are dedicated to providing our students with the highest quality undergraduate and graduate education.

Teaching in the liberal tradition, whether in general arts and sciences or the professional degree programs, has always been at the heart of Grand Valley's educational mission. A liberal education acquaints students with the tradition of humane values and the heritage, problems, and perspectives of their own and other cultures. It transcends the acquisition of information and rests on scholarship and the open exchange of ideas. Students learn to think for themselves as they develop the skills of inquiry, reflection, critical analysis, dialogue, and expression. At Grand Valley State University, the values of liberal education permeate all programs and areas of study.

A broad education rooted in the arts and sciences provides students with the general knowledge and skills necessary to participate intelligently in public discourse. Grand Valley State University is also dedicated to educating students to become competent professionals in their chosen fields. These ideals co-exist within our institution, and together they inspire graduates not only to pursue their own success and well-being but also to positively influence their communities, their professions, and their world.

Grand Valley State University is characterized by and known for superior student-centered teaching and learning. Our diverse environment promotes the development of intellect and creativity through teaching, scholarship, service, and a vibrant campus culture. Realizing this vision will result in a broad national reputation for excellence.

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.

Value Statements

**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 them, 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 and community service. 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 can extend beyond classroom walls to lifelong learning and partnerships between the university and its diverse communities.

Diversity and Community

A range of thoughtful perspectives is necessary for open inquiry, liberal education, and a healthy community. Recognizing this, we seek and welcome a diverse group of students, faculty and staff. We value a multiplicity of opinions and backgrounds and seek ways to incorporate the voices and experiences of all into our university. We value our local community and embrace the participation of individuals and groups from Michigan, the nation, and the world. We also encourage participation in educational opportunities abroad. In order to foster a healthy and diverse environment, we will act with integrity, communicate respectfully, and accept responsibility for our words and actions.

Service

We at Grand Valley State University value 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 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.

Notice

All material in this catalog applies to the 2007–2008 academic year and reflects information available on the publication date. Grand Valley State University reserves the right to revise all announcements contained in this publication and, at its discretion, to make reasonable changes in requirements to improve or upgrade academic and nonacademic programs.

Grand Valley Calendar, 2006–09

Fall Semester 2007

Convocation	August 24
Classes Begin	August 27
Labor Day Recess	September 2–4
Thanksgiving Day Recess	November 21–25
Classes End	December 8
Commencement	December 8
Examinations	December 10–15
Semester Ends	December 15
Grades Due	December 18

Winter Semester 2008

Classes Begin	January 7
Spring Break	March 2–9
Classes End	April 19
Examinations	April 21–26
Semester Ends	April 26
Commencement	April 26
Grades Due	April 29

Spring/Summer Session 2008

Classes Begin first 6 and 12 weeks	May 5
Memorial Day Recess	May 26
Classes End first 6 weeks	June 16
Examinations first 6 weeks	June 17–18
Classes Begin second 6 weeks	June 23
Independence Day Recess	July 4
Classes End second 6 and 12 weeks	August 1
Examinations second 6 and 12 weeks	August 4–5
Session Ends	August 5

Fall Semester 2008

Convocation	August 22
Classes Begin	August 25
Labor Day Recess	Aug. 31–Sept. 2
Thanksgiving Day Recess	November 26–30
Classes End	December 6
Commencement	December 6
Examinations	December 8–13
Semester Ends	December 13
Grades Due	December 16

Winter Semester 2009

Classes Begin	January 5
Spring Break	March 1–8
Classes End	April 18
Examinations	April 20–25
Semester Ends	April 25
Commencement	April 25
Grades Due	April 28

Spring/Summer Session 2009

Classes Begin first 6 and 12 weeks	May 4
Memorial Day Recess	May 25
Classes End first 6 weeks	June 15
Examinations first 6 weeks	June 16–17
Classes Begin second 6 weeks	June 22
Independence Day Recess	July 3
Classes End second 6 and 12 weeks	July 31
Examinations second 6 and 12 weeks	August 3–4
Session Ends	August 4

Fall Semester 2009

Convocation	August 28
Classes Begin	August 31
Labor Day Recess	September 6–8
Thanksgiving Day Recess	November 25–29
Classes End	December 12
Commencement	December 12
Examinations	December 14–19
Semester Ends	December 19
Grades Due	December 22

Winter Semester 2010

Classes Begin	January 11
Spring Break	March 7–14
Classes End	April 24
Examinations	April 26–May 1
Semester Ends	May 1
Commencement	May 1
Grades Due	May 4

Spring/Summer Session 2010

Classes Begin first 6 and 12 weeks	May 10
Memorial Day Recess	May 31
Classes End first 6 weeks	June 21
Examinations first 6 weeks	June 22–23
Classes Begin second 6 weeks	June 28
Independence Day Recess	July 5
Classes End second 6 and 12 weeks	August 9
Examinations second 6 and 12 weeks	August 10–11
Session Ends	August 11

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

Academic Excellence

Grand Valley State University's mission is to educate students to shape their lives, their professions, and their societies. The University's highest priority is to offer outstanding teaching in all of its undergraduate and graduate programs. The University values vigorous engagement of students in the classroom and other learning environments. Grand Valley is known for excellence in student-centered teaching and learning. Eighty-three 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.

The cornerstone of educational excellence at Grand Valley is its focus on liberal education as the foundation for all academic programs. Students engage ideas from diverse traditions in the humanities, creative and performing arts, natural and social sciences, and mathematics. They develop critical thinking and communication skills, gain self-knowledge, and learn to make ethical judgments that prepare them for responsibility as local, national, and global citizens.

Excellence in teaching depends on the scholarship and service of Grand Valley's dedicated faculty and staff. The faculty collaborates with students, each other, and individuals and organizations from the local and regional community in basic and applied research, exhibition and performing arts, and other forms of scholarship. The university supports excellence in teaching and research through the Robert and Mary Pew Faculty Teaching and Learning Center, and the Faculty Research and Development Center. The Pew Teaching and Learning Center supports faculty members through an annual university-wide teaching conference, additional programs and conferences addressing teaching-related issues, individual consultations, and mentoring programs for new faculty. Through the generosity of the Pew Foundation the center awards numerous grants for faculty teaching development projects. The Faculty Research and Development Center focuses on the enhancement of faculty and student research and scholarship. The Faculty scholarship grants program provides faculty with funds to support research and scholarly projects. A Graduate Student Presidential Grant-in-Aid is offered to graduate students who need support for research tied to completion of some aspect of their graduate degree. Usually these will be in support of research undertaken for purposes of a thesis or final scholarly project.



Another area of support through the Center is the Student Scholarly Travel Grant-in-Aid that helps in the cost of presentation of a student's research at a state or national conference. The Faculty Research and Development Center also handles compliance with research involving human or animal subjects. The College of Interdisciplinary Studies provides funding for the Student Summer Scholars Program for students and faculty working together on in-depth laboratory, field-based, or library-derived research as well as creative and performing arts projects. The Office of Grants Administration also supports faculty research and other scholarly efforts that are funded through external sponsors. Grand Valley encourages student involvement in these efforts as well.

Our instructional offerings encompass over 100 academic and career preparation programs leading to degrees in 68 major areas.

Grand Valley is proud to have campus chapters of 17 national honor societies: Phi Kappa Phi (general scholarship and character, all disciplines), Beta Beta Beta (biological sciences), Beta Gamma Sigma (business), Beta Alpha Psi (accounting), Delta Phi Alpha (German National Honor Society), Dobro Slovo (Slavic), Phi Alpha Theta (history), Phi Epsilon Kappa (physical education, health, and recreation), Pi Alpha Alpha (public administration), Pi Sigma Alpha (political science), Psi Chi (psychology), Alpha Kappa Delta (sociology), Sigma Delta Pi (Spanish), Sigma Tau Delta (English), Sigma Theta Tau (nursing), Sigma Xi (science), and Upsilon Pi Epsilon (computer science).

Grand Valley is accredited by The Higher Learning Commission; Member—North Central Association, 30 N. LaSalle Street, Suite 2400, Chicago, IL 60602-2504; telephone: 1-800-621-7440. 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); 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 (CAPTA); 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 Honors College

The Grand Valley State University Honors College is intended for students who, in their previous academic pursuits, have demonstrated high academic achievement. The college provides its students with special academic opportunities and challenges.

Academic Excellence



High school students admitted to Grand Valley State University will be invited to join the University Honors College if they have a 3.5 or better high school GPA and an ACT score of 28 or better.

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

For more information about the University Honors College, consult the University Honors College section in the Grand Valley State University Undergraduate and Graduate Catalog.

The Living/Learning Environment

Honors students may live in the same building where they attend many of their Honors classes, the Glenn A. Niemeyer Living Center. This center incorporates living and classroom instruction. The Niemeyer Living Center fosters a close-knit community that shares goals and experiences specially designed to foster academic excellence and the joy of learning. The Honors office and faculty offices located in the living center provide excellent opportunity for faculty-student interaction.

An Honors education extends beyond the classroom. Students can take advantage of travel opportunities, entertainment offerings, social events, and service projects. Students are encouraged to engage in extra-curricular activities. Participating in student organizations helps Honors students develop leadership skills to complement their academic skills and an appreciation of the richness and diversity of university life.

Honors Society, the student governance organization, provides all Honors students, not just those residing in the living center, a voice in their Honors experience. Members of this society make recommendations to the Honors director, and assume responsibility for the Honors Code.



The Campuses

The Allendale Campus

Grand Valley State University's main campus is located almost midway between downtown Grand Rapids and Lake Michigan, in the town of Allendale. The natural land structure of Grand Valley's 1,275-acre campus is formed by deep, wooded ravines penetrating a high bluff that overlooks the Grand River to the east and gently rolling open fields to the west. The campus is designed to take advantage of the area's scenic wooded ravines as well as its open meadowlands.

Automobile traffic is routed along a main campus drive to parking lots at the edge of the academic areas. Winding walkways between buildings connect with a series of natural trails along the riverbank.

A 230-foot pedestrian bridge called "Little Mac" spans a spectacular 70-foot-deep ravine to connect the north and south sections of the campus.

Great Lakes Group: Lake Michigan Hall, Lake Superior Hall, Lake Huron Hall, and Seidman House. The first four buildings constructed on Grand Valley's campus, in 1963–64, they are characterized by tall, slender concrete arches and native Michigan fieldstone.

The group's fifth member was completed in fall 2005. **Lake Ontario Hall**, a LEED silver certified building, is situated between **Lake Michigan Hall** and the **Calder Art Center**. This building of approximately 50,000 square feet contains faculty offices, student study areas and specialized classrooms including a creative computing lab. It houses the Barbara H. Padnos International Center, the Robert and Mary Pew Faculty Teaching and Learning Center, the office of Dean for the College of Interdisciplinary Studies, the Writing Center, the Writing Department, Women and Gender Studies, Center for Excellence in Science and Math Education, and Intercultural Area Studies.

Lake Michigan Hall houses the Business Services Offices, the Human Resources Office, News and Information Services, Institutional Marketing, and the Anthropology laboratory.

The Campuses



Lake Superior Hall houses the philosophy department, the School of Communications, Offices of the Assistant Deans of the College of Liberal Arts and Sciences, as well as two English composition computer labs.

Lake Huron Hall houses the Departments of English Language and Literature, Classics, and the Allendale offices for the Seidman College of Business.

Located in **Seidman House** are the Archives, the Rare Book Collection, and the Lemmen Collection on Lincoln and the Civil War. In addition, the building contains a quiet study area seating 65, with a scenic view of the nearby ravine. The building is named for the Thomas Erler Seidman Foundation of Grand Rapids, which donated the funds for its construction.

The James H. Zumberge Library, named for Grand Valley's first president, received several awards for its architectural design. The building has five levels, the top four used by the library and the lower level by the university's executive offices. The main floor of the library, entered from the campus walk, contains the circulation desk, reference collection and library offices. Reference librarians are available at the reference/information desk near the main entrance. The book collection is located on the second and third floors. Periodicals, periodical abstracts and indexes, newspapers, microforms, and microreaders are on the fourth floor. Throughout the building are reading areas furnished with lounge chairs, individual study carrels, and group worktables.

The library has more than 664,000 volumes, more than 8,000 periodical subscriptions in print and electronic formats, 853,000 microforms, and other materials necessary to effectively support instructional programs at Grand Valley. As a United States Government and State of Michigan Depository Library, it receives catalogs and large numbers of federal and state documents. For those with special needs, access is provided to the collections of other libraries.

The Performing Arts Center houses the Art Gallery, faculty offices, classrooms, practice rooms, teaching studios for the performing arts, a music technology lab (using Macintosh® computers), and two dance studios. Located in this building is the 490-seat Louis Armstrong Theatre for presentations of plays, operas, concerts, and other programs. Also

located in this building is the Sherman Van Solkema Recital Hall, which seats 65 and is designed for individual and small group presentations.

Kirkhof Center is a multi-purpose building containing student service facilities. The University Bookstore, the Lobby Shop, postal services, pay phones, commuter lockers, the box office operations for campus events, and an automated teller machine (ATM) are located in Kirkhof Center. Food service is available from River Landing dining and vending machines. In addition to meeting rooms and lounge areas, the offices of the Student Senate, the Student Life Office, Women's Center, and the Special Event Services Office are located here.

AuSable Hall houses the Departments of Anthropology and Sociology, Geography, Political Science, Psychology, the Office of the Assistant Dean of the Social Sciences cluster, Women and Gender Studies, Criminal Justice, a Geographical Information Systems Computer lab, and the Institutional Analysis Office. In keeping with the tradition of selecting names associated with Michigan's famed waterways for the academic buildings, AuSable Hall is named after one of the state's most scenic rivers.

The Cook Carillon Tower, a 10-story brick and stone structure, is named in honor of its major donors, Peter C. and Pat Cook of Grand Rapids. The 48 bronze bells were cast by the renowned Royal Eijsbouts Bellfounders and Tower-clock Makers of the Netherlands. The bells range from 7.5 inches to 51.7 inches in diameter and are connected by cables to a keyboard in the chamber below. The keys, or levers, are configured like a piano keyboard and are played by striking the keys with the side of the hand. The Carillon chimes on every quarter hour on a computerized automatic play system.

The Cook-DeWitt Center overlooks a scenic, wooded ravine in the heart of the campus. The building houses the offices of the campus ministry and a 230-seat auditorium with a 26-rank Reuter pipe organ. The building is named for Peter C. and Pat Cook and Marvin and Jerene DeWitt, who donated funds for its construction.

The Islands Group: Mackinac Hall and Manitou Hall. These two buildings, constructed with ribbed concrete walls, bronze glass, and porcelain panels, form a natural outdoor court with the adjacent Commons building.



The Campuses

Mackinac Hall contains classrooms, faculty offices, and computer labs. The Departments of History, Hospitality and Tourism Management, Mathematics, Modern Languages and Literature, and Statistics, Computer Science and Information Systems, Academic and Administrative Computing, and Information Technology are all housed in Mackinac. The building has an English composition computer lab, two general-purpose computer labs, an information technology lab, and a computer lab dedicated to the learning of foreign language.

Manitou Hall contains lecture halls and a computer lab for use by students. The campus administrative systems reside on multiple Oracle servers running Surgard Higher Education Banner suite of applications, housed in Manitou Hall along with the service and communications equipment for the university's fiber-optic-based wide-area network and its connection to the Internet.

Grand Valley's wide-area high-speed network provides a full complement of computer services including wireless access to all academic buildings. Thousands of computers located throughout the campus serve the instructional and administrative needs of the university. Most classrooms and lecture halls are equipped with computers and projection equipment for instruction and all are connected to the university's network and the Internet. Nearly all academic disciplines use computer services on the Grand Valley campus.

The Calder Art Center, named for Alexander Calder, the artist whose stabile, **La Grand Vitesse**, is a Grand Rapids landmark. The Calder Art Center houses the Art and Design department with facilities for graphic design, painting, print-making, art education, drawing, ceramics, and two computer graphics labs along with multi-functional Macintosh® labs for Art and Communication disciplines.

Science Complex: This complex consists of three separate buildings, the **Student Services Building**, **Henry Hall**, and the **Seymour and Esther Padnos Hall of Science**, and totals nearly 300,000 square feet.

The Student Services Building combines a variety of student services under one roof. The offices of Admissions, the Career Planning and Counseling Center, Career Services, Financial Aid, Housing, Student Employment, Advising Resources and Special Programs, and the Dean of Students are located here. Also housed in the three-story building is the Student Assistance Center, which combines the services of Academic Records, Registration, Cashier, Graduation Audit, and the Registrar.

Henry Hall, named after former U.S. Representative Paul Henry of Grand Rapids, contains three lecture halls, the biology department, and the Regional Math and Science Center, and seven microcomputer labs. Much of the artwork in the building is the work of Grand Valley alumni, faculty, and staff.

The Seymour and Esther Padnos Hall of Science, with its modern equipment, sophisticated instruments, and extensive map and specimen collections, is a well-equipped laboratory facility for study, research, and experimentation in the natural sciences. The departments of Chemistry, Geology, Biomedical Sciences, and Physics, as well as the Learning Center, and the Office of the Dean of the College of Liberal Arts and Sciences are located in this building. Financed originally in part by funds from the Loutit Foundation of Grand Haven, the facility was enlarged and remodeled as part of the Life Sciences Complex. It was named in honor of Seymour and Esther Padnos for their many years of commitment to the university, particularly to its science programs.

The Commons houses dining facilities and offices. The main dining area, operated by the Fresh Food Company, serves students and the public and is located on the upper level, with an entrance from the campus walkway on the east. On the lower level, a food court fea-



turing Pizza Hut, Taco Bell, and Subway adjoins an outdoor patio overlooking a wooded ravine and the “Little Mac” pedestrian bridge. The Office of the Dean of Multicultural Affairs and the Office of Multicultural Affairs (OMA) are located on the lower level. The Student Organization Center, including the office for *The Lanthorn* student newspaper, WCKS student radio, Residence Housing Association (RHA), and other student organizations is also located here.

Kleiner Commons is a dining facility that includes a coffeehouse, sports cafe, Subway Sandwich Shop, and convenience store.

Grand Valley Apartments, an existing apartment complex located south of the Grand Valley campus, was purchased in July 2000 by Grand Valley. Twelve buildings provide 144 apartments and parking for Grand Valley students.

Four new buildings opened in Fall 2002, accommodating 568 students. Each unit houses two students, each with a private bedroom. A bathroom and a kitchenette are also provided in each unit.

Student Residences. Curving in an “S” shape along the winding rim of a ravine are three traditional living centers named after founding members of the University’s governing body: **James M. Copeland House**, **Kenneth W. Robinson House**, and **Grace Olsen Kistler House**. Accommodating 900 students, the traditional living centers are coeducational units with separate wings for men and women connected to central lounges. Each student is furnished with a computer network connection.

The Ravine Apartments, a townhouse style complex built along another scenic ravine nearby, accommodates 346 upperclass students in efficiency and one- or two-bedroom units. All units are computer network-equipped.

Laker Village Apartments, another townhouse-style complex on the south end of campus, accommodates 888 upperclass students in two-bedroom units. All units are computer network-equipped.

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Eleven living centers named for Grand Valley Board of Trustees members **Richard M. DeVos, Icie Macy Hoobler, Paul A. Johnson, William A. Kirkpatrick, Arnold C. Ott, Robert C. Pew, William F. Pickard, L. William Seidman, Dale Stafford, Maxine M. Swanson, and Ella Koeze Weed** house 987 students. All the buildings are divided into suites consisting of two double-bed rooms and a bath.

The three living centers that opened in the Fall of 2001, accommodating 494 students, are doubles but provide individual bathrooms and a kitchenette in each unit. The **Glenn A. Niemeyer Living Center** is named after the Provost who retired in 2001 after more than 30 years of service to Grand Valley State University. This living center is home to the University Honors College and features two student meeting rooms and faculty offices.

The **Edward J. Frey Living Center** is named for a past Grand Valley Board of Trustees member; and the **Arthur C. Hills Living Center** is named for a past Board of Trustees Secretary and the composer of Grand Valley's Alma Mater.

The Mark A. Murray and South B Living Centers opened in the Fall of 2004. Named after Grand Valley's third President, the Mark A. Murray Living Center, along with South B offer a combination of one, two, and four-bedroom apartments accommodating a total of 460 students. All apartments provide individual bedrooms, a bathroom and kitchen facilities. Each building has meeting rooms, a great room on each floor, laundry facilities, and an outdoor patio off the main floor great room. The apartments are air-conditioned and computer network-equipped. Meeting rooms and great rooms are wireless network-equipped.

Calder Residence, located adjacent to the Calder Art Center, accommodates 48 students in single rooms appointed with private bath and kitchenette. This living center provides a convenient housing location for art majors involved in programs at the Calder Art Center.

The two three-story apartment buildings, one of which being Mark A. Murray Hall (named for the university's 3rd president), that opened in the Fall of 2005 accommodate 460 students. The buildings offer a combination of one-, two-, and four-bedroom apartments. All apartments provide individual bedrooms. A bathroom and kitchen are also provided in each apartment and two bathrooms in each four-bedroom apartment. Each building has meeting rooms, a great room on each floor, laundry facilities, and an outdoor patio off the main floor great room. The apartments are air-conditioned and computer network-equipped. Meeting rooms and great rooms are wireless network-equipped.

Drug and Alcohol Policy: Grand Valley has a clear policy governing drugs and alcohol. Students who violate the policy are referred to mandatory drug and alcohol education programming through our Counseling Center. We are alcohol free in all of our living centers, and offer two drug and alcohol free lifestyle buildings in which residents are required to sign a contract that they will not consume alcohol or other drugs at any time. We also have a recovery apartment building where students in recovery can live together and where program support is available. The apartment is also home to the university's award winning A.L.E.R.T. program.

The Fieldhouse/Recreation Complex is located in the north central portion of campus. It is home to the movement science department and includes playing fields, baseball and softball diamonds, tennis courts, and the Lubbers Stadium for football and track. The 210,000-square-foot fieldhouse includes a multi-purpose arena for a variety of events, including basketball, volleyball, track, and cultural events. In addition, it includes two tennis courts and four badminton courts. The arena has a seating capacity for up to 5,900 for concerts and 4,200 for center court athletic events.

The complex includes a 26.5-foot-high rock-climbing center within the gymnastics room. This state-of-the-art facility has over 2,100 square feet of climbing surface. Other facilities

include a 25 yard x 25 meter swimming pool with 10 lanes, seating for 300 spectators, and one- and three-meter diving boards; lockers and showers; racquetball, squash, and wallyball courts; a weight training room with more than 20 pieces of free weight equipment; a multi-purpose room; and a studio for dance and aerobics.

The Recreation Center, a 62,000-square-foot addition, can serve approximately 5,000 persons per day. The wing features a two-level fitness center, elevated track, and wood playing courts. The court area includes five basketball courts, overlays for five volleyball courts and eight badminton courts. The fitness center has more than 35 weight machines, a Graviron 2000, free weights, and a Life Force handicapped-accessible exercise system. The second-floor balcony houses approximately 60 pieces of cardiovascular equipment (including StairMaster®, Life-Fitness, Trotter, Nordic Track, and Precor). The elevated four-lane ½-mile fitness/walking track separates runners from the active sports on the main floor. The facility was enlarged in 2002 and now provides a free weight room, a spinning room, and additional individual workout areas.

The Alumni House and Visitor Center stands at the north entrance to the Allendale campus. It houses the office of Alumni Relations, which connects with alumni through special events, benefit programs, maintenance of alumni records, administration of the Grand Valley Alumni Association, and interface with other Grand Valley staff and activities. The center includes accommodations for overnight guests. The Perry Dining Room and other facilities are available for rental or use by members of the Grand Valley community. For more information, call (800) 558-0541 or visit www.gvsu.edu/alumni.

The Meadows Golf Course is a championship 18-hole public golf course on the western edge of the campus. Located on the course are a clubhouse and a learning center. The clubhouse includes a restaurant and pro shop. The learning center is staffed by PGA and LPGA golf professionals and includes a short game area and two practice holes. The entire operation is user financed and open to the public. No university funds, student tuition, or taxpayer dollars are used for the operation or maintenance of the course.

The Robert C. Pew Grand Rapids Campus

The 37-acre Robert C. Pew Grand Rapids Campus is comprised of three separate sites in downtown Grand Rapids: the Richard M. DeVos Center, the L.V. Eberhard Center, and the Cook-DeVos Center for Health Sciences.

The Richard M. DeVos Center has 22 classrooms, one distance education classroom, five Pentium® computer labs, one Macintosh lab, a student project area, and the Steelcase Library with a computer-operated robotic retrieval system and reading room. DeVos Center houses the Seidman College of Business, the School of Social Work, the School of Public and Nonprofit Administration, the School of Criminal Justice, Office of the Dean of the College of Community and Public Service, Offices of the Dean of Graduate Studies and Grants Administration and of Continuing Education, as well as the Dorothy A. Johnson Center for Philanthropy, the Hauenstein Center for Presidential Studies, and the Autism Education Center. The Faculty Research and Development Center includes the Human Research Review Committee administrative and chair offices. The center contains a 250-seat auditorium and two 112-seat auditoriums, an exhibition hall, and numerous conference rooms. The center also provides a full food service operation, a bookstore, an ATM machine, the Student Assistance Center, and a full range of services available through Pew Student Services.

The Steelcase Library, a juxtaposition of technology and tradition, is located on the first floor of the DeVos Center on the Pew Grand Rapids Campus. An automated retrieval

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system holds the library's circulating collection and can accommodate 250,000 volumes. The 10,400-square-foot library also includes a circulation desk, a traditional reference desk, microfilm/fiche reader/printers, computers, a reading room, a photocopy room, and a library instruction center with computers for database access, staff offices, and workspaces. Librarians staff the reference desk.

A large reading room with a stained glass window provides a quiet study area with comfortable seating. The tables and carrels are wired for laptop computer use. The reading room holds the expanded reference collection and the current issues of 700 journal titles. Print resources available at the Steelcase Library support the following disciplines: business, criminal justice, social work, public and nonprofit administration, and law.

The Steelcase Library is accessible from the Fulton Street entrance to the DeVos Center or by following corridor A from inside the DeVos Center. The Library is attached to the Beckering Family Carillon Tower.

Secchia Hall Apartments on the downtown Pew Grand Rapids Campus across from the DeVos Center are operated by the University. There are 81 one- to four-bedroom apartments. Each apartment includes Internet access, cable television, telephone, air conditioning, on-site parking, and laundry.

Winter Hall, the University operated four-story residence hall on the Pew Campus across from the DeVos Center, opened in the Fall of 2003 and accommodates 226 students. There are both single and double units. The hall has meeting rooms, a great room on each floor and a fitness room located on the first floor. The hall is computer network-equipped and air-conditioned.

The L.V. Eberhard Center is located on the Grand River, just east of the DeVos Center. The Center contains classrooms, offices, high-technology teleconference and conference facilities, and one interactive television room. It is home to the College of Education along with Conference and Event Planning Services and Pew Campus Security.

The Meijer Public Broadcast Center, located in the L.V. Eberhard Center, houses Grand Valley's public television stations, WGUV-TV 35/WGVUDT 11 and WGK-TV 52/WGK-DT 5, and radio stations WGUV-AM 1480, WGUV-FM 88.5, WGVS-AM 850, and WGVS-FM 95.3. These operations provide both local and national programs of interest to West Michigan audiences, and many outreach events for the community.

The Fred M. Keller Engineering Laboratories Building is located in the complex along the Grand River, adjacent to the Eberhard Center and interconnected to Kennedy Hall of Engineering. It is a three-story, 30,000 square-foot facility built with its structural, mechanical and electrical systems exposed to provide students with a living laboratory. Two double-height design bays facilitate student project work and a rooftop deck allows students to conduct experiments outside. The building houses laboratories for instruction and research in instrumentation and controls, manufacturing processes, materials, vibrations, vehicle projects, and fluid and thermal systems. The building includes extensive shops for students to implement their designs.

The John C. Kennedy Hall of Engineering, located in the complex along the Grand River, inter-connects the Keller Engineering Laboratories and the Eberhard Center. This 50,000 square-foot facility, opened in Fall 2007, is home to the Seymour and Esther Padnos College of Engineering and Computing and the School of Engineering. This facility contains state of the art laboratories, classrooms, and faculty offices to support teaching and research in many areas of electrical and computer engineering, advanced product and machine design, clean-room based activities such as silicon wafer production and rapid

prototyping of circuit board assemblies. Kennedy Hall also provides facilities for extensive community interaction and support, ranging from K-12 outreach programs to professional development for practicing professionals.

The Cook-DeVos Center for Health Sciences, is part of the Pew Campus located on Michigan Avenue, north and east of the Eberhard and DeVos Centers. Cook-DeVos Center for Health Sciences is a state of the art facility that includes a model patient suite, a simulation center with several METI simulators, the Mr. and Mrs. Peter P. Renucci Motion Analysis Biomechanics Laboratory, and other well-equipped science laboratories. In the Cook-DeVos Center, future healthcare professionals and researchers from different disciplines work together creatively and productively. Grand Valley is among a handful of institutions nationally who are recognizing and integrating the interdisciplinary approach. The center is designed to provide an environment that promotes interdisciplinary problem solving and mutual respect between and among students, faculty, researchers, special-needs populations, and other health services in the community. The center houses the Kirkhof College of Nursing, the College of Health Professions (whose programs include Physician Assistant, Physical Therapy, Occupational Therapy, and Medical Imaging), the graduate program in Cell and Molecular Biology, Frey Learning Center, West Michigan Science and Technology Initiative, the Development Office, and the Grand Rapids African American Health Institute.

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 facility offers full services, including registration, advising, and library access, and is completely integrated into the university's computer network. Classes offered in Holland include those necessary to fulfill the basic skills and general education requirements, several undergraduate degree programs, as well as graduate courses in business administration, education, and public administration.

The Lake Michigan Center in Muskegon, located at 740 West Shoreline Drive, on the south shore of Muskegon Lake, is the home for the **Robert B. Annis Water Resources Institute**. The Annis Water Resources Institute is a leading Great Lakes water research organization. This facility provides faculty and staff offices, research labs, and berthing space for the W.G. Jackson research vessel.

Michigan Alternative and Renewable Energy Center (MAREC), located at 200 Viridian Drive on the south shore of Muskegon Lake, is the home of the university's alternative energy research effort. This facility is designed to be electrical energy self-sufficient. It is equipped with solar collectors, a fuel cell system, and battery systems. MAREC is a LEED Gold Certified Facility.

Regional Centers

Through facilities at the Stevenson Center for Higher Education on the campus of Muskegon Community College and the Northwestern Michigan College University Center in Traverse City, 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.

Campus Services

For further information, please contact our **Muskegon office** at 221 S. Quarterline Road; telephone (616) 895-7750. The **Traverse City office** is located at 2200 Dendrinos Drive; telephone (231) 995-1785.

Visiting the Campus

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 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 either contacting:

Admissions

300 Student Services Building

Grand Valley State University

Allendale, MI 49401-9403

Telephone: (616) 331-2025 or

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

Email: admissions@gvsu.edu

Campus Services

Affirmative Action Office

Grand Valley State University is committed to achieving the goals of equal employment and educational opportunity through affirmative action. The major responsibility of this office is to devise, implement, and direct the university's Affirmative Action program. It is also the goal of Grand Valley to maintain a positive work environment for its employees and a climate conducive to learning for its students. To this end, it is the university's policy that no member of its community may illegally harass another. Employee complaints regarding discrimination or harassment of any kind should be filed with the Director of Affirmative Action. Student to student complaints regarding discrimination or harassment of any kind should be filed with the Dean of Students' Office. For more information, contact the Affirmative Action Office, Room 14 Zumberge. Telephone (616) 331-2242. Or, contact the Associate Dean of Students, Room 202 Student Services Building. Telephone (616) 331-3585.

Alcohol Education, Research, and Training Laboratories (ALERT Labs) School of Communications

Because dangerous drinking affects us all, ALERT Labs' mission is to promote the health and safety of Grand Valley students, faculty, and staff—and the publics with whom they

interact—through alcohol and other drug prevention programs. ALERT Labs provide students an opportunity to work with faculty, staff, and other students on projects focused on preventing the abuse and misuse of alcohol and other drugs.

Students may choose to (1) serve as peer educators, making presentations and conducting experiential training in university housing units and/or classrooms; (2) assist in the development, administration, and analysis of research instruments to measure student behavior toward and perceptions of the use of alcohol and other drugs among their peers; (3) assist in the development, planning, and implementation of specific prevention projects, e.g., the Communication and Social Norms Misperceptions Campaign; (4) develop and write grant proposals, progress reports, news releases, and scholarly articles; (5) produce video and photographic programs for use in classes and in the residential community; (6) work with others as “sponsors” in the Pathways to Recovery Program for students who have been addicted to alcohol and other drugs.

Students use and further develop their skills in areas such as oral communication, leadership, teamwork, networking, writing, videography, photography, and quantitative and qualitative research methods. At the same time, the total population of students at Grand Valley State University reduces its use of alcohol and other drugs. Students interested in working for ALERT Labs or in internships are invited to call (616) 331-2537 or to email alert@gvsu.edu.

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, computer software, 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.

Shuttle Service

Transportation between and within 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 four 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 Sunday during the fall and winter semesters and Monday through Friday during the spring/summer semesters. The Campus Connector makes round trips from the Pew Campus to the Kirkhof

Campus Services

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 Saturday during the fall and winter semesters and Monday through Friday during the spring/summer semesters. Parking for all students attending class at the Center for Health Sciences will be located in Grand Valley's Seward parking ramp at the corner of Lake Michigan Drive and Seward Avenue on the Pew Campus.
- Off-Campus Apartment Shuttle Route
 - The Off-Campus Apartment Shuttle provides service between a variety of private apartment complexes immediately adjacent to the Allendale campus and the Kirkhof Center. The Off-Campus Apartment Shuttle runs Monday through Friday during the fall and winter semesters only.
- Weekend Connector Route
 - The Weekend Connector combines all three other routes — The Campus Connector, CHS Express, and the Off-Campus Apartment Shuttle into one continuous loop. 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/bus. Please note that frequencies of service are reduced during the spring/summer semesters. 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.

Campus Ministry

The interdenominational Campus Ministry Council offers a ministry to the university community through worship services, Bible study 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 4:30 p.m. The Campus Ministry Offices are located in the Cook-DeWitt Center. Telephone (616) 331-3111 or (616) 331-3112.

The Children's Enrichment Center

The Grand Valley State University Children's Enrichment Center, located on West Campus Drive, serves young children ages 3 to 12, both from the campus and the nearby community. Programs are designed to help children nurture habits of intellectual growth, curiosity, and a love for learning. Hours are from 7 a.m. to 6 p.m. Monday through Friday year round. Telephone (616) 895-4146 or toll free (866) 814-4146.

Campus Recreation

“Shaping students and the University community to commit to a healthy lifestyle.”

The Campus Recreation department is committed to the well being of the University community. Our programs and services are offered through Intramural Sports and the Fit-



ness 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. For more information visit: www.gvsu.edu/rec.

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 20 different 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. Grand Valley students, faculty, and staff are eligible to participate. The intramural sports program include: Basketball, Flag Football, Softball, Soccer, Volleyball, Tennis, Golf, Racquetball, Bowling, Table Tennis, Billiards, and many more.

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 students, faculty, and staff. Free services include health risk appraisals, health screening, fitness, testing, exercise programming, equipment orientations, and nutritional counseling. Services that are offered at a cost include group exercise passes, cholesterol testing, personal training, and massage therapy. The Fitness and Wellness Center sponsors various programs such as recreation clinics, health fairs, CPR training, fitness challenges, and on campus education outreach.

Health Services

The Campus Health Center is located at 10383 A 42nd Avenue on the Allendale Campus. The purpose of the Health Center is to provide urgent health care for students, faculty, staff, and their families. The center provides an array of health services including physical examinations, health screening, allergy injections and immunizations, treatment of short-term illnesses and/or injuries, contraceptive services, health education, and the management of long-term health problems. Physician assistants and nurses provide health services Monday through Friday from 9 a.m. to 4:30 p.m. The Health Center operates on a fee for service basis and students either pay at the time of service or request that the fee be placed on their university bill.

Campus Services

Grand Valley State University students may subscribe to a health insurance plan offered through a commercial insurance company. Dependent and maternity benefits are available in this policy.

Parking

Approximately 8,900 parking spaces are available in 18 lots on the Allendale Campus and 3,200 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.

Department of Public Safety

The Department of Public Safety is a full-service law enforcement agency with full arrest powers and is responsible for enforcing state laws as well as all university rules and regulations, and for maintaining a safe and secure environment for the campus community. Department personnel are trained in first aid and other emergency procedures. The department also 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

Communications

WGVSU-TV 35/WGVSU-DT 11 and WGVSU-TV 52/WGVSU-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 State University 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 NPR programs and local news, talk, and information programs.

For those planning careers in broadcasting, 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 campus.

Office of Graduate Studies and Grants Administration

Overview

The Office of Graduate Studies and Grants Administration 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

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 Graduate Dean 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 on the third floor of 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 admissions 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 Web site.

Graduate Council

The Graduate Studies office 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.

Graduate Dean's Citations for Academic Excellence

The Dean of Graduate Studies presents awards to outstanding graduate students to recognize them for academic achievement. Nominations for awards are submitted to the Graduate Studies office by the graduate program director in the student's area of study. Awards are presented twice per year at the Graduate Student Celebration, held in December for students who graduated in the previous Spring/Summer and at the end of the Fall semester, and in April for students graduating at the end of the Winter semester. Awardees receive a certificate and honor 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. 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 for a regional award.

Graduate Assistantships

The Graduate Studies office is responsible for the 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 Graduate Studies office 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 Student Services/Student Employment sections of the Grand Valley State University Undergraduate and Graduate Catalog.

Requests for Exceptions 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, grad-

uate 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 8-year limit or 5-year transfer limit, if the student is currently enrolled in classes, the student's academic performance, if the course are required to complete the degree, if the student is admitted to the program as of the submission of the petition. All must be submitted to the Graduate Dean either via e-mail 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: for 12 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.

8-year Time Limit to Degree Completion:

All courses to be counted for a master's degree at GVSU must be completed within 8 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.

5-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 Graduate Studies is required for more than 15 hours per semester.

Petition to Return: non-degree students who have been dismissed

Non-degree seeking graduate students applying for readmission to the university after dismissal for failure to maintain a 3.0 GPA must complete a Petition to Return prior to being readmitted to the university or admitted to a specific graduate program. The student must provide a statement that explains factors that led to the low GPA and a plan of study that would permit the student to overcome the low GPA. This plan must be approved by the Graduate Director in the program into which the student seeks to gain admission. The student is not allowed admission into the program until the GPA is raised.

Please refer to the Graduate Academic policies and Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog for further information on academic review, probation, and dismissal.

Grants Development and Administration

Grants Development and Administration encourages active scholarship among faculty and students, both graduate and undergraduate. This office provides oversight and services in the management of 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 works 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. Proposal writing workshops are offered twice per year, during the break between the Winter and Spring/Summer semesters, and in the Fall semester. The Grants Development and Administration office from time to time allows graduate students to attend the workshops, upon request from their research or academic advisor.

The Faculty Research and Development Center (R&D), part of Graduate Studies and Grants Administration, provides internal funding support for tenure track faculty presentations at state, national, and international academic conferences. R&D also funds research grants-in-aid and summer stipends to support faculty research. The R&D Center provides travel grants-in-aid to undergraduate and graduate students who have been invited to present their research at state or national conferences. Limited Presidential Research Grants-in-Aid are available to graduate students to complete Masters Thesis research work.

Faculty Research and Development Center

Supports and oversees two regulatory compliance and protections offices, the Human Research Review Committee for all human subjects' research, and the Institutional Animal Care and Use Committee for all animal research.

Continuing Education

Continuing Education at Grand Valley State University provides educational programs and services that link the needs of lifelong learners with the resources of the university. Continuing Education coordinates this commitment by providing academic programs and services at regional sites and locations throughout Michigan, as well as through professional development and community engagement opportunities. Visit the Continuing Education Web site at www.gvsu.edu/learn.

Programs and Locations:

At the Meijer Camps in Holland, Grand Valley offers the 100- and 200-level freshman and sophomore classes for those just beginning a degree completion program. Upper level courses are offered in a variety of majors. In addition, several graduate courses are offered. Personal and professional development workshops are also offered at the Meijer Campus. Individuals and organizations seeking additional information about Grand Valley in Holland should call (616) 394-4848 or (616) 331-3910 www.gvsu.edu/learn/holland.

The Muskegon Center, located at the James L. Stevenson Center for Higher Education, on the campus of Muskegon Community College, offers undergraduate degree completion

programs in, teacher certification (social studies/elementary education). Graduate degrees include education, and social work. For more information about Grand Valley in Muskegon call (231) 777-0505 or visit www.gvsu.edu/learn/muskegon.

Grand Valley State University also offers degree completion programs and community outreach to Northern Michigan. The Traverse City regional center, located at the University Center of Northern Michigan College, offers undergraduate degrees, elementary teacher certification (language arts and social studies), and liberal studies. Students can earn a master's degree in education and social work. Other Northern Michigan locations include Sault Ste. Marie and Cadillac. For information about Grand Valley in Northern Michigan call (231) 995-1785 or visit www.gvsu.edu/learn/traverse.

Distance Education

The university offers a variety of distance education opportunities designed to help students overcome barriers of location and/or time constraints. The delivery systems include various combinations of two-way interactive television and online courses.

Online Courses

Grand Valley State University offers courses via the Internet. Information about the courses and programs is available at www.gvsu.edu/learn.

Noncredit Services

Continuing Education sponsors selected training and professional development activities to serve the business and professional communities and individuals in West Michigan. Seminars and workshops are available online, at the Meijer Campus in Holland or onsite. Information about noncredit services and seminars can be found on the Division's Web site www.gvsu.edu/training or by calling (616) 331-7180.

Professional Development Partnership (PDP)

Continuing Education through PDP works with school districts in providing staff development. To arrange for university credit on SB-CEUs, contact the office at (616) 331-6522 or visit www.gvsu.edu/pdp.

Grand Forum

Continuing Education, through Grand Forum provides lifelong learning programs for learners of age 55 and up. Information on Grand Forum is available by calling (616) 331-6615.

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.

Student Life

Student Organizations

Academic & Professional

Students who join these organizations have the opportunity to develop their knowledge and appreciation for academic disciplines outside the classroom. Almost every academic program offers such co-curricular opportunities. Guest lecturers, field trips, special projects, contacts with professionals in the field, and networking provide opportunities for individual development.

- Advertising Club
- American Humanics Student Association
- American Marketing Association
- American Society of Mechanical Engineers (ASME)
- American Society of Safety Engineers
- Anthropology Club
- Art Education Student Chapter
- Association of Student Geographers
- Bachelor of Social Work Student Organization (BSWSO)
- Biochemistry and Molecular Biology Club
- Biology Club
- Center for Health Sciences Interdisciplinary Council
- Chemistry Club
- Collegiate Chapter of the National Association of Music Education
- Collegiate Entrepreneurs Organization
- DPT Class of 2008
- Economics Club
- Free thought/On Campus
- Geology Club
- German Club
- Graduate & Professional Student Association
- Health Service Association
- Hospitality and Tourism Management Clut
- La Tertulia
- Law Society
- Les Franglais
- Liberal Studies Student Organization (LSSO)
- Masters of Social Work Student Organization
- Math and Stats Club
- Mini Baja Club
- National Society of Black Engineers
- Organization for Internal and IT Auditing
- Passport Student Organization
- Philosophy Club
- Photographers Guild
- Physical Therapy Class 2006
- Physics & Astronomy Club
- Pre Med Club
- Pre Occupational Therapy Club
- Pre Chiropractic Club
- Pre Dental Club
- Pre Optometry Club
- Pre Physical Therapy Club
- Pre Physician Assistants Club
- Pre Veterinary Club
- Psychology Club
- Psychology Club
- PT Class of 2007
- Public Relations Student Society of America (PRSSA)
- Radiologic and Imaging Sciences Student Organization (RISSO)
- Seidman I.P.O./Investment Club
- Seidman Real Estate Group
- Sigma Tau Delta (English)
- Society for Advancement of Management and International Business
- Society for Human Resource Management (SHRM)
- Society of Manufacturing Engineers
- Sociology Club
- Student Chapter of the National Science Teachers Association
- Student Council for Exceptional Children
- Student Nurses Association
- Student Occupational Therapy Association
- Teachers of Tomorrow
- Tech GV
- Therapeutiuc Recreation Club
- vinette
- Writers' Club

Cultural Interest Organizations

Students who join these groups will have the opportunity to explore other cultures and share their own heritage. A wide range of activities, including lectures, concerts, and festivals, allows students to develop leadership skills and promotes culture and diversity at Grand Valley. Students need not be members of each group, but have an interest in celebrating and educating others on each heritage. The cultural organizations we key members of our annual Intercultural Festival held each October.

African Student Council
 American Sign Language and Culture
 Arab Cultural
 Asian Student Union
 Black Leaders Coalition
 Black Student Union

Chinese Language and Culture
 International Club
 Latino Student Union
 Native American Student Association
 Russian Circle
 You Beautiful Black Woman

Fraternities and Sororities

Grand Valley State University is proud to have nationally recognized fraternities and sororities on campus. Our Greek community is value focused and participates in an annual values assessment process. Fraternities and sororities offer many opportunities for life-long friendships, leadership development, service to the community, and academic achievement. New members joining fraternities and sororities have a higher grade point average than their peers and develop a strong sense of community during their time at GVSU.

Alpha Kappa Alpha Sorority, Incorporated
 Alpha Omicron Pi
 Alpha Phi Alpha Fraternity, Inc.
 Alpha Sigma Alpha, ZT chapter
 Alpha Sigma Phi Fraternity
 Alpha Sigma Tau
 Delta Sigma Phi
 Delta Sigma Theta Sorority, Inc.
 Delta Zeta
 Greek Life Council
 Independent Greek Council
 Interfraternity Council
 Kappa Alpha Psi Fraternity INC.
 National Pan-Hellenic Council
 Order of Omega
 Pan-Hellenic Council
 Phi Beta Sigma Fraternity, Inc.
 Phi Sigma Sigma
 Rho Lambda
 Sigma Gamma Rho Sorority Inc.

Sigma Kappa Sorority
 Sigma Lambda Beta International
 Fraternity Inc.
 Sigma Lambda Gamma National
 Sorority Inc.
 Sigma Phi Epsilon
 Sigma Pi International Fraternity
 Theta Chi Fraternity
 Zeta Phi Beta Sorority, Inc.

Honorary

Beta Alpha Psi
 Delta Sigma Pi
 Iota Tau Alpha
 National Residence Hall Honorary
 (NRHH)
 Omicron Delta Kappa Society
 Phi Alpha Theta
 Psi Chi
 Sigma Tau Delta

Student Life

Media

Many opportunities for students to get involved in radio, television, newspaper, and programming are made available through the following student organizations.

Apples & Oranges
Broadcasting Network of Grand Valley
(GVCN)
Comic Association
Lantern

Renaissance Faire
Scientists of Sound
Video Game Club
Underground Film Organization
WCKS Student Run Radio

Performing Arts

Student organizations having involvement in artistic performance activities are included in the following student organizations. Additional opportunities for music and dance are available through the music department.

Dance Troupe
Euphoria
Rhythm in Blues

Society of Composers, Inc.
Voices (Gospel Choir)
STAGE

Faith-Based Groups

Student organizations that focus on religious beliefs offer opportunities for spiritual growth and social interaction.

Alpha Omega Co-ed Christian Ministries
Chi Alpha Christian Fellowship
Cru (Campus Crusade for Christ)
Christianity on Campus
Hillel
His House Christian Fellowship
Inter-Varsity Christian Fellowship

Muslim Students' Association
Orthodox Christian Fellowship
Prayer Gathering
University Christian Outreach
Ways of the Earth
Wesley Fellowship
Young Life

Service & Advocacy

A variety of student organizations provide community service-learning opportunities within the local community. Other organizations advocate a particular social issue and strive to educate the campus community.

Alpha Phi Omega
Alternative Breaks
Amnesty International
Animal Care Takers (ACT)
Armed Forces Association
Best Buddies
Campus Lions Club
Child @ Heart
Circle K International
Colleges Against Cancer
Dance Dance Marathon

Eyes Wide Open
E.O.R.G.E.
Habitat for Humanity
Health & AIDS
Hunger & Homelessness
Measure for Measure
Organization for the Advancement of
Students with Disabilities
P.A.L.S.
Rotoract
Senior Citizens Club

Soil & Water Conservation
 Society Student Environment Coalition
 Students for H.O.P.E.
 Students Against Sweatshops
 Students for a Free Tibet

Students for Fair Trade
 Students for Life
 Students for Organ Donation
 Voices for Healthy Choices

Special Interest Groups

Grand Valley students interested in politics, academic discussions, hobbies, social action, or a variety of other concerns have many clubs from which to choose.

Alternative Realities
 Aviation Club
 Classic Society
 Coalition Party
 College Democrats
 College Republicans
 Contemporary Ceramics Association
 Disney College Program Alumni Association
 Harry Potter Club (The)
 Hip-Hop Congress
 International Relations Organization
 Japanese Conversation Table (JCT)

NaNo
 Oldskool Society
 Ongaku Organization (GOO)
 Pathways
 Red Fridays
 Ride-EZ
 Science Fiction Club
 Scrapbooking Club
 Spotlight Productions
 Student Car Club
 Student-Parent Support Group
 Swing Club

Sport Clubs

Recreational sport clubs provide opportunities for competition with other schools at the regional, national, and some at the international level through individual and team events. Participation in these team programs enables student athletes to further develop leadership skills, cognitive and social skills, and often results in lifelong friendships.

Backpacking and Outdoors Club
 Bowling Team (Men's)
 Bowling Team (Women's)
 Capoeira Mandinga
 Chess Club
 Cues on Campus
 Cycling Club
 Dodgeball Club
 Ducks Unlimited
 Equestrian Club
 Euchre Club
 Fencing Club
 Foosball Club
 Go Club
 Gymnastics Club
 Hockey Club
 Kung-Fu Club
 Lacrosse (Men's)
 Lacrosse (Women's)
 Laker Dance Team

Laker Paintball Club
 Lexicon Scrabble Club
 Officials' Club
 Paintball Club
 Ping Pong Club
 Poker Club
 Rodeo Team
 Rowing Club
 Rugby — Men's and Women's
 Shooting Team
 Ski Team
 Soccer — Men's and Women's
 Synchronized Skating Team
 Triathlon Club
 Ultimate Frisbee
 Vertical Earth (rock climbing)
 Volleyball — Men's and Women's
 Water Polo — Men's and Women's
 Wrestling Club

Student Life

Student Governance & Community Councils

Community Intercultural Council for
Stafford & Swanson
Swanson
Copeland Community Council
Holland Student Organization
Kistler Multicultural Tribunal Council
Niemeyer, Hills, Frey Community Council
North/West Community Council
Pew, Pickard, DeVos Community Council

Ravines Neighborhood Association
Residence Housing Association (RHA)
South A/B and Calder
Student Senate
Weed, Hoobler, Ott, Johnson &
Robinson
Community Council
Winter and Secchia Neighborhood
Association

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. The Student Senate operates through an established committee structure, which includes the Appropriations, Campus Affairs, Educational Affairs, Intercultural Affairs, Political Actions, Public Relations, and Student Resources Committees. 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 Grand Valley State University 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.

Cultural Board

The Grand Valley State University Cultural Board promotes unity, mentoring, leadership, advocacy, and programming that celebrates ethnic backgrounds. Comprised of six registered student organizations, the Grand Valley State University Cultural Board is open to all students regardless of ethnic or multi-ethnic backgrounds. The board meets regularly to organize campus-wide cultural celebrations and to work with faculty, staff, and other students to increase multicultural awareness in our university community. Contact (616) 331-3965 for more information.

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 on the lower level of the Commons. *The Lanthorn* staff includes editorial, advertising, business, graphic art, staff writing, and staff photography positions. Call (616) 331-2460 to find out more information.

GVCN— Student Television

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. GVCN's office is located in the Student Organization Center, lower level of Kirkhof. Contact (616) 331-4826 for more information.

WCKS— Student Radio

WCKS is the student-run campus radio station located on the lower level of the Commons building. Opportunities for all aspects of radio production and broadcast are available to students. Contact (616) 331-2356 for more information.

Office of Student Life

Students are in class an average of 30 percent of the time during a week of college life. 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. Historically, students who are successful have developed a plan for how they will spend the other 70 percent of their time.

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 over close to 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. Whether it is for a meeting, entertainment, or studying, the Kirkhof Center is a place for the campus community to come and gather in a formal or informal setting. Located within the student center are the Office of Student Life & Event Services, Student Organization Center, Office of Student Senate, 2020 Information Desk, University Bookstore, Women's Center, Java City/Lobby Shoppe, food services, postal services, pay phones, commuter lockers, copy center, ATM machine, game room, and giant movie theater room.

Kirkhof Center Daytime Programs provide free entertainment and cultural events during weekdays. These events usually occur around noon in the Kirkhof Center and are great for non-traditional and commuter students that cannot afford events on campus in the evening or on the weekends.

Laker Late Night is an energized program that provides quality late night entertainment during prime social time, 9 p.m.-2 a.m., on Friday and Saturday nights in the Kirkhof Center. Laker Late Night provides a social environment where programs are sponsored by student organizations that build community through participation in music, film, dance, comedy, crafts, games, and novelty programming.

Student Life

Community Service Learning Center

The Community Service Learning Center located in the Kirkhof Center, is an outreach office that encourages the Grand Valley population to engage themselves in community awareness through community issues education, volunteer skill set training, campus-wide volunteer/service opportunities, and community agency partnerships. Grand Valley 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. The CSLC is a clearinghouse for West Michigan volunteer opportunities.

Laker Leadership Programs

Emerging Leaders Retreat

The Emerging Leaders Retreat 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 retreat teaches leadership through interactive activities and discussion led by student leaders and staff from the Office of Student Life. This retreat is a great way to get acquainted with leadership in a college setting.

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.

Advanced Leaders Capstone

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 form throughout th state and 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 Luncheon recognizes Kenneth R. Venderbush who served as Vice President of Student Affairs at Grand Valley State University from 1969–1973. The luncheon features a speaker from the community, or a past Grand Valley Alum, sharing their experiences and inspirations on the topic of leadership and service.

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, Sibs 'n Kids Weekend, Make a Difference Day, Relay for Life, Community Outreach Week (COW), Renaissance Festival, and Presidents' Ball.

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.

Ethnic Festival: An annual event of cultural appreciation. 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.

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.

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.

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.

Soulfest: Each February the Black Student Union shares with the campus a night of African cuisine that was adapted to the resources available during slavery, now known as "Soul Food." Along with a selected form of entertainment requiring audience participation, Grand Valley celebrates the legacy of African Americans.

Student Life

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. Close to 300 student organizations are supported by this center.

University Promotions

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

Campus Events Information

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 that operate the desk are there to answer questions and assist students. Contact the 2020 Information Desk staff at (616) 331-2020.

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 on the Internet 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.

Intercollegiate Athletics

Grand Valley is a member of the Great Lakes Intercollegiate Athletic Conference (GLIAC). Membership in the GLIAC includes Ashland, Ferris, Findlay, Gannon, Mercyhurst, Grand Valley, Hillsdale, Lake Superior, Northern Michigan, Northwood, Michigan Tech, Saginaw Valley, 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, a symbol of athletic excellence, twelve times. Grand Valley's men's teams have won conference championships in football eleven times; basketball, seven; baseball, ten; wrestling, six; tennis, one; golf, two; indoor track, seven; outdoor track, five; and cross country, four. In women's sports, Grand Valley has won championships in basketball eight times; cross country, six; softball, eleven; tennis, two; volleyball, eight; indoor track, seven; outdoor track, seven; and golf, four.

Scholarships are offered in all men's and women's sports.

Grand Valley competes in the following sports: **Men** — baseball, basketball, cross country, football, golf, swimming and diving, tennis, and track. **Women** — basketball, cross country, golf, soccer, softball, swimming and diving, tennis, track, and volleyball.

Student Services

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; serves as a resource for gay, lesbian, bisexual, and transgender issues; 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.

Gay/Lesbian/Bisexual/Transgendered (GLBT) Resources

Staff in the Dean of Students office serve as resources to students concerned about gay, lesbian, bisexual, or transgender issues. The office provides support to Allies and Advocates, a group of faculty and staff who offer support and resources in a safe environment for the members of the university community concerned with issues of sexual orientation. A faculty member is appointed each year and works with the office, Allies and Advocates, the student organization, and serves as a liaison between GLBT students and the university. The faculty liaison can be reached at 331-2530.

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.

Advising

Advising Resource Center (ARC)

The ARC supports student learning by providing a wide range of services to students in one central location: academic advising for students who have not decided on a specific major or minor, or those who have not been officially admitted to Grand Valley State University; grievances regarding general undergraduate university graduation requirements such as general

Student Services

education, total credit, credit overload requests, transfer course equivalency or residency requirements; workshops to help students with study skills, test anxiety, and time management. The ARC support programs consist of Academic Advising for Undecided Majors; Disability Support Services; The EXCEL Program; Freshman Orientation; Graduation Persistence Advising; LAKER Academic Center; Muskegon Partnership Program; Student Transfer Enrollment Partnership; Testing Services; Tutoring; Transfer Orientation; TRiO Programs-Upward Bound, Upward Bound Math/Science, McNair Scholars, Educational Connections, Educational Support Program. The ARC 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.

Arts and Humanities Teacher Certification Advising Center

The Arts and Humanities (A&H) Advising Center provides information and advising to current and prospective education students who have a major and/or minor in an Arts and Humanities content area.

The Center provides services and resources to: undergraduate A&H education students who have questions regarding the application process and admission criteria for the College of Education; post baccalaureate A&H students who are coming to Grand Valley to obtain their Michigan Provisional Teaching Certificate; teachers who are adding an A&H major or minor endorsement to their Teaching Certificate.

The A&H Teacher Certification Advising Center is located in Mackinac Building-Suite 1060B, (616) 331-3895.

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.

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 scheduling 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.

S.M.A.R.T. Center (Science and Mathematics Advising, Resource, and Transition Center)

It is the mission of the S.M.A.R.T. Center to provide consistent and accurate academic advisement and information on resources available to all students pursuing or transitioning

to majors and minors in the fields of science and mathematics. The center complements faculty advising by offering initial academic advisement through freshman and transfer orientation; by assisting in the development of an achievable academic outline; by disseminating Grand Valley policies and procedures as it pertains to students in science and mathematics; by providing a central location for students seeking information on pre-professional programs such as pre-medical, pre-dental, and pre-pharmacy studies. In addition, the center assists students in appropriate course selection in the general education program and teacher certification prerequisites. The S.M.A.R.T. Center is located in 377 Padnos 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 telephoning the center at (616) 331–8585 or by stopping in at the office.

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.

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.

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 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.

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.

Student Services

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. For more information on this academic support program, please contact the S.M.A.R.T. Center at (616) 331-8585.

Career Planning

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 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 web sites emphasizing career exploration and information. The Counseling and Career Development Center and Library are located in 204 Student Services Building. Telephone (616) 331-3266.

Counseling Center

The Counseling Center staff provides students with counseling on personal issues such as relationships, anxiety, depression, self-awareness, eating disorders, and substance abuse. Counseling is provided to students using either individual sessions and/or group sessions with peers. In addition, personal development seminars are offered each semester to help students make more effective decisions. Seminars and groups cover such topics as stress management, assertiveness training, relationship skills, and building self-confidence. Seminars are held in the Counseling and Career Development Center in 204 Student Services Building. Staff members are available 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 and from 10 a.m. to 7:00 p.m. on Mondays, Tuesday from 11:00a.m. to 6:00 p.m., Wednesday and Thursdays from 8:00 a.m. to 5 p.m. at the Pew Campus office. To make an appointment, call (616) 331-3266.

Career Services and 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, and developing interviewing skills and job search techniques. Individual appointments can be scheduled with an advisor in addition to attending workshops and seminars. Students who register with the office may take advantage of a Web-based system to get current job listings, sign-up for on-campus interviews, and receive email correspondence from Career Services regarding upcoming events and employment information. The Web-based system provides a computerized resume database available to employers for resume referrals. The office coordinates six annual career fairs: Grand Valley State University Careerfest™ (for all majors and the police academy), West Michigan Career Connections (nonprofit business and industry, social

services, and government), Health Career Day, Summer Job Fair, Careers in Communication Day, Career Expo, Teacher Search, and Out-of-State Teacher Fair. Representatives from these markets come to campus to provide information on prospective opportunities and to interview Grand Valley students. 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, with office hours 8 a.m. to 6 p.m. Monday through Thursday and 8 a.m. to 5 p.m. on Friday, and 116B DeVos Center, (616) 331-6708, with office hours 8 a.m. to 6 p.m., Monday through Thursday and 8 a.m. to 5 p.m. on 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 Web site at www.gvsu.edu/careers.

Employment Statistics for 2005-2006

The employment rate for Grand Valley graduates continues to be very 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.

Recent employment statistics-those persons employed in a position directly related to their majors or attending graduate school-are listed for various majors at Grand Valley.

2004–2005 Major	Percent Employed Directly	Percent Enrolled in Graduate School
Accounting	65%	27%
Accounting (master's)	100%	0%
Athletic Training	29%	71%
Biology (master's)	100%	0%
Biopsychology	0%	100%
Business	82%	18%
M.B.A.	89%	0%
Business Economics	55%	27%
Chemistry	25%	75%
Classical Tradition	100%	0%
Classics	0%	100%
Clinical Laboratory Science	100%	0%
M.S. in Communications	82%	0%
Computer Information Systems (master's)	100%	0%
Computer Science	75%	13%
Criminal Justice (master's)	100%	0%
Earth Science	100%	0%
Economics	100%	0%
Education General (master's)	94%	01%
Education General: CSAL (master's)	88%	0%
Engineering	81%	15%
Engineering (master's)	100%	0%
English (master's)	100%	0%
Finance	67%	16%
Geography	60%	20%
Health Administration (master's)	100%	0%

Student Services

2004–2005 Major	Percent Employed Directly	Percent Enrolled in Graduate School
Health Science	10%	74%
Hospitality & Tourism Management	88%	08%
Information Systems	88%	12%
Integrated Science	50%	50%
International Business	67%	33%
International Relations	50%	33%
Journalism	83%	0%
Marketing	80%	04%
Mathematics	59%	21%
Medical Imaging	100%	0%
Music	36%	45%
Natural Resource Management	56%	33%
Nursing	99%	0%
Nursing (master's)	92%	0%
Occupational Safety & Health	80%	10%
Occupational Therapy	100%	0%
Physical Therapy (master's)	100%	0%
Physician Assistant (master's)	93%	0%
Physics	0%	100%
Psychology	19%	66%
Reading (master's)	100%	0%
Russian Studies	0%	100%
School Counseling (master's)	100%	0%
Social Work	32%	61%
Social Work (master's)	93%	0%
Special Education/Psychology	60%	33%
Special Education/Psychology (master's)	100%	0%
Statistics	0%	100%
Taxation (master's)	100%	0%
Theatre	100%	0%
Therapeutic Recreation	100%	0%

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 recent survey conducted by Grand Valley Career Services, 99 percent of employers agreed that most students would benefit from such 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 (occa-

sionally, 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 (three and a third hours per week per credit for a 15-week term) for three academic credits. 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; and students must complete all departmental requirements for the experience, including final reports. 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.

Student Employment

The Student Employment office has a Web site 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.

Multicultural Affairs

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

Student Services

all people, and to empower students to be active learners. In addition, OMA initiates and supports efforts to recruitment and retention of students, faculty and staff.

OMA is home to the four multicultural cohort programs: Multicultural Business Education Cohort (MBEC), Multicultural Higher Education Cohort (MHEC), Multicultural Science Education Cohort (MSEC) and Multicultural Teacher Education Cohort (MTEC). The cohort programs offer a comprehensive support system to students by providing a broad spectrum of academic, cultural, professional, and social enrichment programs. The objective of these programs is to provide first-year students with a positive transition to campus, and to successfully retain and graduate students. The cohorts also serve as community learning centers where students who pursue similar educational interests can connect, interact, and share their educational experiences. Members of the cohorts also benefit from the one-on-one working relationship with the program coordinators. Other programs OMA provides include Students Promoting Diversity and Leadership Peer Mentoring, Wade H. McCree Incentive Scholarship Program and King-Chavez-Parks GearUp, Future Faculty, and Visiting Professors programs. OMA is located in 130 Commons. Telephone (616) 331-2177, email oma@gvsu.edu, or visit our Web site at www.gvsu.edu/oma.

Robert C. Pew Campus 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. We also coordinate orientation for newly admitted graduate students. For information visit our Web site at www.gvsu.edu/pewcampus or call (616) 331-7220.

Working closely with graduate 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 searching, counseling, financial assistance, 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.

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 living in each living center, along with student Resident Assistants/Apartment Living Assistants and Multicultural Assistants, arranges educational, diversity, and recreational programs that serve to foster and maintain pleasant living and study conditions. Two students are assigned to a room and, whenever possible, students are allowed to choose their roommates. The traditional living centers accommodate approximately 900 freshman students. 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 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, living centers are filled on a first-come, first-served basis. Approximately 3,000 spaces in the living centers are reserved for freshmen; the remaining spaces are available for upperclass students. All rooms are smoke free.

Dining

The living centers provide accommodations and meals for approximately 3,000 students. Three room-and-board plans are available: a 7-meal plan, a 14-meal plan, and a 21-meal plan. Meals are served in the Fresh Food Company, Kleiner Commons, Einstein Bagel, Papa John's, and River Landing at the Kirkhof Center, depending on the plan selected. At each meal the traditional dining service in the Fresh Food Company provides several entrees, including a vegetarian entree, from which students may choose. Students may eat all they want and are allowed to return as often as they want to the various serving tables. A food court, featuring Taco Bell Express, Subway Express, and Pizza Hut, is located on the lower level of the Commons. In the Kleiner Commons, there is a marketplace, coffee shop, and convenience store for student dining. Students can use their dining cards at the Kleiner convenience store, River Landing and at Java City located in the Kirkhof Center.

Apartments

The apartment complexes on the Allendale campus provide housing for students who have completed at least one full year of living on campus or have earned a minimum of 30 semester hours. There are four-bedroom, two-bedroom, one-bedroom, and efficiency apartments. A university staff member living in the complex, along with Apartment Living Assistants and Multicultural Assistants, arranges educational, diversity, and recreational programs that foster pleasant living and study conditions.

The apartments are arranged in three village-style clusters, each around a community building. 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.

Student Services

In addition, students can choose the apartments located on the Robert C. Pew Campus in Grand Rapids. One-, two-, three-, four-bedroom, and efficiency units are available. Units are semi-furnished, with a couch and chair provided.

Students must make their own arrangements for the apartments. Because the units resemble privately developed apartments in every way, yet are conveniently located right on campus, they are very much in demand and students are advised to make application for rental well in advance. Applications and contract information may be obtained from the Office of Housing and Residence Life located at 103 Student Services Building, telephone (616) 331-2120.

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.

Housing Application Process

New students who want to live on campus should apply to the Office of Housing and Residence Life immediately upon acceptance for admission. Spaces are filled on a first-come, first-served basis. Summer session housing applications are accepted at any time. A \$150 deposit (subject to change) must accompany the contract materials. The deposit is a reservation/security deposit and must be paid before the beginning of each academic year. The deposit is also required for the summer session. All first-year students are encouraged to apply before March 1 for the fall semester in which they plan to attend.

Living center and apartment contracts are for the entire academic year. Apartment residents may request a 12-month contract. Students who must move in order to take part in



Grand Valley sponsored or approved off-campus academic programs (such as field work or study abroad) will be allowed to break the contract with a refund of their deposit, providing required written notice is given in accordance with published deadlines.

Financial aid awarded for housing will be refunded to the sponsor, not to the student. Further information on the housing application and refund policy is contained in the housing contracts.

Women's Center

The Grand Valley Women's Center focuses on services and programs that support and enhance the growth of all students at the university through gender education. Ultimately, the Women's Center strives to make a substantial difference in the quality of life for women in the Grand Valley community and surrounding area. The center serves as a place of education and involvement for anyone seeking to further their knowledge and/or advocate on the status of women. The center creates an environment where students increase self-awareness, connect with resources, apply skills, conduct research, and perform service-learning on gender equity. The Women's Center is committed to creating an environment in which diversity 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 161 Kirkhof Center. Telephone (616) 331-2748, visit our Web site at www.gvsu.edu/women_cen, or email womenctr@gvsu.edu.

Admission to Grand Valley

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

Admission to Grand Valley

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 C or better. Transfer credit is typically determined by the offering of an equivalent course at Grand Valley. Limited transfer credit may be awarded from technical or terminal associate degree programs. Credit from 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 Dean of Advising Resources and Special Programs. 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 General Academic Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog.

Admission to Grand Valley

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 Emphasis requirement; and one three-course theme. For specific course information, please refer to the General Education section of the Grand Valley State University Undergraduate and Graduate Catalog.

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

University Honors College

The Grand Valley State University 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 will be invited to join the University 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 University Honors College may apply for admission if they have a 3.5 or better college GPA. Applicants should contact the director of the University Honors College.

For more information about the University Honors College, consult the University Honors College section in the Grand Valley State University Undergraduate and Graduate Catalog.

International Students

Grand Valley welcomes international students wishing to study at our campus. In 2005-2006, students from 55 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.
- 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.

The following minimum scores are expected: TOEFL 550 paper-based, 213 computer-based, or 80 internet-based; CELT 85; or IELTS.

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. A completed application for admissions must be submitted by February 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.

Admission to Grand Valley

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

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, as a result of their work experience or undergraduate education, are interested in expanding or continuing their professional education. 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 programs have more restrictive application deadlines. Please refer to specific program for application deadlines. 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

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

1. A baccalaureate degree from an accredited institution of higher education.
2. Submission of all required admission materials, including:
 - a. Completed graduate application for admission.
 - b. \$30 nonrefundable application fee (unless you have previously applied to Grand Valley).
 - c. Official copies of transcripts from all institutions of higher education previously attended. **Transcripts must be sent from those institutions directly to the Grand Valley Admissions office.**
 - d. Scores from either the TOEFL (Test of English as a Foreign Language) or CELT (Comprehensive English Language Test) by students whose native language is not English.
3. Additional requirements and application procedures are listed under each graduate degree program.

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 division.

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.

Admission to Grand Valley

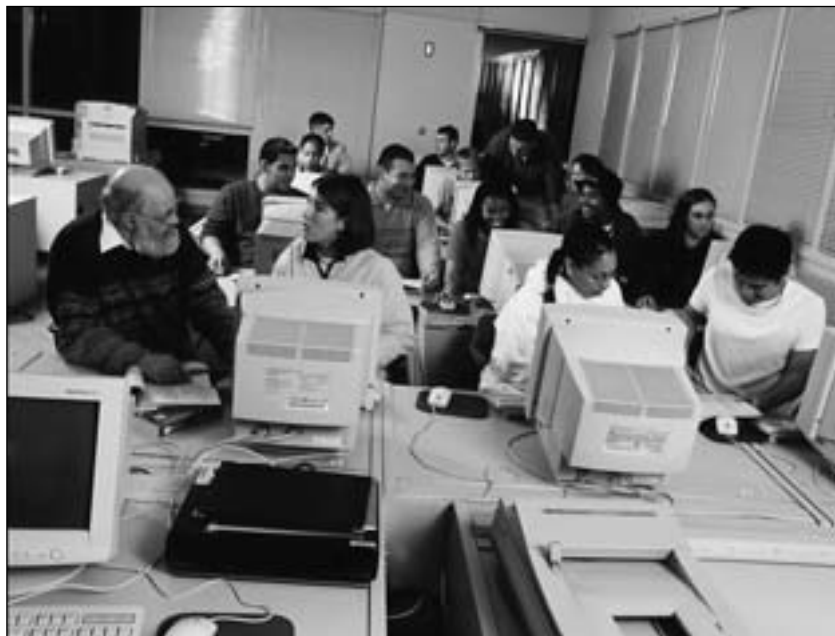
3. In keeping with the residency requirement, a student with a graduate degree from another institution with appropriate regional accreditation must earn a minimum of 24 semester hours in residence at Grand Valley. Note that the minimum total hours required for the second degree must be satisfied either 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.

International Students

In 2006–2007, students from 52 nations were enrolled at Grand Valley. Grand Valley welcomes the interest of foreign students wishing to study on our campus.

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

1. Completed International Admission Application.
2. \$30 nonrefundable application fee.
3. Evidence of English language proficiency verified by the Test of English as a Foreign Language (TOEFL) scores or CELT (Comprehensive English Language Test) scores.
4. Verification of financial support.
5. 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.



Applicants must be able to communicate well in English. The following minimum scores are expected: TOEFL 550 paper-based, 80 internet-based, 213 computer-based; CELT 85, or completion of ELS Level 112. Financial independence must be demonstrated prior to admission. An acceptance letter and an I-20 form will be issued after the applicant has been accepted. International students are required to have all application materials in to the Admissions Office by the deadline date of May 1 for fall admission.

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 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.

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

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

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 \$3,620 per semester. Tuition is \$315 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 \$3,800 per semester. Tuition is \$330 per credit hour for fewer than 12 credits and for each credit over 16. Tuition for graduate resident students is \$375 per credit hour for 500–600 level courses, \$330 for courses below 500 level.

For lower division (0–54 credits) nonresident undergraduate students, tuition is \$6,255 total per semester for anywhere from 12 to 16 credits and \$532 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 \$6,466 total per semester for anywhere from 12 to 16 credits and \$550 per credit for fewer than 12 credits and for each credit over 16. Nonresident graduate tuition is \$600 per credit hour for 500–600 level courses, \$550 for courses below 500 level.

The above tuition rates apply to all students registering for credit courses, including guests, visitors, and all categories of students 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.

Parking

Students wishing to park on either the Allendale or Robert C. Pew Campus, must purchase a parking permit. Permits can be ordered electronically starting June 1, 2007 at www.gvsu.edu/publicsafety. The permit costs \$140/semester for full-time students and \$73/semester for part-time students. A student is considered part-time if they are taking 6 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 for a permit at the Web site listed above on June 1, 2007 or after will be issued a permit.**

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

*Tuition rates and fees are set by the Board of Trustees. The rates listed here are for the 2006-2007 academic year. Additional tuition is assessed on some high cost curriculum. For more information go to the Grand Valley Web site, click on *Quick Facts* under *About Grand Valley*, and view the special course charges under *Tuition Rates*.

**Subject to change for the 07/08 year.

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.

Enrollment Requirements for 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 Merit Award
- 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 credits or more for undergraduate, 4.5 or more for graduate):

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

The following funds will be prorated based on your enrollment:

- 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
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 11–5 credits

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

- Academic Competitiveness Grant
- Federal Carl Perkins Loan
- Federal Nursing Loan
- Federal Supplemental Opportunity Grant
- Grand Valley Grants
- Grand Valley Scholarships
- SMART Grant
- Some private scholarships

Changes in Tuition and Fees

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.

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 tuition paid. 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 (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 tuition paid.
3. Students withdrawing after the second week of classes in the shortened session (summer) and 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 registration 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 registration and other mandatory fees. There will be no refund of these fees after the last date for a 75 percent refund as published in the Schedule of Classes.



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 Schedule of Classes.

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 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 in the Grand Valley State University Undergraduate and Graduate 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 for Undergraduate Students

At Grand Valley in 2006–2007 more than 76 percent of full-time students receive some kind of financial aid. The average award is approximately \$8,129.

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, job, and loan.

To be considered for aid, a student must be admitted as a degree-seeking student and be enrolled for 12 credit hours or more per semester (15 credit hours per semester is considered a normal load). Exceptions are made for part-time students. Students who receive scholarships based on merit are required to average 15 credit hours per semester.

The graduation rate, as defined in the federal IPEDS Graduation Rate Survey, for students entering Grand Valley as new, full-time degree-seeking freshmen during the fall of 1999 was 53 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 89.0 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.ed.gov to file the FAFSA online. Paper forms are also available from your local high school/community college or they may be obtained by contacting the Office of Financial Aid, Grand Valley State University, Allendale, Michigan 49401-9403. Telephone (616) 331-3234.

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 (6 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 Web site, www.gvsu.edu/financialaid, after March 1, 2008.

Looking Ahead to Summer 2008

We will be using your 2007-2008 FAFSA to determine your eligibility for aid for Spring/Summer 2008. A Spring/Summer 2008 Application will be available after March 1, 2008 on our Web site.

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.ed.gov is the fastest and most accurate means of filing. Paper forms are also available from your high school, community college or by contacting the office of Financial Aid. 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 emailed to your preferred 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 15: Entering freshman, and transfer students receive notification of their financial aid award.

April 15: Spring/summer session students receive notification of their financial aid award.

June 15: 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 15: 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.

College Costs and Student Budgets

Before applying for financial aid, students and parents should assess all of the costs of attending Grand Valley. The following tables indicate 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)	\$7,298
Books and supplies	900
Personal and miscellaneous	1,000
Room and board*	6,864
Transportation	1000
Total	\$17,062

*Tuition and fees and room and board charges are determined by the Grand Valley State University Board of Trustees. The rates listed here may change for the 2007-2008 academic year.

Costs and Financial Aid

Commuting Students (Michigan resident)

Tuition and fees*	\$7,298
Books and supplies	900
Personal and miscellaneous	1000
Food (lunches)	700
Transportation	<u>2,000</u>
Total	\$11,898

Out-of-State Students

Out-of-state tuition* for lower division (0–54 credits) students is \$6,255 per semester for 12–16 credit hours, \$532 per credit hour for fewer than 12 credits and more than 16. Additional transportation costs are usually necessary. Out-of-state tuition for upper-division (55 or more) students is \$6,466 per semester for 12 to 16 credit hours, \$550 per credit hour for fewer than 12 credits and more than 16.

Self-supporting Students

Grand Valley generally uses the guidelines set by the U.S. Department of Education to determine if a student is self-supporting. A self-supporting student is one who has attained age 24. A student who is under 24 is considered to be dependent unless he or she (1) is an orphan, ward of the court, or a veteran, (2) is a graduate student or married student, or (3) has legal dependents other than a spouse. The Office of Financial Aid may use professional judgment to determine a student's dependency status apart from this definition. Students must provide supporting documentation.

Students who apply for financial aid and are married and/or have dependents have varying expenses; however, only those costs attributable to actual attendance as specified above will be considered in determining the type and amount of aid the student is eligible to receive.

Financial Aid for Part Time Students

If you have chosen to attend part time you may be considered for financial aid if you are enrolled part-time (at least 6 credit hours for undergraduate students and 4.5 credit hours for graduate students). As a part-time student, you should follow the normal application procedures. Undergraduate students taking fewer than 6 credit hours may be eligible for the Federal Pell Grant and the Michigan Adult Part-Time Grant. (see section on Programs Based on Need).

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).

*Tuition and fees and room and board charges are determined by the Grand Valley State University Board of Trustees. The rates listed here may change for the 2007-2008 academic year.

2. Student Loans: Federal Direct Student Loans of up to \$10,250 per semester are available (see following program description).
3. Assistantships: Funds may be available in special categories. You should consult your program director for information.

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 academic-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.

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. An appointment with a financial aid counselor is highly encouraged. This helps to ensure your study abroad is fully covered.

Financial Aid Programs

At Grand Valley, financial aid includes scholarships, grants, loans, and student employment. These aids are 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.

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 Grants and Scholarships

Scholarship eligibility criteria indicated below are for students entering in the 2007-2008 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

Costs and Financial Aid

including ACT and SAT scores must be received by the December 31 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 3.8 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 complete 25 GVSU credits after your first year, 55 GVSU credits after your second year, and 85 GVSU credits after your third year of attendance.
 - 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 1,300 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 complete 25 GVSU credit hours after your first year, 55 GVSU credit hours after your second year, and 85 GVSU credit hours after your third year of attendance.
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.

This scholarship is renewable for three successive additional years (eight semesters total) provided you maintain a 3.25 or better 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.
 - 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. Grand Valley must be the first college you attend after high school graduation. This amount is currently approximately \$5,270. 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 1,150, based on the critical reading and math combined scores.

This scholarship is renewable for three consecutive additional years (eight semesters total) provided you maintain a 3.25 or better GPA and complete 25 GVSU cred-



its after your first year, 55 GVSU credits after your second year, and 85 GVSU credits after your third year.

- 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 earned or be earning an associate's degree. All admitted transfer students will be considered for this scholarship. Students who receive this award have cumulative collegiate GPAs of 3.75. Mid-year transfers can be considered for the following fall semester and Grand Valley must be the first institution you attend after you earn your associate's degree.

This scholarship is renewable for one additional consecutive year (four semesters total) provided you maintain a 3.25 or better GPA and complete 25 GVSU credits after your first year of attendance.

The above scholarships are only for use in the Fall and Winter semesters for a total of eight consecutive semesters. The Financial Aid Office will review each scholarship recipient at the end of the Winter semester for renewability. If a student fails to meet the minimum GPA and/or minimum credit completion 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. Petitions for reinstatement must be done in writing to the Director of Financial Aid.

Costs and Financial Aid

- 3. 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 total cumulative 3.5 GPA, 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 3.5 GPA and complete a minimum of 25 credits. The scholarship will take the place of any other merit scholarships awarded by Grand Valley.
- 4. 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 3.5 GPA, 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 3.5 GPA and earns a minimum of 25 Grand Valley credits.
- 5. 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 3.2 GPA, 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.
- 6. Grand Valley UAW Region 1-D Scholarships.** Grand Valley State University, in cooperation with Region 1-D of the UAW, offers two \$1,000 scholarships to entering freshman students who are children of UAW Region 1-D members from selected counties. Transfer students must have graduated from an accredited community or junior college by the time they enter the program and must matriculate directly to Grand Valley State University. To apply for a scholarship, incoming Freshmen students must have a minimum GPA of 3.1, an ACT composite of 21, be a child of a UAW member in good standing in Region 1-D, and be from Allegan, Barry, Ionia, Kalamazoo, Kent, Montcalm, Muskegon, Newaygo, or Ottawa County. Transfer students do not need to have the ACT score. Scholarships will be renewable for three additional consecutive years (one additional year for transfer students) provided the student maintains a 3.0 GPA and successfully completes 25 GVSC credits after the first year, 55 GVSC credits after the second year, and 85 GVSC credits after the third year of attendance. Application forms are available from Grand Valley's Financial Aid office or from the local UAW offices. Deadline for submission is December 31 each year.
- 7. Upperclass Honor Scholarships.** A limited number of scholarships up to \$1,000 are awarded annually to upperclass students not receiving scholarships from other sources.

Students must be full-time undergraduates, have a 3.5 cumulative GPA 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 is made by the Grand Valley Scholarship Committee. These scholarships may be renewed for one year for students who enroll full time, maintain a 3.25 GPA, and meet the academic progress criteria as defined by the Grand Valley Financial Aid office (see the Academic Progress section for requirements). Students must apply by the March 1 deadline.

8. **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, 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.
9. **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.
10. **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.
11. **Michigan Merit Award: For students who graduated 2000–2006 years.** The Michigan Merit Award assists students graduating from Michigan high schools. This award is available to students who score at Level 1 or Level 2 on the reading, writing, math and science MEAP tests given to Michigan high school students during their junior year. Students may also qualify if they score at Level 1 or Level 2 on two of the MEAP tests mentioned above and have at least a 24 composite on the ACT test. This award is for \$2,500 and must be disbursed in two payments of \$1250 over two consecutive academic years. Contact your high school guidance office for information on the MEAP testing dates at your school. Additional money may be available to students who took the MEAP tests in middle school. The maximum additional given is \$500 and depends on the number of tests passed.
12. **Michigan Promise Award:** For students who are graduating in 2007. The Michigan Promise Award assists students graduating from Michigan high schools. The award provides up to \$4,000 based on their performance on the MEAP tests. Michigan Promise recipients are eligible to receive \$1,000 their freshman year and \$1,000 their sophomore year. If certain academic progress criteria are met at the end of the sophomore year, and additional \$2,000 will be awarded.
13. **Native American Tuition Benefit.** Students who are certified by the Michigan Inter-Tribal Council to be at least one-quarter blood (or more) Indian 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 meet satisfactory academic progress to continue receiving this benefit.

Costs and Financial Aid

14. Other Grand Valley State University Scholarship Programs*

Accounting Alumni Scholarship

Eligibility: Juniors majoring in accounting.

Amount: Up to \$1000, Nonrenewable.

Selection: By the Seidman College of Business.

Application: Contact the Dean's office, Seidman College of Business.

Alumni Heritage Scholarship

Eligibility: Children of Grand Valley Alumni. Must have a 3.3 GPA and 22 ACT or 1030 SAT or better as an entering freshman. Must not be receiving Award of Excellence or Award of Distinction from Grand Valley. Students who are residents of Michigan must have the qualifying ACT score.

Amount: \$500. Freshman only. Nonrenewable.

Selection: Upon admission to Grand Valley. Grand Valley must be the first college or university attended after high school.

Application: Students must submit applications for admission by February 1 and indicate that one or both parents are Grand Valley graduates.

American Production and Inventory Control Society Scholarship

Eligibility: Business administration major.

Amount: \$600.

Selection: By Seidman College of Business.

Application: Contact the Management Department, Seidman College of Business.

Angus Foundation "Most Improved Student" Award

Eligibility: Undergraduate student with engineering or science major and sophomore or junior standing who has shown the most improvement in academic record from the end of fall semester to the end of the following fall semester.

Amount: Varies. Nonrenewable.

Selection: By the Director of the Advising Resource Center.

Application: Submit a scholarship application and a copy of academic transcript to the Advising Resource Center.

David G. and Mary L. Annis Education

Eligibility: Open to all qualifying freshmen. Candidates who are graduates of Allendale, White Pigeon, Forest Hills and Northview school districts, in rotation respectively, will have priority consideration. Freshmen who indicate on their admission application that they intend to become elementary or secondary teachers or who wish to major in a teachable discipline are eligible. Must be enrolled full-time. Filing the Free Application for Federal Student Aid (FAFSA) and demonstrating financial need are required. Renewable for a total of ten semesters. Junior and senior renewing recipients must demonstrate their intention to pursue credentialing to become elementary or secondary teachers by applying to and being accepted by the College of Education.

Amount: Varies.

Selection: Financial Aid Office

Application: The application for admission serves as the scholarship application.

David G. and Mary L. Annis Graduate Teacher Certification

Eligibility: This scholarship is open to students pursuing credentialing to become elementary or secondary teachers by applying to the Graduate Teacher Certification program in the College of Education. Must be enrolled full-time. Filing the Free Application for Federal Student Aid (FAFSA) and demonstrating financial need are required. Non-renewable.

Amount: Varies.

Selection: College of Education

*Some criteria for scholarships may be modified to be in conformity with current law.

Application: Contact the College of Education.

Joseph E. Appelt P.E. Engineering Scholarship

Eligibility: Entering freshmen in engineering who demonstrate an interest in environmental issues. GPA of 3.0, an ACT math subscore of 26, an ACT composite score of 23, and 6 units of high school math and science. Must have completed admissions application materials to Grand Valley by December 31. The application must be submitted by January 31. Application also available online through Engineering. Nonrenewable.

Amount: \$500.

Selection: By School of Engineering.

Application: Contact School of Engineering.

Art Scholarship

Eligibility: Determined by Art Department.

Amount: \$1,000.

Selection: By Art Department.

Application: Contact Art Department.

Newton D. Becker Scholarship Award

Eligibility: Graduating senior in the accounting program.

Amount: Fee to attend the Becker C.P.A. review course.

Selection: By the Accounting Department.

Application: Contact the Accounting Department, Seidman College of Business.

David A. Bergsma Scholarship

Eligibility: Grand Valley athlete.

Amount: \$1,000.

Selection: By Athletics Department.

Application: Contact Athletics Department.

Berkowitz Scholarship for Handicapped Students

Eligibility: Applicant must be currently enrolled as a degree seeking undergraduate student of Grand Valley and must have a documented physical or learning disability.

Amount: \$500 or larger, depending on need and available funds.

Selection: By Grand Valley Disability Support Services with the advice of a representative of Grand Valley's Financial Aid office.

Application: Contact Grand Valley Disability Support Services. Deadline is March 15th.

Owen Bieber Scholarship

Eligibility: Full-time entering freshmen with 3.5 GPA and 27 ACT. Transfer students must have graduated from an accredited community or junior college by the time they enter the program and must matriculate directly to Grand Valley State University. Apply for admission prior to February 1.

Affiliated with the UAW as follows:

- a member in good standing for five years.
- a retired member of the UAW.
- a spouse of a five-year member or retired member.
- a dependent son or daughter of a five-year member or retired member.

Amount: Tuition and fees. Renewable for three years (one year for transfers) provided you maintain a 3.5 or better GPA and complete 25 credits after your first year, 55 credits after your second year, and 85 credits your third year of attendance.

Selection: By Grand Valley Scholarship Committee. This scholarship cannot be received in combination with the Faculty and/or the Presidential scholarship.

Application: Available in the Grand Valley Financial Aid Office. This application includes an essay written by the student.

Costs and Financial Aid

Rev. Darld and Joyce Black Doctor of Physical Therapy Scholarship in memory of Robert Klein

Eligibility: This scholarship assists students pursuing the profession of Physical Therapy. Because Mr. Klein benefited greatly from the services of physical therapists during his lifetime, veterans, especially those wounded in their service of our country, will take preference. Must be enrolled with full time status in the College of Health Professions Doctor of Physical therapy graduate program and have a baccalaureate degree from GVSU. Must demonstrate financial need as defined by government programs by filing the Free Application for Federal Student aid (FAFSA). This scholarship may not be renewed. Must have completed admissions application deadline to GVSU by December 31.

Amount: Varies

Selection: Physical Therapy department

Application: Contact the Physical Therapy department.

Edith Blodgett Piano Scholarship

Eligibility: Freshman pianist in either the Bachelor of Arts or Bachelor of Music degree program.

Amount: Varies.

Selection: Grand Valley Music Department faculty.

Application: Contact the Grand Valley Music Department.

Joan Boand Athletic Endowment Scholarship

Eligibility: Athlete who has used all four years of athletic eligibility; 3.0 GPA.

Amount: Varies.

Selection: Grand Valley Athletics Department.

Application: Contact the Athletics Department.

Robert Bosch Fuel Systems Engineering Scholarship

Eligibility: Entering freshman majoring in engineering. Must have 3.0 cumulative high school GPA, ACT math subscore of at least 26 and ACT composite of at least 26. Must have at least 6 units of high school math and science. Free Application for Federal Student Aid (FAFSA) must be filed as financial need is a consideration.

Amount: \$500; renewable for an additional three years.

Selection: Padnos School of Engineering.

Contact: Padnos School of Engineering

Ira Brad Scholarship

Eligibility: Must be admitted as a degree seeking undergraduate student. Persons of color will have priority consideration in the selection. To be considered, candidates must declare their person of color status on their application for admission. Financial need, as defined by government programs is required. Students must file the Free Application for Federal Student Aid (FAFSA).

Amount: Varies

Selection: By the Financial Aid Office

Application: Filing the Free Application for Federal Student Aid serves as the scholarship application.

Contact: As there is no scholarship application, the Financial Aid will notify recipient when selected.

Branstrom Fine Arts Scholarship

Eligibility: Portfolio and/or application to the fields of music (special consideration given to pianists and singers), performing arts, visual arts, dance, and drama.

Amount: Varies.

Selection: By a committee of faculty from the fine arts departments.

Application: Contact chairpersons of fine arts departments.

Breen Scholarship Fund

Eligibility: Students who are regularly enrolled in any history course.

Amount: \$300.

Selection: Committee of the History Department.

Application: Contact the History Department. Essay due by April 7.

Brooks Family Minority Scholarship

Eligibility: For entering freshmen racial/ethnic minority students with priority given to residents of the Holland area.

Amount: Varies. Renewable for three years with a 2.85 GPA and standard academic progress.

Selection: Grand Valley Financial Aid Office from eligible entering freshmen.

Application: No other application other than completing the Free Application for Federal Student Aid (FAFSA).

Donna K. Brooks Presidential Scholarship

Eligibility: Freshman Award of Faculty Distinction applicant.

Amount: Varies. Renewable for three years.

Selection: Grand Valley Financial Aid Office.

Application: Application for admission serves as scholarship application.*

Building Owners and Managers Association Scholarship

Eligibility: For undergraduate business students with economics or real estate major or has an interest in a real estate or real estate related career. Must be full-time. Must have completed the junior year with a minimum overall 3.0 cumulative GPA.

Amount: \$1,000.

Selection: By Seidman College of Business.

Application: Contact the Seidman College of Business.

Johnny C. Burton Scholarship

Eligibility: For African-American students majoring in business.

Amount: Varies; \$500 minimum.

Selection: By Office of Multicultural Affairs and the family of Johnny Burton.

Application: Contact the Office of Multicultural Affairs. Deadline is February 15. Must reapply each year.

Business Study Abroad Scholarship

Eligibility: Seidman College of Business students planning to study abroad. Deadline for application is April 1.

Amount: Varies, \$500 to \$700.

Selection: By Seidman College of Business.

Application: Contact Seidman College of Business.

Butterworth Nursing Scholarship

Eligibility: Students admitted into the clinical nursing program; 3.0 GPA.

Amount: Number and amount vary.

Selection: By Butterworth Hospital School of Nursing Alumni Committee.

Application: Contact the Kirkhof College of Nursing or the Grand Valley Financial Aid Office.

*These scholarships are only for use in the Fall and Winter semesters for a total of eight consecutive semesters. The Financial Aid Office will review each scholarship recipient at the end of Winter semester for renewability. If a student fails to meet the minimum GPA and/or minimum criteria and only at the beginning of an academic year. Petitions for reinstatement must be done in writing to the Director of Financial Aid.

Costs and Financial Aid

Alexander Calder Honor Scholarship

Eligibility: Senior student in theatre, music, art, or dance.

Amount: Varies, nonrenewable.

Selection: By committee of the College of Liberal Arts and Sciences.

Application: Contact the Dean's Office, College of Liberal Arts and Sciences.

Campus View Apartments Upperclass Scholarship

Eligibility: Upperclass students with a 3.5 GPA and not receiving other merit scholarships.

Replaces a portion of Upperclass Honor Scholarship.

Amount: Two \$500 scholarships.

Selection: By the Grand Valley Financial Aid Office.

Application: Complete application for Upperclass Honor Scholarship and return to the Financial Aid office by March 1.

Career Services Internship Award

Eligibility: Candidates for this scholarship must be either a current junior or senior. Must be a degree-seeking student participating in a Grand Valley State University approved, credit-bearing unpaid internship. Demonstration of financial needs as defined by filing the Free Application for Federal Student Aid (FAFSA) is required.

Amount: Varies

Selection Career Services

Application: Contact the Career Service Office

Barry Castro Business Ethics

Eligibility: Students at the sophomore level who anticipate becoming junior level students at the Seidman College of Business beginning with the fall semester following application for this scholarship. Minimum cumulative grade point average of 3.0. Must be full time status and demonstrate a strong interest in business, ethics, and philosophy. Demonstration of financial need (as defined by filling the Free Application for Federal Student Aid (FAFSA) is not required but may be considered for selection. Scholarship may be renewed without reapplication for one additional year provided the student continues to meet the qualifications stated above.

Amount: Varies

Selection: Recipients will be chosen by the Seidman College of Business, Business Ethics Center Executive Committee subject to the Seidman Dean's Office.

Application: Contact the Business Ethics Center in the Seidman College of Business.

Robert L. Chamberlain Memorial Scholarship

Eligibility: English major with junior status, 3.0 GPA, excellence in writing, and interest in theatre, art, or music.

Amount: Up to \$1,000.

Selection: Scholarship Committee of the English Department.

Application: Contact the English Department.

Deadline: March 1.

Hong Chen Memorial Scholarship

Eligibility: Asian-American students, 3.0 cumulative GPA or higher, full-time. Preference is given to non-U.S. born students.

Amount: Varies.

Selection: Financial Aid Office.

Application: None.

Douglas and Ellen Chung Asian Social Work Graduate Scholarship

Eligibility: This scholarship was established to promote social work services in the Asian countries and communities. Candidates must be Asians or Asian Americans who demon-

strate by an essay their eagerness to bring culturally sensitive social work to their home countries around the Pacific Rim or to their Asian communities in the western world. Candidates must be admitted to the School of Social Work to study at the graduate level in a degree seeking course. Must have cumulative undergraduate grade point average of 3.3 or better and be making satisfactory academic progress (3.0 or better in graduate school). Must be enrolled as a full time student.

Amount: Varies

Selection: School of Social Work

Application: Contact the School of Social Work

Knights of Peter Claver and Ladies Auxiliary Scholarship

Eligibility: Candidates may be transfer students, non-traditional as well as traditional first year students. Must be persons of color, enrolled full-time as a degree-seeking student.

Must have a 2.5 cumulative grade point average or better. Candidates are required to demonstrate financial need by completed the Free Application for Federal Student Aid (FAFSA).

Amount: Varies

Selection: Office of Multicultural Affairs

Application: Contact the Office of Multicultural Affairs.

Clerical Office Technical (COT) Association Scholarship

Eligibility: Children of Grand Valley COT employees and must be enrolled full-time.

Amount: Varies.

Selection: By COT Scholarship Committee.

Application: Available in the Financial Aid Office. Deadline is March 1. Not automatically renewed; must reapply each year.

School of Communications Scholarship

Eligibility: Honors upper-level School of Communication's students who have demonstrated promise in their chose field of study. The student must have declared a major in the School of Communications, be in good academic standing, and have completed a minimum of 30 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). See the School of Communications for details.

Amount: Individual scholarship will be in the \$1,000 range. The scholarships are not automatically renewable, but students may re-apply.

Selection: Decisions is made by the School of Communications Scholarship Committee based on clarity of application essay and student's grade point.

Application: Complete applications are due the first Monday in February for the following academic year.

Community Leadership Scholarship

Eligibility: This scholarship was established by the founding members of the Grand Valley State University Foundation Leadership Committee, who seek to advance new generations of business leaders and community philanthropists. Candidates must be entering their senior undergraduate year and must give evidence of significant community service performed while a college student at GVSU as well as their desire to be engaged in community service throughout their lives.

Amount: \$1000

Selection: American Humanics Office

Application: Contact the American Humanics Office

Costs and Financial Aid

Computer Science and Information Systems Scholarship

Eligibility: Upperclass computer science major.

Amount: Varies; nonrenewable.

Selection: Faculty of the Computer Science and Information Systems Department.

Application: Contact the Computer Science and Information Systems Department.

Ann M. Cusack Upperclass Scholarship

Eligibility: Upperclass students with a 3.5 GPA and not receiving other merit scholarships.

Replaces a portion of Upperclass Honor Scholarship.

Amount: \$1,000 scholarship.

Selection: By the Grand Valley Merit Scholarship Committee.

Application: Complete application for Upperclass Honor Scholarship and return to the Grand Valley Financial Aid Office by March 1.

Dance Scholarship

Eligibility: Talented students in dance.

Amount: Varies, renewable as determined by Music Department.

Selection: By Music Department.

Application: Apply directly to the Music Department.

David Daniels Memorial Scholarship

Eligibility: Third-year physical therapy students.

Amount: Varies.

Selection: By the David Daniels Memorial Scholarship Committee.

Application: Contact the chair of the David Daniels Memorial Scholarship Committee in the Physical Therapy Department.

Gilbert and Patricia Davis Scholarship for Full- or Part-time English Majors

Eligibility: Junior or senior English majors; 3.0 GPA with 30 hours at Grand Valley for transfer students.

Amount: Up to \$1,000.

Selection: Scholarship Committee of College of Liberal Arts and Sciences.

Application: Contact the English Department.

Aaron DesRocher Memorial Chemistry Scholarship

Eligibility: This scholarship is intended to help enthusiastic upper-level chemistry majors.

Candidates must be entering their junior undergraduate year and must be attending full time. Priority will be given to scholarship candidates who have financial need as evidenced by filing the Free Application for Federal Student Aid (FAFSA).

Amount: Varies

Selection: Chemistry Department

Application: Contact the Chemistry Department

Richard M. DeVos Presidential/Faculty Scholarship

Eligibility: Freshman Award of Distinction applicant. Commitment to a career in business.

Amount: Varies. Renewable for three years. Replaces Award of Distinction dollar amount.

Selection: Grand Valley Financial Aid Office.

Application: Application for admission serves as scholarship application.*

*These scholarships are only for use in the Fall and Winter semesters for a total of eight consecutive semesters. The Financial Aid Office will review each scholarship recipient at the end of Winter semester for renewability. If a student fails to meet the minimum GPA and/or minimum criteria and only at the beginning of an academic year. Petitions for reinstatement must be done in writing to the Director of Financial Aid.

Helen DeVos Presidential Scholarship

Eligibility: Freshman Award of Distinction applicant. Commitment to music and the arts.

Amount: Varies. Renewable for three years. Replaces Award of Distinction dollar amount.

Selection: Grand Valley Financial Aid Office.

Application: Application for admission serves as scholarship application.*

Early Awareness Scholarship

Eligibility: Recipients of this 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 and GEAR UP. Additionally, students must have a 3.3 cumulative high school grade point average (gpa) and a 21 ACT composite score. Non-residents of Michigan may also qualify with a 960 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.

Amount: \$3000.

Renewability criteria: Students must be enrolled full time, achieve a minimum of a 2.85 gpa and maintain satisfactory academic progress. This scholarship is renewable for 3 successive semesters (8 semesters). It can be used in the traditional academic year only.

Application: A completed admissions application serves as your application for this scholarship.

L.V. Eberhard Business Scholarship

Eligibility: Entering freshman majoring in business. Must have a 3.5 GPA and a minimum 29 ACT composite score or 1300 SAT for non-Michigan residents.

Amount: \$1,000 per year, renewable for three additional years provided the student maintains a 3.0 GPA after 25 credits, 3.25 GPA after 55 credits, and a 3.5 GPA after 85 credits.

Selection: By the Seidman College of Business.

Application: Contact the Dean's Office, Seidman College of Business.

L.V. Eberhard Graduate Research Assistantship

Eligibility: Full-time, degree-seeking graduate student in the Seidman College of Business. Student must have a 3.5 GPA and a minimum GMAT score of 600.

Amount: \$6,000 per year including tuition.

Selection: By the Seidman College of Business Faculty Committee.

Application: Contact the M.B.A. program director, Seidman College of Business.

Edward L. Tremba Geology Scholarship

Eligibility: For geology majors.

Amount: \$500.

Selection: By Geology Department.

Application: Contact the Geology Department.

Leslie Eitzen Voice Scholarship

Eligibility: Voice majors.

Amount: Varies, nonrenewable.

Selection: By the Department of Music.

Application: Contact the Department of Music.

*These scholarships are only for use in the Fall and Winter semesters for a total of eight consecutive semesters. The Financial Aid Office will review each scholarship recipient at the end of Winter semester for renewability. If a student fails to meet the minimum GPA and/or minimum criteria and only at the beginning of an academic year. Petitions for reinstatement must be done in writing to the Director of Financial Aid.

Costs and Financial Aid

School of Engineering/SAE Engineering Scholarship

Eligibility: Entering freshmen majoring in engineering. Application for admission must be complete by January 15.

Amount: \$1,000. May apply for renewal for the sophomore year.

Selection: By School of Engineering.

Application: Available at www.sae.org or SAE.

FTLC Endowment Scholarship for Minority Students in Education

Eligibility: Racial minority, 3.0 cumulative GPA, and admitted to the Teacher Education or Advanced Studies in Education M.Ed. programs. Preference to full-time students. Financial need also a consideration.

Amount: Varies per semester.

Selection: By the FTLC Endowment Scholarship Committee. Application: Contact the Dean's Office, College of Education. Deadlines are November 1 and March 15.

First Robotics Engineering Scholarship

Eligibility: Entering freshmen in engineering. Must have a cumulative GPA of 3.3 or better, and an ACT composite score of at least 26, and at least 6 units of high school math and science. Must have completed admissions application materials to Grand Valley by February 1.

Amount: \$4,000 per year, renewable for three additional years for a total of \$16,000. To renew, a student must be enrolled in engineering and carry a minimum of 15 credits each semester, maintain a minimum 3.0 GPA at Grand Valley and successfully complete the engineering requirements for each academic year.

Selection: By School of Engineering.

Application: Contact School of Engineering. Application also available online at the Engineering Web site.

Scott Flahive Police Academy Scholarship

Eligibility: Awarded to GVSU Police Academy student. The fund was created in memory of Scott Flahive, a graduate of the GVSU Police Academy who was a Grand Haven police officer shot and killed in the line of duty. Must be enrolled in Policy Academy with a 2.5 or higher cumulative grade point average.

Amount: \$500, contingent upon annual funding. Selection: Director of the School of Criminal Justice, the Director of the Police Academy and one faculty member.

Application: Contact the School of Criminal Justice.

Flanders/University Club Scholarship

Eligibility: Upperclass anthropology or related major.

Amount: Up to \$1,000 per year.

Selection: By University Club Board.

Application: Contact the Anthropology Department. Deadline is March 1.

General Dynamics Land Systems Engineering Scholarship

Eligibility: Entering freshmen, transfer, or upperclass students in engineering. Must be enrolled full-time as pre-engineering or declared engineering major. Must have cumulative GPA of 3.0, an ACT math subscore of 27, an ACT composite score of 25. Must have successfully completed at least six units of high school math and science. Must have completed admissions application materials to Grand Valley by February 1. Must file Free Application for Federal Student Aid (FAFSA). First priority will be given to candidates that have financial need.

Amount: \$1,500. Nonrenewable.

Selection: By Padnos School of Engineering.

Application: Contact Padnos School of Engineering. Application also available online at the Engineering Web site.

Geology Scholarship

Eligibility: Geology major at Grand Valley.

Amount: \$500, renewable based on GPA and recommendation of geology faculty.

Selection: By faculty of Geology Department.

Application: Apply directly to Geology Department.

Charlotte Gierst and Salome Egeler Music Scholarship

Eligibility: Talented band instrumentalists.

Amount: Varies, renewable as determined by Music Department. Requires participation in ensemble.

Selection: By Music Department.

Application: Apply directly to the Music Department.

Richard Giles Scholarship

Eligibility: Graduate or undergraduate seniors in accounting.

Amount: Varies.

Selection: By the Seidman College of Business.

Application: Contact Accounting Department, Seidman College of Business.

Graduate Teacher Certification Scholarship

Eligibility: Must have applied and been accepted to the College of Education to study at the graduate level or already be a graduate level student in the College of Education, must be pursuing initial teacher certification and must maintain full-time status as a graduate student. Must have a cumulative GPA of 3.5 or better in an approved teachable major and/or in the last 60 credits of undergraduate work, must have demonstrated financial need.

Amount: Varies.

Selection: Selected by the College of Education Scholarship Selection Committee in coordination with the Financial Aid Office.

Application: Contact the College of Education.

Grand Forum Scholarship for Continuing Education

Eligibility: 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 State University. Candidates must be returning as undergraduate students, preferably after four years of interrupted college studies. Must have a minimum of 24 prior credits. Must be enrolled as a degree-seeking student with at least 3 credit hours. Must demonstrate financial need as defined by filing the Free Application for Federal Student Aid (FAFSA).

Amount: \$1000

Selection: Financial Aid Office

Application: Financial Aid Office

Grand Rapids Builders Exchange Scholarship

Eligibility: Grand Rapids area full- or part-time students seeking careers in the construction industry. Special application required.

Amount: Up to full tuition at Grand Valley (scholarship not limited to Grand Valley students). Preference to juniors and seniors with 3.0 GPA.

Selection: By Grand Rapids Builders Exchange.

Application: Available at Financial Aid Office. Deadline is June 1.

Grand Rapids Community Foundation Local College Scholarship

Eligibility: Resident of Kent County, 3.0 GPA, financial need, special application required. Preference to juniors and seniors.

Amount: Varies.

Costs and Financial Aid

Selection: Nominees are selected by the Financial Aid Office and are forwarded to the Grand Rapids Community Foundation for final approval.

Application: Applications are available at the Financial Aid Office. Deadline is April 1.

Grand Valley Grant program

Eligibility: Need based grant for students who have an Expected Family Contribution (EFC) of \$2000 or less from the Free Application for Federal Student Aid (FAFSA).

Amount: \$3000.

Renewability 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: A completed admissions application must be received by 12/31 for admission beginning the following fall semester. A complete application consists of an application for admission, transcripts, results of the ACT or SAT test and a \$30 application fee. Grand Valley must be the first college you attend after graduation. This scholarship cannot be combined with the Urban Schools Scholarship or the Early Awareness Scholarship.

Grandville Ambucs Scholarship

Eligibility: Must be admitted to or enrolled in clinical portion of the Physical Therapy program. Must demonstrate a strong academic background and community involvement related to their field.

Amount: \$500.

Selection: A preliminary review of the applications will be done by the Grand Valley State University Financial Aid Office. Final selection will be made by the sponsorship committee of the Grandville Ambucs.

Application: Contact the Financial Aid Office.

Gail and Scott Haebich Nursing

Eligibility: Awarded to undergraduate or graduate students admitted to the Kirkhof College of Nursing. Must be full-time and within their last six semesters of the nursing program. Must have cumulative grade point average of 3.0 or better. Must file the Free Application for Federal Student Aid (FAFSA) and have demonstrated financial need. Renewable for a maximum of six semesters provided funding exists.

Amount: \$1,000

Selection: Kirkhof College of Nursing Scholarship Committee

Application: Contact the Kirkhof College of Nursing

Earl Harper Management Scholarship

Eligibility: African-American student majoring in business management. Minimum of 2.5 GPA after completing 15 credits at Grand Valley.

Amount: Varies

Selection: Minority Advisory Council.

Application: Contact Career Planning and Placement Office.

Joyce Hecht Philanthropy Scholarship

Eligibility: Junior, senior or graduate student pursuing a career plan to eventually promote and develop philanthropy and engage in nonprofit agency fundraising.

Amount: Varies.

Selection: Chaired by Director of the School of Public & Nonprofit Administration.

Application: Contact the School of Public & Nonprofit Administration.

William Hegarty Scholarship

Eligibility: Graduate students who show promise of becoming law enforcement executives.

Amount: \$1,000.

Selection: By School of Criminal Justice.
Application: Contact School of Criminal Justice.

Paul Henry Foundation Congressional Internship Scholarship

Eligibility: Students in the Congressional Intern Program.
Amount: Varies.
Selection: By the Paul Henry Foundation.
Applications: Contact the Political Science Department.

Arthur C. Hills Music Scholarship

Eligibility: Music majors or students involved with musical performance group.
Amount: Varies.
Selection: By music faculty.
Application: Apply directly to the Music Department.

Hispanic Scholarship

Eligibility: For entering freshman of Hispanic or Latino racial/ethnic background. Must meet the grade point average and ACT score to qualify for a Diversity scholarship. Student must complete the Free Application for Federal Student Aid (FAFSA). Must be enrolled full time.
Amount: Varies.
Selection: Financial Aid Office.
Application. Application for admission serves as the scholarship application.

Dr. James D. Hoffman Scholarship

Eligibility: This scholarship is intended to benefit diversity students at Grand Valley State University who are academically and economically disadvantaged. In addition, School Zone Publishing Company employees or children of employees may also receive this scholarship. Diversity candidates must be degree seeking entering freshmen. School Zone Publishing Company employees or children of employees may be entering candidates at any undergraduate or graduate level. Diversity candidates must declare they are persons of color in their response to admission application form questions. Diversity candidates must demonstrate financial need by filing the Free Application for Federal Student Aid (FAFSA) and have a completed application for admission by February 1. The FAFSA serves as the application for diversity candidates.
Amount: Varies.
Selection: Candidates for the diversity scholarship will be selected by the Financial Aid Office.
Application: School Zone Publishing Company employees and/or their children will need to make their status known to the Financial Aid Office for award consideration. Diversity candidates will make application to the Financial Aid Office.

Hilda C. Holder Scholarship for Women in Business

Eligibility: Candidates for this scholarship must be females entering their junior or senior year with a minimum of 55 credit hours or a graduate student. Must be enrolled full time with a declared business major. Must have a 3.0 cumulative grade point average. Demonstration of financial need as defined by filing the Free Application for Federal Student Aid (FAFSA) is required.
Amount: Varies.
Selection: Seidman College of Business
Application: Contact the Seidman College of Business.

Huizenga Biology Education

Eligibility: Awarded to students entering their junior year of study. Must be enrolled as a full-time student with a biology major and seeking secondary teacher certification.

Costs and Financial Aid

Priority will be given to candidates based on a combination of academic merit and financial need. Renewable for a total of four semesters.

Amount: \$1,000

Selection: Biology Department

Application: Contact the Biology Department

William and Lois Hundley Scholarship

Eligibility: Candidates for this scholarship must be entering their junior or senior year. Must be enrolled full time as a degree-seeking student. Must be a member in good standing of the intercollegiate baseball team. Must have a cumulative grade point average of 2.5 or better. Renewable for a total of four semesters.

Amount: \$1000

Selection: Intercollegiate Athletics Department

Application: Contact the Intercollegiate Athletics Department.

Hungerford, Aldrin, Nichols & Carter, P.C. Accounting Scholarship

Eligibility: Junior or senior accounting major.

Amount: \$2,000

Selection: By Hungerford, Aldrin, Nichols & Carter. P.C.

Application: Contact the Seidman College of Business Accounting Department

Investment Club Student Scholarship

Eligibility: For business majors with 3.2 GPA who are members of the Grand Valley Investment Club and have completed at least two finance classes.

Amount: \$500; nonrenewable.

Selection: By an appointed member of the Investment Club and the advisor.

Application: Contact the Finance Department, Seidman College of Business.

Charles H. and Florence Irwin Scholarship Endowment

Eligibility: Must meet the NCAA academic eligibility requirements and be enrolled full-time.

Amount: \$1,000.

Selection: Grand Valley Athletics Department.

Application: Contact the Athletics Department.

Jurries Family Scholarship

Eligibility: Candidates for this scholarship must have earned a minimum of 55 credit hours. Must be enrolled full time with a declared business or write major. The first scholarship will be awarded to a candidate majoring in writing. When this recipient no longer is qualified to receive this scholarship, the next award will be made to a business major. This alternating pattern shall continue thereafter. When a business major is selected, preference will be given to candidates who are pursuing a minor course in Entrepreneurship. Must have a 3.0 cumulative grade point average. Demonstration of financial needs as defined by filing the Free Application for Federal Student Aid (FAFSA) is required. The scholarship is automatically renewed provided the student continues to meet the qualifications. This scholarship is renewable provided the student continues to meet the qualifications.

Amount: Varies.

Selection: Seidman College of Business or the Writing Department, as applicable.

Application: Contact the Seidman College of Business or the Writing Department.

Fred M. Keller Engineering

Eligibility: Awarded to an entering freshman or new transfer with an engineering major. Experience in the field via an internship or other work related experience is preferred. Entering freshmen must have successfully completed at least six units of high school mathematics and science courses. Must be full-time. Must have applied for admission by

December 31 and have declared their ethnic or multiracial person of color status on the application for admission. Must file the Free Application for Federal Student Aid (FAFSA) and have demonstrated financial need.

Amount: \$2,500

Selection: Padnos School of Engineering Scholarship Committee

Application: Contact the Padnos School of Engineering.

Daniel Kemp Alumni Leadership Scholarship

Eligibility: Freshman Award of Distinction qualifications.

Amount: Varies. Renewable for three years. Replaces Award of Distinction dollar amount.

Selection: Grand Valley Alumni Scholarship Committee.

Application: Application for admission serves as scholarship application.*

Kent Medical Foundation Nursing Scholarship

Eligibility: Students from the Kent County area enrolled in the clinical portion of the Nursing program.

Amount: Varies.

Selection: Recommended by the faculty of the Kirkhof College of Nursing and confirmed by Kent Medical Foundation.

Application: Contact the Kirkhof College of Nursing.

Kent Medical Foundation Health Sciences Grant

Eligibility: Graduating senior in Health Sciences going on to post-baccalaureate education.

Amount: \$500.

Selection: Recommended by the Biomedical and Health Sciences Department and confirmed by Kent Medical Foundation.

Application: Contact the Biomedical and Health Sciences Department.

Mullendore Legal Studies and Criminal Justice

Eligibility: Students must have at least 55 credits. Must be enrolled full time as a degree seeking student in either Legal Studies or Criminal Justice. Minimum cumulative grade point average of 3.0 or new transfer students must have 2.75 cumulative from prior college work.

Demonstration of financial need (as defined by filing the Free Application for Federal Student Aid FAFSA) is required. Scholarship may be renewed without reapplication for two additional semesters provided the student continues to meet the qualifications stated above.

Amount: Varies

Selection: Recipients will be chosen by the School of Criminal Justice.

Application: Contact the School of Criminal Justice.

Kirkhof Engineering Scholarship

Eligibility: Entering engineering freshman applying for admission by December 31. Must have a minimum 3.0 high school GPA and a minimum 24 composite ACT with a math score of 26 or better. Must have six units of high school math and science.

Amount: \$1,000 for the first year; up to \$2,000 per year as an upper-class student. Must have 3.0 cumulative GPA to renew. Maximum 8 semesters of scholarship award.

Selection: By faculty committee of the School of Engineering.

Application: Contact the School of Engineering.

*These scholarships are only for use in the Fall and Winter semesters for a total of eight consecutive semesters. The Financial Aid Office will review each scholarship recipient at the end of Winter semester for renewability. If a student fails to meet the minimum GPA and/or minimum criteria and only at the beginning of an academic year. Petitions for reinstatement must be done in writing to the Director of Financial Aid.

Costs and Financial Aid

Don Klein Graduate Scholarship in Accounting

Eligibility: Must be accepted in the Master of Science in Accounting. Must have completed an undergraduate business degree with a minimum of 3.75 GPA; have a minimum of 600 GMAT score; demonstrated leadership, service and involvement in extra-curricular activities; and strong interpersonal and communication skills. Students must enroll full-time and complete the program within 2 academic years. Must have completed admissions application materials to Grand Valley by March 1.

Amount: Full in-state tuition cost of 33 graduate credits.

Selection: By Seidman College of Business.

Application: Contact Seidman College of Business.

Walton Koch Scholarship

Eligibility: Completing a B.S. or B.A. in anthropology or related area, 2.5 overall GPA with a 3.0 in anthropology courses; at least sophomore status. Applications are ordinarily due not later than March 30.

Amount: Varies.

Application: Contact Anthropology Department or the Financial Aid Office.

Albert S. and Ella D. Koeze Art Scholarship

Eligibility: Be entering junior or senior year or beginning graduate-level work. Must be full-time as a Bachelor of Fine Arts or Master of Fine Arts degree student with a 3.0 cumulative GPA and show promise as an artist, based on two letters of recommendation from the Department of Art and Design faculty.

Amount: \$1,000.

Selection: Department of Art and Design.

Application: Complete application and return to Art and Design Department.

Dirk Koning Film and Video Scholarship

Eligibility: Candidates must be upper level Film and Video majors. Transfer students must be accepted in the Film/Video major and have completed a minimum of 15 credits in the major at Grand Valley. Demonstration of financial need not required.

Amount: \$1,000 range. Not automatically renewable, but individuals may re-apply.

Selection: Committee consisting of Film/Video faculty plus community representatives, based on a statement outlining the applicant's interests and concerns in the area of media and social action, plus resume and copy of a recent transcript.

Application: Due 5:00 pm the last Monday in March, for the following academic year. Further information and application form are available on the School of Communications Web site.

Jack J. Korff Seidman College of Business Finance Scholarship

Eligibility: Candidates for this scholarship must be a junior or senior previously having earned 55 credits. Must be accepted and enrolled full time as a BBA degree seeking Seidman College of Business student majoring in finance. Must have cumulative grade point average of 3.0 or better and must be making satisfactory academic progress according to the norms established by Seidman College of Business Finance Department. Demonstration of financial need as defined by filing the Free Application for Federal Student Aid (FAFSA) is required. Renewable for a total of four semesters.

Amount: Varies.

Selection: Finance Department

Application: Contact the Finance Department.

Lynn Kraemer Memorial Scholarship

Eligibility: Entering freshman student in the nursing program with a minimum 3.0 GPA and 22 ACT.

Amount: \$1,000. Renewable with a minimum 3.25 GPA.

Selection: Recipient recommended by the Financial Aid Office in cooperation with College of Nursing. Final approval made by the family of Lynn Kraemer. This scholarship is awarded once every four years.

Application: Free Application for Federal Student Aid (FAFSA).

Lacks Enterprises Scholarship Program

Eligibility: Student planning to pursue a career in engineering, business, or environmental-related industry. High school graduate with a 2.5 GPA and an ACT score of 21 or better. Grand Valley student with 3.0 GPA.

Amount: \$500.

Selection: Recipients will be chosen from students who meet the above criteria, with preference to dependents of employees of Lacks Industries, Inc., and Plastic Plate, Inc.

Application: Contact the Human Resources Office of Lacks Industries or the Grand Valley Financial Aid Office for applications.

Ruth B. Leedy Memorial Scholarship

Eligibility: Award is used to fund an Award for Excellence Scholarship.

Amount: \$500. Renewal criteria follow Award for Excellence Scholarship.

Selection: By Financial Aid Office.

Application: No additional application necessary.

Lesbian Gay Bi-sexual and Transgender Scholarship

Eligibility: Created to provide financial assistance for students who demonstrate positive sensitivity to and involvement in LGBT issue. Preference will be given to LGBT students. May be undergraduate or graduate student. Must be enrolled at least half time with a 2.0 minimum cumulative grade point average. Financial need, as demonstrated by a current completed Free Application for Federal Student Aid (FAFSA), may be considered. Not automatically renewed.

Amount: Varies.

Selection: GVSU LGBT Scholarship Committee.

Application: Applications are due March 1. Applications are available online or in the Financial Aid Office.

Arend D. and Nancy Lubbers University Honors College Scholarship.

Eligibility: Freshman Award of Distinction/Presidential scholarship qualifier. Accepted for enrollment by March 1 in the University Honors College as an entering freshman. Must have 3.8 cumulative high school grade point average and a 32 ACT composite.

Amount: Varies. Renewable for an additional eight semesters.

Selection: Director of the University Honors College and the Grand Valley Scholarship Committee.

Application: Students meeting the eligibility criteria will be invited to the Presidential Scholarship competition.

Dr. Faite R-P Mack/Thomas Jackson Urban Teacher Education Scholarship

Eligibility: Full-time students of African-American descent, seeking initial certification or endorsement in teaching, financial need, high GPA, and admitted to the College of Education. Must be a high school graduate of one of the following districts: Grand Rapids, Kentwood, Benton Harbor, Muskegon, Muskegon Heights, South Haven, Baldwin, or Wyoming.

Amount: Up to \$500.

Selection: By College of Education faculty committee chaired by Dr. Faite R-P Mack.

Application: Contact the Dean's Office, College of Education. March 1 deadline.

Costs and Financial Aid

Mathematics Scholarship

Eligibility: Upperclass mathematics major.

Amount: Varies; not renewable.

Selection: By faculty of the Mathematics Department.

Application: Contact the Mathematics Department.

Corky Meinecke Scholarship

Eligibility: This 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. Therefore the scholarship is open to students majoring in broadcasting, journalism and communications who can demonstrate a desire to work in the sports area. This scholarship is also available to students working for the Grand Valley Sports Information Director and to non-scholarship athletes.

Amount: Varies.

Selection: Alumni Office.

Application: Alumni Office or Sports Information Director.

Metro Detroit Alumni Scholarship

Eligibility: Entering freshmen from Wayne, Oakland, Macomb, Livingston, Washtenaw, or St. Clair County. GPA of 3.5 and an ACT score of 24 or SAT score of 1110. Must have completed admissions application materials to Grand Valley by February 1. Candidates do not need to be a child of a Grand Valley alumnus to apply.

Amount: \$500.

Selection: By Metro Detroit Chapter Scholarship Committee of the Advisory Board. Application Deadline Date: February 1 of each year.

Application: Contact Alumni Relations Office.

Metropolitan Hospital Scholarship

Eligibility: Students admitted into the Kirkhof College of Nursing with 3.5 or above GPA. Must be full-time and member of an identified ethnic minority.

Amount: Varies.

Selection: By Metropolitan Hospital

Application: Contact the Kirkhof College of Nursing.

Michigan Nursing Scholarship

Eligibility: Must be enrolled with a declared major of nursing. Must be a U.S. citizen or permanent U.S. resident. Must have been a resident of the state of Michigan for at least 12 months prior to receiving the scholarship. Must sign the Scholarship Agreement and Promissory Note that he/she will achieve licensure within one year of completion of nursing program and to agree to the specified employment provisions. Failure to do so will result in repayment of the scholarship funds awarded. Financial need will also be a criteria so students must submit the Free Application for Federal Student Aid (FAFSA).

Amount: \$4,000 for full-time, prorated for three quarter and half time enrollment.

Selection: By Financial Aid Office and Kirkhof College of Nursing.

Application: No scholarship application—must file the FAFSA each year.

Paul C. Miller Scholarship

Eligibility: Entering freshman must be a graduate of Sparta High School and demonstrate financial need.

Amount: Up to half tuition for one year.

Selection: Scholarship Committee composed of the Sparta High School guidance counselor and a Grand Valley State University Financial Aid officer.

Application: Apply for admission by February 1 and submit the FAFSA form by March 1.

Milhilesh and Jitendra Mishra Foreign Student and Faculty Scholarship

Eligibility: Full-time Business major with preference to Management or International Business students, 2.5 cumulative GPA.

Amount: \$1,000.

Selection: By the Grand Valley Financial Aid Office.

Application: No additional application is necessary.

Minority Scholarship for Graduate Students

Eligibility: Underrepresented minority students who are interested in graduate business programs.

Amount: Varies, renewable.

Selection: By Seidman College of Business.

Application: Contact the Graduate Office in Seidman College of Business.

Jacob Mol Athletic Scholarship

Eligibility: Must be a degree seeking student in good academic standing on the Grand Valley State varsity basketball team.

Amount: Full Michigan resident tuition. Renewable if student continues to meet the same criteria as stated for initial application.

Selection: By Athletics Department.

Application: Contact Athletics Department.

Rodney Mulder Social Work

Eligibility: Awarded in honor of the former Dean of the School of Social Work, Rodney Mulder, who exemplifies a spirit of generous giving to others. Awarded based on a student's ability to articulate what volunteering and giving to others has meant to them. MSW applicant must have degree seeking status and have completed four core courses or have Advanced Standing. BSW applicants must have degree-seeking status and must be second semester juniors or have senior status. Must have 3.0 cumulative grade point average and submit a one-page essay detailing their volunteer experiences and what it means to them. Must include a letter of recommendation from volunteer supervisor or community member as well as one from the faculty advisor.

Amount: Varies.

Selection: College of Social Work

Application: Contact the College of Social Work.

Glenn A. and Betty Niemeyer History Scholarship

Eligibility: Must be entering junior or senior year as a full-time history major. 3.25 cumulative GPA. Financial need is not required. Transfer candidates must have previously completed at least 12 credits in history at Grand Valley State and have a 3.25 cumulative GPA based on Grand Valley Statework.

Amount: Varies.

Selection: History Department.

Application: Contact the History Department.

Amos Nordman Foundation Scholarship

Eligibility: Students from low-income families with a high academic standing, indicating a strong possibility of successfully completing a college course of study.

Amount: \$500. Preference to students from the Muskegon area.

Selection: By the Financial Aid Office.

Application: Free Application for Federal Student Aid (FAFSA).

Costs and Financial Aid

Barbara H. Padnos Scholarship for Study Abroad

Eligibility: Full-time, degree-seeking students attending a full-year overseas study program.

Students must have a minimum 2.75 cumulative GPA. Preference is given to students in the Arts and Humanities.

Amount: \$5,000–\$15,000 depending on the length and cost of the overseas study program.

Selection: By a committee from the Barbara H. Padnos International Advisory Board.

Applications: Contact the Barbara H. Padnos International Center in Lake Ontario Hall.

Louis Padnos Iron & Metal Co. Employees Scholarship

Eligibility: Sons, daughters, or other dependents of employees of the Louis Padnos Company.

Amount: Up to 75 percent of tuition and fees. Reapply every semester.

Selection: By Padnos Company in cooperation with Grand Valley Financial Aid Office.

Application: Contact Human Resources at Padnos Company.

Padnos School of Engineering/MSPE Engineering Scholarship

Eligibility: Entering Michigan freshmen majoring in engineering with 3.0 GPA based on 4.0 for 10th and 11th grades; ACT composite of 26.

Amount: \$1,500.

Selection: By MSPE.

Application: Applications are due to the local MSPE chapter scholarship chair by the 2nd Monday in January. Available from MSPE or www.michiganspe.org.

Seymour and Esther Padnos Engineering

Eligibility: Entering engineering freshman with interest in environmental issues, applying for admission by December 31. Must have cumulative GPA of 3.0 or better, ACT math sub-score of 27 or better, ACT composite of 25 or better. Must have six units of high school math science. Must have submitted the Free Application for Federal Student Aid (FAFSA).

Amount: \$2,500. Renewable for an additional 3 years.

Selection: By faculty committee of the School of Engineering.

Application: Contact the School of Engineering.

Eugene and Lillian Pawl Scholarship

Eligibility: This scholarship benefits nursing and pre-medical students who are the first in their families to attend college. The parent heading this family will have no earned undergraduate degree in higher education. Scholarship awards will be made beginning at the junior level with a minimum of 55 credit hours. Must be enrolled full time. Pre-medical candidates must demonstrate and express intention of entering an allopathic or osteopathic medical school upon graduation from GVSU. Candidates must have completed ALL prior undergraduate education at GVSU (advance placement and incidental transferable credits from summer courses excepted). The scholarship may be received for a maximum of four semesters. It will be renewed automatically provided the recipient continues to meet the application qualifications. Must demonstrate financial need as defined by government programs by filing the Free Application for Federal Student aid (FAFSA). This scholarship may not be renewed.

Amount: Varies.

Selection: Nursing recipients will be chosen by the Kirkhof College of Nursing/Premedical recipient will be chosen by a committee consisting of one representative from each of the Biomedical Sciences, Biology, and Chemistry departments and the Pre-Professional program advisor.

Application: Contact the Kirkhof College of Nursing and the Pre-Professional program advisor.

Peace and Justice Award

Eligibility: Students who are exemplary in their involvement with peace and justice issues and organizations.

Amount: Varies.

Selection: By Director of Advising Resource Center.

Application: Available in the Advising Resource Center. Deadline is March 15.

Ross W. Perry Bachelor of Science/Doctor of Physical Therapy Major Scholarship

Eligibility: Candidates must be full time graduate students who will be entering their third semester of the first year of the three year Doctor of Physical Therapy curriculum. Minimum 3.5 cumulative GPA and financial need. Must have submitted the Free Application for Federal Student Aid (FAFSA).

Amount: Varies. Renewable for a total of six semesters.

Selection: Physical Therapy Department.

Application: Contact the Physical Therapy Department.

Ross W. Perry Bachelor of Science/Core Sciences Major Scholarship

Eligibility: Full-time student entering their junior year, seeking Bachelor of Science degree in core sciences, geology, chemistry, mathematics, physics with 3.5 cumulative GPA and financial need. Must have submitted the Free Application for Federal Student Aid (FAFSA).

Amount: Varies. Renewable for one additional year.

Selection: Grand Valley Financial Aid Office.

Application: No additional application is necessary.

Plant Services Personnel Scholarship

Eligibility: Dependents of Grand Valley Plant Service personnel.

Amount: Varies.

Selection: Plant Services Scholarship Committee.

Application: Contact Plant Services. Deadline is April 1.

Polish Heritage Scholarship

Eligibility: Full-time students of Polish descent from West Michigan; minimum 2.75 GPA.

Amount: Up to \$500.

Selection: Polish Heritage Society.

Application: Contact the Financial Aid Office. Application deadline is March 15.

Positive Black Women Scholarship

Eligibility: African American women.

Amount: Varies.

Selection: Positive Black Women Scholarship Committee.

Application: Contact the Counseling Center. Application deadline March 1.

Pratt Nontraditional Nursing Scholarship

Eligibility: Accepted to Kirkhof College of Nursing including all prerequisites to be completed or in the process of completion. Must be full time and have a cumulative 3.0 GPA or better for all undergraduate coursework. Must hold an earned BA/BS degree other than a nursing degree from an accredited institution. Must complete and submit to the Kirkhof College of Nursing an essay. Demonstrated financial need is required. Students must annually file the Free Application for Federal Student Aid (FAFSA).

Amount: Varies.

Selection: Kirkhof College of Nursing in coordination with the Financial Aid Office.

Application: Contact the Kirkhof College of Nursing. Deadlines are Oct 1, March 1, and May 1.

Berthold Price Endowment Scholarship

Eligibility: Student who has completed at least 15 Grand Valley credits with a 2.75 GPA. Students must write an essay demonstrating their knowledge of their ethnic minority experience.

Costs and Financial Aid

Amount: Varies, up to \$1,000.

Selection: The Bert Price Endowment Selection Subcommittee.

Application: Contact the Financial Aid Office or Career Planning and Placement Office.
Deadline is March 1.

Price Heneveld Engineering Scholarship

Eligibility: Incoming freshman or transfer student entering Padnos School of Engineering. Must be admitted prior to December 31, must have a minimum admission GPA of 3.0 and an ACT math subscore of at least 27 and an ACT composite score of 25. Must have at least 6 units of high school math and science. Transfer students must have graduated from an accredited community or junior college by the time they enter the program and must matriculate directly to Grand Valley State University. Extra consideration will be given to applicants with financial need.

Amount: \$500. May be renewed for one additional year.

Selection: School of Engineering Scholarship committee.

Application: School of Engineering Scholarship.

Esther Rehm Stotz Nursing Scholarship

Eligibility: Entering freshman students intending to enter the nursing profession. Students must have a 3.5 GPA and a minimum 27 ACT composite score.

Amount: \$750 per year renewable for three additional years provided the student maintains a minimum 3.25 GPA and satisfactory academic progress.

Selection: By the faculty of the Kirkhof College of Nursing.

Application: Apply for admission by March 1, declaring nursing as intended major.

Joe E. Reid Scholarship

Eligibility: Students enrolled in the special education program of the College of Education.

Amount: \$500.

Selection: By the College of Education Faculty Committee.

Application: Contact the Dean's Office, College of Education.

Reister Family Memorial Scholarship

Eligibility: Preference given to descendants of George Jakob Reister and Julianna Knodel Reister. Must file the Free Application for Federal Student Aid (FAFSA).

Amount: Varies.

Selection: By the Reister Family Scholarship Committee.

Application: Contact the Financial Aid Office. Application deadline is May 1.

Renaissance Church of God in Christ African American Academic Achievement Scholarship

Eligibility: This scholarship is to assist and encourage African American students in their pursuit of higher education. Candidates must be transferring from any community college with an earned Associates degree. Demonstration of financial need as defined by filing the Free Application for Federal Student Aid (FAFSA) is required. This scholarship is non renewable and recipients may not reapply.

Amount: \$1000

Selection: Office of Multicultural Affairs

Application: Contact the Office of Multicultural Affairs.

J. Patrick Sandro Education Scholarship

Eligibility: Undergraduate student who is entering junior year and admitted to the College of Education. Must be full-time and intending to teach at the elementary, middle school, or high school level. Must have financial need as demonstrated by filing the Free Application for Federal Student Aid (FAFSA).

Amount: Varies. Renewable for a total of six semesters.

Selection: By the College of Education.

Application: Contact the College of Education.

Ilene I. Schooley Biomedical Science Scholarship

Eligibility: This scholarship is intended for students majoring in Biomedical and Health Sciences who demonstrate an interest in pursuing post-graduate work in health related research. Candidates will have demonstrated such interest by previous involvement in one or more qualifying research projects within the Biomedical and Health Sciences area. Candidates for this scholarship must be entering their junior year or have completed 55 credit hours. Must be enrolled full time as a degree seeking student. Candidates must demonstrate financial need as defined by government programs by annually filing the Free Application for Federal Student Aid (FAFSA). Renewable for a maximum of six semesters.

Amount: Varies

Selection: Biomedical and Health Science Department

Application: Contact the Biomedical and Health Sciences Department.

Mary and Wilhelm Seeger Scholarship

Eligibility: Entering freshman student with background in foreign language who intends to major in a foreign language or use a foreign language in his or her chosen career.

Amount: \$1,000.

Selection: Scholarship Committee of College of Liberal Arts and Sciences.

Application: Contact the Modern Languages and Literatures Department.

Thomas Seykora Alumni Leadership Scholarship

Eligibility: Freshman Award of Distinction Scholarship applicant.

Amount: Varies. Renewable for three years. Replaces Award of Distinction dollar amount.

Selection: Grand Valley Alumni Scholarship Committee.

Application: Application for admission serves as scholarship application.*

Shakespeare Scholarship

Eligibility: For entering freshmen majoring in theatre arts.

Amount: \$1,250.

Selection: By Theatre Department faculty committee.

Application: Contact the School of Communications Theatre Department. Deadline is October 1.

Elizabeth K. Sherwood Memorial Scholarship

Eligibility: Award is used to fund an Award for Excellence Scholarship.

Amount: \$500. Renewal criteria follow Award for Excellence Scholarship.

Selection: By Financial Aid Office.

Application: No additional application necessary.

Marilyn and Budge Sherwood Scholarship

Eligibility: Female M.B.A. candidates.

Amount: \$500.

*These scholarships are only for use in the Fall and Winter semesters for a total of eight consecutive semesters. The Financial Aid Office will review each scholarship recipient at the end of Winter semester for renewability. If a student fails to meet the minimum GPA and/or minimum credit completion the scholarship will be cancelled for the following academic year. A student can petition for reinstatement once they again meet the minimum criteria and only at the beginning of an academic year. Petitions for reinstatement must be done in writing to the Director of Financial Aid.

Costs and Financial Aid

Selection: By the Seidman College of Business.

Application: Contact the M.B.A. program director, Seidman College of Business.

Ryan Short Memorial Scholarship

Eligibility: For students in the Master of Social Work program pursuing a career in drug and alcohol rehabilitation and education. Minimum 3.2 GPA.

Amount: Varies.

Selection: By the School of Social Work. Final selection by the family of Ryan Short.

Application: Contact the Dean of the School of Social Work. Deadline is April 1.

Ram Singh Social Work Scholarship

Eligibility: Candidates must be entering their junior undergraduate year or beginning graduate level work in Social Work. Must be enrolled full time and have a cumulative grade point of 3.0 or better. No demonstration of financial need is required.

Amount: Varies.

Selection: Social Work Department

Application: Contact the Social Work Department

Nedra J. Smith Otis Art Scholarship

Eligibility: Must be a junior, senior or graduate student working on BFA or MFA. Student must be full time with a 3.0 cumulative GPA. Must complete required review by department and have completed all core art courses. Must show promise as an artist.

Amount: Varies.

Selection: By Art & Design Department.

Application: Contact Art & Design Department. Application includes two letters of recommendation.

School of Social Work Scholarship

Eligibility: Must be degree seeking and have completed four core social work courses or have advanced standing. Must provide financial aid information as the award is based on need. Must have 3.3 cumulative grade point average. Applicant must get a letter of recommendation from the Academic Advisor. Applicant must submit a one page essay detailing how the Scholarship will assist.

Amount: Varies.

Selection: College of Social Work.

Application: Contact the College of Social Work.

Social Work Minority Scholarship

Eligibility: Awarded based on minority status as defined by being a person of color. MSW applicants must have degree-seeking status and have completed four core social work courses or have Advanced Standing. BSW applicants must have degree-seeking status and be a second semester junior or have senior status. Applications must have a 3.0 cumulative grade point average. Must be Black/Non-Hispanic, Hispanic, Asian/Pacific Islander or Native American. Applicants must submit a one page essay detailing their commitment to advocating for social justice of minority populations in their community. Must include a letter of recommendation from a community member who can speak to the student's commitment in this area as well as a letter of recommendation from the faculty advisor.

Amount: Varies.

Selection: College of Social Work.

Application: Contact the College of Social Work.

Spectrum Health Diversity Scholarship

Eligibility: Candidates must be African American, Hispanic, Native American, Asian or Pacific Islander and have resided during the past three years in one of the following counties:

Emmet, Charlevoix, Antrim, Kalkaska, Missaukee, Clare, Isabella, Montcalm, Ionia, Eaton, Calhoun or Branch. Candidates must be accepted by Grand Valley State University for enrollment at undergraduate or graduate level and must be admitted to one of the programs offered by the Kirkhof College of Nursing or the College of Health Professions. Need is a factor so candidates must file the Free Application for Federal Student Aid (FAFSA).

Amount: Varies. Awarded for the final five semesters of recipients' specific program.

Selection: Office of Multicultural Affairs

Application: Office of Multicultural Affairs.

SPX Corporation Engineering Scholarship

Eligibility: Students transferring from community colleges who intend to pursue engineering.

Preference is given to students drawn from communities with SPX corporate involvement. Students must have a total cumulative 3.0 or better GPA, matriculate directly to Grand Valley, and apply for admission by December 31.

Amount: Up to \$2,000 per year. Renewable.

Selection: By faculty committee of the School of Engineering.

Application: Contact the School of Engineering.

Statistics Scholarship

Eligibility: Upperclass statistics major.

Amount: Varies; not renewable.

Selection: By faculty of the Statistics Department.

Application: Contact the Statistics Department.

Steelcase Scholarship

Eligibility: Preference given to children of Steelcase employees. Must be a full-time student, demonstrate financial need, 2.5 GPA.

Amount: Up to \$500 per year, renewable.

Selection: By Financial Aid Office.

Application: Steelcase scholarship applications are available from the Financial Aid Office or Steelcase Human Resources. Submission of the Free Application for Federal Student Aid (FAFSA) is also required. Deadline is March 1 each year.

Steelcase Inc. Seidman College of Business Diversity Scholarship

Eligibility: Created to support undergraduate persons of color in their pursuit of a business degree, beginning in their junior year. Recipients must be enrolled full-time and have 2.75 cumulative gpa or better. May be renewable for up to a total of four semesters. Financial need as demonstrated by filing the Free Application for Federal Student Aid (FAFSA) is required.

Amount: Varies.

Selection: Seidman College of Business.

Application: Deadline is February 1. Applications are available online, in Seidman Undergraduate Advising Office, Multicultural Affairs Office or Financial Aid.

Howard and Rose Stein Biology

Eligibility: Open to students entering their junior undergraduate year. Must be enrolled full-time as a Biology, Natural Resources Management, or Cell and Molecular Biology degree-seeking student. Cumulative grade point average of 3.2 or better. Renewable for one year provided the student maintains satisfactory academic progress and required enrollment level.

Amount: Varies.

Selection: Biology Department.

Application: Contact the Biology Department.

Costs and Financial Aid

Subar Family-Model Coverall Service Scholarship

Eligibility: Must be degree seeking undergraduate or graduate student. Entering freshmen or transfer students must have high school or college cumulative GPA of 3.1 and an ACT composite of 20. Candidates must declare their minority status on the admission application. Multiracial candidates may also qualify. Model Coverall Service employees who have been with the company for a minimum of 3 years, or dependent children of such persons will be given preference. Must demonstrate financial need by filing the Fee Application for Federal Student Aid (FAFSA).

Amount: Varies but not to exceed \$750 per academic year.

Selection: By the Financial Aid Office. Application deadline is March 1 for the following fall semester.

Application: Financial Aid Office.

Sullivan Scholarship Trust Fund

Eligibility: Entering freshman from metropolitan Grand Rapids area. Participant in athletics during senior year of high school.

Amount: \$1,000, nonrenewable.

Selection: By the Athletic Department.

Application: Contact the Director of Intercollegiate Athletics.

Steele A. and Mary D. Taylor Minority Scholarship

Eligibility: Must have graduated from Grand Rapids Public Schools or have earned an associate degree from Grand Rapids Community College. Entering freshmen candidates must have a 3.1 high school cumulative GPA and a 20 ACT composite. Community College transfers must have a 3.0 collegiate GPA. Must have ethnic minority status declared on the admission application. Multiracial candidates may also qualify. Must demonstrate financial need by filing the Free Application for Federal Student Aid (FAFSA). Must be living on Allendale campus for one year as a residential, non-commuting student.

Amount: \$1,500. Not currently renewable.

Selection: By the Financial Aid Office.

Application: Contact the Financial Aid Office. Application deadline is March 1.

TEI Accounting/Tax Scholarship

Eligibility: Undergraduate accounting majors with an interest in tax.

Amount: up to \$1,000.

Selection: By Seidman College of Business.

Application: Contact the Seidman College of Business Accounting Department.

Telephone Pioneers Scholarship

Eligibility: Upperclass or graduate students in teacher education or advanced studies in education.

Amount: Varies.

Selection: By College of Education faculty committee.

Application: Contact the Dean's Office, College of Education. Deadline is March 1.

Alice C. TenBrink Scholarship

Eligibility: Award is used to fund an Award for Excellence Scholarship.

Amount: \$500. Renewal criteria follow Award for Excellence Scholarship.

Selection: By Financial Aid Office.

Application: No additional application necessary.

Topcraft Metal Products, Inc. Scholarship

Eligibility: Topcraft will partner with Grand Valley State University by awarding scholarships to engineering students who want to apply their ideas in a manufacturing environment.

Candidates must be completing their freshman year and have an affiliation with Topcraft Metal Products, Inc. while receiving this scholarship. Must be enrolled full-time as a degree seeking students with a 3.0 cumulative gpa or better. Financial need may be considered so candidates must file the Free Application for Federal Student Aid FAFSA).

Amount: Up to \$5,000.

Selection: Topcraft Metal.

Application: Contact Topcraft Metal.

TV 35/52 Auction Grant

Eligibility: Highest bidder during the annual Channel 35/52 auction.

Amount: Full tuition and fees for 30 credit hours (in-state, undergraduate).

Selection: Automatic to highest bidder.

Application: None.

UFCW Local 951 Foundation Scholarship

Eligibility: May be any grade level, undergraduate or graduate. Must be full-time or half time.

Must have a minimum 2.0 cumulative GPA. Must be an active member or dependent of an active member of UFCW Local 951 with at least one year of union membership.

Amount: Varies.

Selection: By the Financial Aid Office.

Application: Contact UFCW Local 951. The application includes an essay.

Urban Schools Scholarship

Eligibility: This scholarship is specifically for students graduating from the following high schools: Michigan high schools: *Arthur Hill, Cass Tech, Communication Media Art, Crockett Tech, Detroit High School of Fine and Performing Arts, Detroit Northwestern, John Pershing, Martin Luther King, Pontiac Central, Pontiac North, Renaissance High, Southfield Lathrup, Southfield Lathrup, Southfield Senior High, Western International* Non-Michigan high schools: *Chicago High School Agricultural, Curie, Gwendolyn Brooks, Hillcrest, Hyde Park Academy, John Hope College Preparatory, Lane Tech, Percy Julian, Provos East, Provos West, Thornridge.*

In addition to graduating from one of the above high schools, students must also meet minimum grade point and standardized test scores. Michigan residents must have a 3.3 cumulative grade point average and a 21 ACT composition score. Non-Michigan residents must also have a 3.3 cumulative grade point average and score a 960 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.

Amount: \$3000.

Renewability criteria: Students must be enrolled full time, achieve a minimum 2.85 cumulative grade point average and maintain satisfactory academic progress. This scholarship is renewable for 3 successive years (8 semesters). This scholarship can only be used in the tradition.

Donald and Barbara VanderJagt Mathematics and Athletics Scholarship

Eligibility: Sophomore (or later) undergraduate with an overall 2.5 GPA. Must be full-time with a declared mathematics major and continuously taking at least one mathematics course leading to a mathematics major. Must participate in and be a member of at least one intercollegiate athletic team or one club sport at Grand Valley State. Must be making satisfactory academic program according to the norms established by Grand Valley and the NCAA. Financial need may be considered as shown by completing the Free Application for Federal Student Aid FAFSA).

Costs and Financial Aid

Amount: \$1,000

Selection: Dr. Donald VanderJagt and Mrs. Barbara VanderJagt or their designate in collaboration with the Financial Aid Office.

Application: Mathematics Department, Office of the Athletic Director or Financial Aid Office.

Kathleen B. Vogelsang Seidman College of Business Scholarship for Women

Eligibility: Candidates for this scholarship will be female “non-traditional” students who for whatever reason did not begin undergraduate education immediately following high school graduation. Must have prior employment experience. May be undergraduate or graduate student but undergraduate students will have preference. Must be enrolled full time with a declared business major. Must have 3.0 cumulative grade point average. Demonstration of financial need as defined by filing the Free Application for Financial Aid (FAFSA) is not required but financial need may be considered. The scholarship is automatically renewed for a maximum of six semesters provided the student continues to meet the qualifications.

Amount: Varies.

Selection: Seidman College of Business.

Application: Contact the Seidman College of Business.

Volkhardt Family Nursing Scholarship.

Eligibility: Nursing candidates must be entering their junior undergraduate year as a degree seeking student. Financial need as defined by government programs is required and demonstrated by completing the Free Application for Federal Student Aid (FAFSA).

Amount: Varies.

Selection: Kirkhof College of Nursing.

Application: Kirkhof College of Nursing or the Financial Aid Office.

Volkhardt Family Physical Therapy Scholarship.

Eligibility: Physical Therapy candidates must be entering their first year of graduate study as a degree seeking student. Financial need as defined by government programs is required and demonstrated by completing the Free Application for Federal Student Aid (FAFSA).

Amount: Varies.

Selection: Physical Therapy Department.

Application: Physical Therapy Department or the Financial Aid Office.

Florence Cowan Ward Scholarship for Nursing

Eligibility: Junior, senior, or graduate nursing student with a 3.0 GPA or higher, financial need, and taking a portion of the clinical study at Spectrum Health.

Amount: \$1,000; renewable for one year.

Application: Contact the Kirkhof College of Nursing or the Financial Aid Office. Deadlines are Oct 1, March 1 and May 1.

Margaret F. Ward Art and Design Scholarship

Eligibility: Entering junior or senior year or beginning graduate work, full-time status as a Bachelor of Art Education degree student, cumulative GPA of 3.0 or better, financial need, showing professional promise as a future educator.

Amount: Varies.

Selection: Department of Art and Design.

Application: Contact the Department of Art and Design.

Margaret F. Ward Music Scholarship

Eligibility: Entering junior or senior year or beginning graduate work, full-time status as a Bachelor of Music Education degree student, completion of mid-program review by Department of Music, completion of all core music courses, cumulative GPA of 3.0 or better, showing professional promise as a future educator.

Amount: Varies.

Selection: Department of Music Financial Aid Office.

Application: Contact the Department of Music.

Dr. Ronald Ward Scholarship

Eligibility: Must be entering freshman year. Must show aptitude in engineering or in the sciences and intend to major, concentrate or specialize in one of those fields. Must have a 3.5 high school cumulative GPA, an ACT composite score of at least 26 or SAT score of at least 1,150. Must have familial residence in Indiana. First priority will be given to those in the greater Indianapolis, Indiana metropolitan area (Marion and contiguous counties).

Amount: \$5,000.

Selection: College of Liberal Arts and Sciences Scholarship Committee.

Application: Deans Office College of Liberal Arts and Sciences.

WGVU-TV Scholarship

Eligibility: Any outstanding student employee of WGVU/WGVK-TV.

Amount: Full tuition, one year.

Selection: By a scholarship panel assembled by the TV station.

Application: Contact WGVU-TV 35 and WGVK-TV 52.

Shawn D. Wiersma Criminal Justice Memorial Scholarship

Eligibility: Candidates for this scholarship must meet the following criteria: must be entering their senior year having earned 85 or more credit hours, must be enrolled full time as a Criminal Justice major and planning to enter the police or law profession. Demonstration of financial need as defined by filing the Free Application for Federal Student Aid (FAFSA) is not required, however, financial need may be considered during selection.

Amount: \$1000

Selection: Criminal Justice.

Application: Contact the School of Criminal Justice.

Bill and Diana Wipperfurth Annis Water Resources Institute Student Research Scholarship

Eligibility: Candidates for this scholarship must meet the following criteria: must have a minimum of 55 earned credits; must be enrolled full time as a degree seeking student; must have 2.75 or higher cumulative grade point average. Demonstration of financial need as defined by filing the Free Application for Federal Student Aid (FAFSA) is not required, however an indication and explanation of financial need is on the application and may be considered during the selection.

Amount: \$1500

Selection: AWARI Director and faculty.

Application: Contact the Annis Water Resources Institute.

Wisner Physical Therapy

Eligibility: For students pursuing a career in physical therapy. Candidates must be enrolled full-time into the Doctor of Physical Therapy program. Must have a 3.5 or higher cumulative grade point average. Financial need as demonstrated by completing the Free Application for Federal Student Aid (FAFSA) is a requirement.

Amount: Varies.

Selection: Physical Therapy Department.

Application: Contact the Physical Therapy Department.

Women's Scholarship

Eligibility: Nontraditional, full-time or part-time women.

Amount: Three credit hours of Michigan resident undergraduate or graduate tuition (not including fees).

Costs and Financial Aid

Selection: GVSU Women's Scholarship Committee.

Application: Contact The Women's Center or Financial Aid Office.

Doug and Linda Woods Excellence in Athletic Training Scholarship

Eligibility: Full-time undergraduate students with a 3.0 cumulative GPA or higher, junior standing, and admitted into the athletic training curriculum.

Amount: \$1,000.

Selection: Panel of Grand Valley Athletic Training Alumni.

Application: Contact the Athletic Training Office.

Jennifer Youssef Journalism

Eligibility. For students pursuing a career imprint or broadcast journalism. Candidates must include an internship at a news establishment (newspaper, radio or TV station) as part of their course work. Must also contribute to production of the Grand Valley *Lantern and www.Lantern.com*. Applicants must be entering the junior undergraduate year or beginning graduate work. Demonstrated financial need is not a requirement.

Amount: Varies.

Selection: School of Communication Application: Contact the School of Communication.

Lt. William Zimmerman

Eligibility: This scholarship was established in memory of Lt. William A. Zimmerman USMC, a graduate of Grand Valley State University who died in the service of his country at Beirut, Lebanon in October 1983. The scholarship provides financial aid for Grand Valley students who serve in any branch of the U.S. armed forces, active or reserve, and for any who are honorably discharged veterans. Candidates must be either a veteran or in the reserves. Proof of honorable discharge papers in the case of veterans, or a letter of good standing from their commanding officer in the case of reservists, is required. Candidates must be full time and have at least a 2.0 cumulative grade point average. Financial need as demonstrated by filing the Free Application for Federal Student Aid (FAFSA) is required.

Amount: Varies

Selection: The Financial Aid Office

Application: Contact the Financial Aid Office.

Felix V. and Gladys A. Zukaitis Scholarship Trust Fund

Eligibility: Award is used to fund an Award for Excellence Scholarship.

Amount: \$1,000.

Selection: Students will be selected from those qualifying for Award for Excellence Scholarships.

Application: Applications for admission must be received by February 1 of the student's senior year in high school. Must submit the FAFSA form by March 1.

Felix V. and Gladys A. Zukaitis Athletic Scholarship Trust

Eligibility: Must be a member of a Grand Valley intercollegiate athletic team, have a minimum 2.0 GPA, and have financial need.

Amount: \$1,000.

Selection: Students will be selected by the Athletic Department in consultation with the Financial Aid Office.

Application: Must be admitted to Grand Valley, be accepted as a member of an intercollegiate varsity athletic team, and submit the FAFSA form to the appropriate agency.

Student Employment

The Student Employment office has a Web site 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.

Educational Loans

Private 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 Web site www.gvsu.edu/financialaid for more information.

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 1% 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. Our federal school code is 002268.

Federal Direct Parent Loan for Undergraduate Students (PLUS): Parents of dependent students may borrow funds under the Parent Loan Program as authorized by the Education Amendments of 1986. 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%. Applications for this loan may be obtained from the Grand Valley Financial Aid office. Funds are made available through the Federal Direct Plus Loan Program. Grand Valley, *not local banks*, will originate these loans for parents.

Programs Based On Need

Grants and Scholarships

The programs listed below are considered “gift” assistance and do not require repayment.

1. **Grand Valley University Freshman Grants.** These awards of up to \$2,000 are based on financial need and availability of funds. To apply, you must complete the FAFSA. These grants are awarded to freshman students and are not renewable.
2. **Michigan Competitive Scholarships.** 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.

Costs and Financial Aid

If you are a high school student, you should ask your counselor for further information about taking the ACT before the end of your senior year.

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.

- 3. Federal Pell Grants.** This program is the main source of need-based federal financial aid grant funds. To apply for a Pell Grant, you must submit the FAFSA and indicate on this form that you wish Grand Valley State University to receive your application. 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.
- 4. Federal Supplemental Educational Opportunity Grants (SEOG).** These federal grants, ranging from \$100 to \$1,000, are awarded to full-time students of *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 generally given to students who qualify for the Pell Grant Program.
- 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.
- 6. University Grants-in-Aid.** You may be eligible for a University Grant-in-Aid if you are from an extremely economically disadvantaged background and if your other loans, grants, or student employment are insufficient to meet your needs as determined by the Grand Valley Financial Aid office. Only a limited number of these grants are available.
- 7. 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.
- 8. Academic Competitiveness Grants (ACG)/National Science and Mathematics Access to Retain Talent (SMART):** ACG and SMART Grants are new federal grant programs authorized by Congress starting in 2006–2007 academic year. Students must have filed a FAFSA and shown need by qualifying for the Federal Pell grant. Additional criteria and award amounts are listed at www.gvsu.edu/financialaid under “ACG & SMART Grants.”

Educational Loans

- 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. 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).

- 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 6.8% and there are four repayment options. 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.
- 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.
- Harriet D. Dively Loan Fund.** A limited number of institutional long-term loans are available for students with unusual situations of documented financial need. Loans are granted for up to \$1,000 per year at 6 percent interest, with repayment after students terminate their education. Students must apply for regular financial aid using the FAFSA and see a Financial Aid counselor for additional information. Preference is given to upper class students.
- Leon W. Hall Loan Fund.** Limited institutional loan funds are available for students who do not qualify for other federal and institutional loans but who still demonstrate need. Loans are made at 6 percent interest up to \$1,000 per year, with repayment after students terminate their education. Preference is given to upper class students. Students must complete the FAFSA.
- Grand Valley Short-Term Loans.** For a small service fee, short-term loans 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.
- Grand Valley Deferment Plan.** Tuition loans allow students to pay their tuition loans in 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 at the Financial Aid Office.
- 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 sent with the initial tuition billing each semester and are also available in the Financial Aid Office. Contact the Student Accounts Office for more information.

Enrollment Requirements for Disbursement of Aid

Enrollment requirements for funds to pay on your bill

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 Merit Award
- 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 for undergraduate, 4.5 or more for graduate):

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

The following funds will be prorated based on your enrollment:

- State Competitive Scholarship
Prorated for three-quarter time enrollment of 9–11 credits
Prorated for half-time of 6–8 enrollment credits
- Federal Pell 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:

- Academic Competitiveness Grant
- Federal Carl Perkins Loan
- Federal Nursing Loan
- Federal Supplemental Opportunity Grant
- Grand Valley Grants
- Grand Valley Scholarships
- SMART Grant
- Some private scholarships

Student Employment

1. **Federal College Work-Study Program.** Most campus jobs are funded under this program. Preference is given to students who have the greatest financial need, who meet the satisfactory academic progress requirements of Grand Valley, and who are enrolled for a full program of courses. Students usually work an average of 10 to 15 hours a week. Employment is not guaranteed.
2. **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 follow those for the Federal College Work Study Program.

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.

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.

Veterans Administration Benefits Federal Public Laws 634 and 88-361 provide educational allowances 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. Scholarship information on the Internet is available at sites such as www.fastweb.com, www.brokescholar.com, and www.srnexpress.com. 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.

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 a portion of the loan or grant funds that were 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 is not 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 will 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 the amount of the unearned federal student aid based on the above determination. Any*

Costs and Financial Aid

refund due the student under Grand Valley's tuition refund policy will be deducted from the amount owed.

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

Definitions

1. Title IV programs include Federal Perkins Loans, Federal Supplemental Educational Opportunity Grant, Federal College Work-Study, Federal Pell Grant Program, and Federal Direct Loan Program. Repayments are not required for College Work-Study.
2. Unofficial withdrawal-students who drop out but do not officially go through withdrawal procedures. 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.*
3. Cash disbursement-the actual amount of financial aid received by the student minus actual institutional charges for tuition and room and board.

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 67% 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

- Maintain a 3.0 cumulative GVSU GPA.
- Complete and pass a minimum of 67% 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

- Maintain a 2.0 cumulative GVSU GPA.
- Complete and pass a minimum of 67% of all collegiate undergraduate attempted hours.
- Complete all additional requirements with 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

- Maintain a 2.0 cumulative GVSU GPA.

- Complete and pass a minimum of 67% 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 67% 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.
- Student 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, I, NC, or F 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 Grand Valley catalog for “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.

Costs and Financial Aid

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 will 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 satisfactory academic progress toward your degree according to the policy of Grand Valley State University (see Academic Progress section).
6. You have not defaulted on any previous Title IV loan, do not owe a refund or repayment to any institution on any Title IV program (Pell Grant, Supplemental Educational Opportunity Grant, Perkins Loan, Work-Study, Federal Direct Loans, and Michigan Competitive Scholarships funded under Title IV), and have not borrowed in excess of any loan limits from any 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 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. 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.
9. 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.
10. You will be required to complete entrance counseling and a Master Promissory Note (MPN) prior to disbursement of your first Direct Loan at Grand Valley. This gives you information about your rights and responsibilities as a borrower. You will be required to complete exit counseling during the semester prior to your graduation or following an enrollment period of less than half-time.
11. You agree that financial aid awarded to you may be used as a credit toward payment of all tuition, fees, room and board, and all other charges that may be due or past due on your student account.

Academic Policies and Regulations

Unit of Credit

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

Coursework is evaluated as follows:

Grade	QualityPoints	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.

Graduate credit 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

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 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

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, or NC do not replace an earlier grade. Students must notify the registrar of their intention by filing the appropriate form during the semester in which they repeat the class. Because several departments have changed course numbers, students and their faculty advisors should determine the current course equivalent to the course taken previously.

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.

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 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 eighth

week. (After the first week of the current semester, students may not use the online system to withdraw.)

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 withdraw 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 for the professor or department chair to the Senior Director of Advising Resources and Special Programs. 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 and have it signed by the Senior Director of Advising Resources, the Director of Housing, and the Director of Financial Aid, if applicable. 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.

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 a 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.

Academic Policies and Regulations

3. Reserved Graduate Course Numbers

- a. The numbers 680 and 780 are to be used for graduate special topics courses.
- b. The numbers 690 and 790 are to be used for graduate research preparation courses.
- c. The numbers 693 and 793 are to be used for graduate project courses.
- d. The numbers 695 and 795 are to be used for graduate thesis/dissertation courses.
- e. The numbers 699 and 799 are to be used for graduate independent study courses.

Grade Reports — 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.

Grade Reports — 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 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.

Access to Records

Students at Grand Valley have access to official records and data pertaining to themselves and the right to deny access to those records to others as set forth in Section 438 of the Family Educational Rights and Privacy Act of 1974, as amended. A copy of the Privacy Act appears in the *Student Code*.

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:

1. No student shall knowingly, without authorization, procure, provide, or accept any materials which contain questions or answers to any examination or assignment.
2. No student shall, without authorization, complete, in part or in total, any examination or assignment for another person
3. No student shall, without authorization, allow any examination or assignment to be completed, in part or in total, by another person.
4. No student shall knowingly plagiarize or copy the work of another person and submit it as his or her own.
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.

Academic Policies and Regulations

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 director of the Academic Resource Center. If at this point the grievance is still not resolved to the student's satisfaction, a further written appeal could be made to the Provost. In this case, the Provost shall establish a committee to review the grievance and make a recommendation within 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 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 college 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.

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.

Academic Policies and Regulations

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

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

Application for Degree

Grand Valley State University awards baccalaureate and master's 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 candidates for degree (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.

Student Records: Statement of Policy

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

recordkeeping 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*.

Academic Waivers

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.

1. **Good Standing.** Each student must have a cumulative grade point average (GPA) of a 2.000 or higher to be in good standing.
2. **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.
3. **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.

Academic Policies and Regulations

- 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. 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 2006, winter 2007, and summer 2007:

Summa cum laude—4.000

Magna cum laude—3.873–3.999 (96th to 100th centiles)

Cum laude—3.780–3.872 (91st to 95th centiles)

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 Dean of Advising Resources and Special Programs.

Advising/Degree Audit

All undergraduate programs recommend that their degree-seeking students meet with an assigned faculty advisor periodically 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

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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.

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 students who begin their studies at Grand Valley State University in Fall 2000 and thereafter AND to students who enter Grand Valley with a completed MACRAO through Spring/Summer semester 2001.

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.

2. Cumulative 2.0 GPA

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 with a 2.0 GPA

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 with a 2.0 GPA

A minor is not required for graduation. 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 095 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.

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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 Advising Resource 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.

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

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

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

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

Skills Goals

1. To engage in articulate expression through effective writing and speaking.
2. To think critically and creatively.
3. To locate, evaluate, and use information effectively.
4. 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. The pedagogy of the Foundation helps students develop the essential skills of creative and critical thinking, articulate expression, and information literacy.

Cultures

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. 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. Such study enhances one's ability to live and work intelligently and cooperatively in a multicultural nation and an independent world. All Cultures courses also 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. Themes consist of interrelated courses that explore an idea from three different perspectives and examine the connections that exist, actually or potentially, among our various ways of understanding major ideas. All Theme courses continue to address creative and critical thinking, articulate expression, and information literacy. In addition, these courses focus on integrative skills. These classes emphasize the integrative, synoptic, and creative qualities of thought characteristics of the generally educated person.

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General Education Requirements

Foundations

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

Cultures

- One course with the World Perspectives designation
- One course with the United States Diversity designation

Theme

- Each student will select a theme and choose three courses from that theme. The courses must come from three different disciplines. At least two of the courses must be upper level (300 or 400).

I. Foundations

The Arts — select one

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

Philosophy and Literature — select one

AAA/ENG 231	Early African American Literature
CLA 201	Classical Literature
COM 202	Critical Interpretation
ENG 203	World Literature
ENG 205	Literatures in English
ENG 212	Introduction to Shakespeare
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 the Present

Historical Perspectives — select one

ANT 215	Origins of Civilization
CLA 121	Greek Civilization

CLA 131	Introduction to Roman Civilization
HSC 201	The Scientific Revolution
HSC 202	The Technological Revolution
HST 101	Introduction to World Civilizations
HST 102	Introduction to European Civilizations
HST 103	Introduction to American Civilizations
HST 203	World History to 1500 A.D.

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

Physical Sciences—Select one from Physical Sciences and one from Life Sciences. One of those courses must contain a lab.

CHM 102	Chemistry and Society
GEO 100	Environmental Geology
GEO 103	Oceans
GEO 105	Living with the Great Lakes
SCI 226	Integrated Physical Science for K-8 Teachers

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

Life Sciences—Select one from Life Sciences and one from Physical Sciences. One of those courses must contain a lab.

ANT 206	Human Origins
BIO 105	Environmental Science
BMS 100	Human Health and Disease

Lab Courses

BIO 103	The Biology of People
BIO 107	Great Lakes and Other Water Resources
BIO 109	Plants in the World
BIO 120	General Biology I
BMS 202	Anatomy and Physiology
CMB 150	Biotechnology and Society
SCI 225	Integrated Life Science for K-8 Teachers

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Social Sciences — Select two from different disciplines

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 Complex Societies
WGS 200	Introduction to Gender Studies

II. Cultures

World Perspectives — select one

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 346	Kinship and Culture
ANT 360	Ethnology of Mesoamerica
ANT 370	Cross-cultural Perspectives on Gender
BUS 301	International Business and Culture
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
FRE 202	Intermediate French II
GER 202	Intermediate German II
GPY 235	World Regional Geography
GPY 351	Geography of Africa
GPY 355	Geography of Southwest Asia (The Middle East).
GRK 202	Intermediate Ancient 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
MUS 218	World Music

PHI 210	Eastern Philosophy
PHI 240	Middle Eastern Philosophy
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
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 & Gender in the Developing World

U.S. Diversity — select one

AAA/WGS 352	Black Women's Culture and Communities
ANT 311	Native Peoples of North America
ED 225	Diversity in 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 United States

III. Themes—Select a theme and complete three courses from that theme. The courses must be from different disciplines.

Theme 01 — Perspectives from the Outside: Marginality and Difference

BIO 329	Evolution of Social Behavior
ENG 335	Literature of American Minorities
HST 376	History of Witches
LIB 350	The Immigrant Experience in the U.S.
MGT 355	The Diversified Workforce
SOC 250	Perspectives on Madness
SOC 385	Social Class Inequality

Theme 02 — Changing Ideas: Changing Worlds

BIO 349	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

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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

BIO 103	The Biology of People
LIB 314	Life Journey
PHI 300	Theories of Human Nature
PHI/PSY 366	Perspectives on Aging
PSY 364	Life Span Developmental Psychology
PSY 377	The Psychology of the Quest
SOC 323	Families in Society

Theme 05— Making War and Peace

CJ 405	Terrorism
ENG 384	Literary Responses to War and Peace
HST 317	History of American Foreign Relations
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— Revolution and Evolution 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 Culture and Communities
BIO 325	Human Sexuality
CJ/WGS 320	Crimes Against Women
CLA 320	Women in the Classical World
ECO 350	Gender and Economics
HST 371	History of Gender, Family, 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 351/WGS 351	Family & 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 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 Change and Ethics
MGT 438	Business Ethics
MKT 375	Public Policy and Marketing
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 352	Geography of Latin America
GPY 356	Geography of Europe
GPY 410	Landscape Analysis
GPY 412	Global Environmental Change
LIB 330	The Idea of Nature
NRM 451	Natural Resource Policy

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

Theme 13—The U.S. Civil Rights Movement

AAA 305	Perspectives on the Black Arts Movement
ENG 381	Regional Discourses in US Civil Rights
HST 316	U.S. Civil Rights Movement History
LIB 320	Social Autobiography in the U.S. Civil Rights Movement

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- 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

- 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
HST 327 History of American Urban History
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 Creativity and Innovation

LIB 310	Creativity
MGT 345	Team Building
SOC 346	Sociology of Art
WRT 219	Introduction to Creative Writing

Theme 19— Perception

CLA 345	Tradition and Reception
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— The American Mosaic

AAA 340	African American Culture and Social Thought
ANT 311	Native Peoples of North America
HST 315	Latinos: The Forging of Ethnic Identities
LAS 475	Latinos in West Michigan
LIB 401	Visionary Thinkers in the American Mosaic
MUS 300	Exploring American Music
SOC 381	Class, Race, and Gender
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 American Sports
MKT 361	Sports Marketing
PED 315	Sport: Psychosocial Aspects
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 I
PLS 339	Comparative Democratization

Theme 24— Custom Study Abroad

See the Padnos International Center for details: www.gvsu.edu/pic, or visit 130 LOH.

Supplemental Writing Skills

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 Writ-

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ing 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 associate's degree 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 associate's degree 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.

University Honors College

University Honors College Students may satisfy the general education through the University 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 are considered to have met the general education requirements and skills requirements, with three exceptions: They are required to demonstrate proficiency in mathematics (MTH 110); they must 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 they must complete 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.

7. 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 of the student's choice. A placement test is 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.

8. 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.

9. 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.

10. 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.

11. 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).

Double Major; Double Minor; Major-Minor

In order to have two 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 not duplicated in the other. For a double minor, each must contain 20 credits not duplicated in the other. 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:

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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 may not pursue a course, program, or degree that has been discontinued by the university regardless of the student's entry date.

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 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 nondegree 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:

Advising Resources and Special Programs

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.

Advising Resources and Special Programs

“Advising Resources and Special Programs (ARSP) provides students and the greater community with academic advising, support services, and resources to complete educational and career goals. ARSP values individualism, promotes diversity, encourages professionalism and collaboration, endorses scholarship, and advocates life-long learning.”

—Mission Statement

Academic Advising

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 help explore possible majors, assist with scheduling, and provide assistance with study skills development. Once students declare their major, they are referred to their major department for advising.

Transfer Student Advising

200 Student Services Building (616) 331-3588

Transfer Student Advising provides academic support to transfer students in their transition to Grand Valley.

Student Support

Disability Support Services (DSS)

200 Student Services Building (616) 331-2490

Disability Support Services provides services and accommodations that enhance the learning environment for students with disabilities. DSS also educates the Grand Valley State University community about disability issues.

Educational Support Program (TRiO)

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.

EXCEL Program

200 Student Services Building (616) 331-3780

The EXCEL Program is designed to provide academic services (advising, study skills development, career exploration, and specialized tutoring) to a diverse student community.

Early Alert and Student Success Program

200 Student Services Building (616) 331-3588

The Early Alert and Student Success Program is designed to assist students who are experiencing academic as well as other difficulties during their time at Grand Valley State University. Through Early Alert, faculty and staff contribute directly to retention by assisting with the early detection and intervention strategies for students who are doing poorly in class, chronically absent from class, or experiencing other kinds of problems that affect academic performance. There are three components of EASS: Graduation Persistence Assistance (GPA), Secondary Admit Program Grade Point Average Requirement Assistance (SAGPA), Early Alert Support Services (EAS).

LAKER Academic Center

165 Field House (616) 331-3328

The athletic advisor provides 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.

Ronald E. McNair Post-Baccalaureate Achievement Program (TRiO)

230 Student Services Building (616) 331-3441

The McNair 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 under-represented minorities and financially eligible first-generation college students who wish to obtain a doctoral degree.

Testing Services

200 Student Services Building (616) 331-3588

Testing Services offers math placement testing, WRT 305 placement testing, College-Level Examination Program (CLEP), the Comprehensive English Language Test (CELT) for

Advising Resources and Special Programs

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.

WRT 305, Writing in the Disciplines, is a junior-level writing course requirement. Students have the opportunity to meet this requirement based on a satisfactory score on an assessment essay. The WRT 305 assessment essay is offered three times a semester.

Grand Valley State University is an open test center for CLEP, which is offered once per month. Credit is granted for subject examinations offered by CLEP. Minimum score requirements are listed in the Credit by Exam brochure: <http://www.gvsu.edu/credbyexam.pdf>.

The CELT is a pre-admission requirement for Grand Valley applicants who speak English as a second language. CELT is offered once per month.

Tutoring

201 Student Services Building (616) 331-3451

101B DeVos Center (616) 331-6407

Students can schedule a tutor in most 100- and 200-level courses or attend open tutoring sessions as scheduled. Students are encouraged to request tutors early in the semester. Tutoring is also available at our satellite campuses. All tutoring is free of charge.

Open math lab is available in 2250 MAK.

Academic Standards and Other Services

200 Student Services Building (616) 331-3588

Course Evaluations and Substitutions

- Responsible for course evaluations and substitutions for General Education Foundation requirements and degree cognate requirements.
- Academic Review Committee: Review appeals of the withdrawal deadline and the Petition to Return process.
- Credit Overload appeals: Review appeals to enroll in more than 20 credits in a semester.
- Residency Waiver requests: Review appeals to take a class or classes at another institution during the final 30 semester hours.
- Emergency Notification: It is the responsibility of the student to notify their professors of attendance issues. ARSP will contact 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.

University-wide Activities

Orientation

ARSP provides coordination and administrative support for Freshman Orientation and Transfer Student Orientation.

Transitions

ARSP provides academic advising information to support Transitions, the fall orientation program.

Awards Banquet

ARSP assists in coordinating the annual Awards Banquet, recognizing outstanding students from each academic program.

Phi Kappa Phi

ARSP administers Grand Valley's chapter membership and initiation ceremony for the largest and most highly respected academic honor society that recognizes and promotes academic excellence in all fields of higher education.

Publications

- Advising Resources for Faculty and Professional Advisors
- Student Advising Guide
- Choosing a Major booklet
- Credit by Exam brochure
- Not Sure About Your Major brochure

Out-Reach

Athletes Who Care

165 Field House (616) 331-3328

Through the LAKER Advising Center, student-athletes provide services in a broad scope of volunteer and community service experiences.

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...*reaching out to GRCC students to help them ultimately achieve a bachelor's degree through Grand Valley State University.*

Educational Talent Search (TRiO)

104 Eberhard Center (616) 331-7110

Provides information and a broad range of educational and career services to West Michigan residents who are interested in continuing or resuming their education. The advisors in this program also work with school-age community members to encourage them to pursue higher education.

Upward Bound Program (TRiO)

230 Student Services Center (616) 331-3441

Upward Bound is designed to help high school students prepare for college. The program has an academic year component and a summer residential component.

Upward Bound Math and Science Program (TRiO)

230 Student Services Center (616) 331-3441

This program helps qualified high school students who plan to go to college and pursue a career in math or science.

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 Web site 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 Web site 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 Web site at <http://ace.mivu.org>.

College of Interdisciplinary Studies

The College of Interdisciplinary Studies fosters and supports interdisciplinary initiatives and university-wide support services in teaching and research. The University College mission is: Connecting Diverse Interdisciplinary Communities—Cultivating Innovative Liberal Learning.

The following academic programs are included in the college: Liberal Studies; Women and Gender Studies; Area Studies which includes African/African American Studies, Middle East Studies, Latin American Studies, and East Asian Studies; General Education; and the Honors College. The college also includes the university-wide services and support of the Pew Faculty Teaching and Learning Center, the Writing Center, the Supplemental Writing Skills Program, and the Padnos International Center, and programs such as Student Scholarship Day and the Summer Student Scholars program.

The Barbara H. Padnos International Center

Grand Valley State University's mission, values, and vision statement include references to educating students in the global community beyond Michigan or the U.S.A. Grand Valley 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 Grand Valley 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, College, 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 create meaningful educational opportunities for student, faculty, and staff educational and living experiences in other nations. Partnerships also increase the presence of international students and faculty at Grand Valley State University. Currently, Grand Valley has institution-to-institution agreements with the following institutions, which offer summer, semester, and year long study abroad opportunities for students:

Australia, University of the Sunshine Coast, Queensland

China, China-Japan Friendship Hospital, Beijing; East China University of Science and Technology, Shanghai; East China Normal University, Shanghai; Shanghai University of Finance and Economics

England, Kingston University, Kingston-on-Thames

France, Groupe ESC Grenoble; L'Ecole Supérieure Des Sciences Commerciales of Angers

France, l'Université Catholique de L'Ouest, Angers

Ghana, University of Cape Coast

Italy, John Cabot University, Rome

Japan, International Christian University, Tokyo; The Japan Center for Michigan Universities, Hikone

Mexico, Universidad De Las Americas-Puebla

Norway, University of Oslo

Poland, Krakow University of Economics

College of Interdisciplinary Studies

Spain, University of Deusto, Bilbao

Sweden, Uppsala University

Turkey, Middle East Technical University, Ankara

Various locales, Consortium for Overseas Student Teaching (COST)

Study Abroad

The Padnos International Center (PIC) supports the academic programs in all departments, divisions, and schools as well as the area studies programs by offering and coordinating study abroad opportunities in various countries. Academic semester and year-long programs in countries relevant to various academic majors and minors are available for academic credit to all Grand Valley students.

Also, 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), International Agreement Study Abroad Grant (open to students studying on a partnership program), and the PIC Study Abroad Grant (open to both graduate and undergraduate students). The Padnos International Center also maintains a roster of various scholarships and grants for study abroad.

PIC maintains a fully staffed overseas programs resource room, where students can explore participation in overseas experiences throughout the world. Guidance, enrollment support, financial aid coordination, and credit transfers are 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.

The Padnos International Center also houses the U.S. Office for John Cabot University of Rome, Italy, and provides information on JCU to students across the U.S.A.

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:

The Robert and Mary Pew Faculty Teaching and Learning Center

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

The Padnos International Center 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.

International Student Services Program

Grand Valley recognizes the importance of international students. 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, host family arrangements, and overseas immigration regulations and work authorization.

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 Robert and Mary Pew Faculty Teaching and Learning Center

The mission of the Robert and Mary Pew Faculty Teaching and Learning Center (Pew FTLC) is to enhance student learning by supporting faculty members in their efforts to teach effectively. To that end, the Pew FTLC sponsors a number of programs to target both specific and broad-based teaching-related issues. These programs include the annual Fall Teaching Conferences, an ongoing program of workshops, mentoring for new faculty, and grant administration. The directors are available for consultation with individual faculty and academic units. The Pew FTLC is located in 324 Lake Ontario Hall.

Writing Center

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 Grand Valley State University 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.

Hauenstein Center for Presidential Studies

The mission of the Hauenstein Center at Grand Valley State University 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 webcast live to more than 3,500 viewers in 18 countries.

As a public service, the center features allpresidents.org—one of the fastest-growing Web sites 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 and Nonprofit Leadership was established in 1992 with support from the W.K. Kellogg Foundation. The Johnson Center's mission is to promote effective philanthropy, community improvement, and excellence in nonprofit leadership through teaching, research, and service. The Johnson Center seeks to accomplish this in three ways:

Academically, by encouraging civic engagement among students and faculty. As a public service and as a resource for classroom studies, the Johnson Center (www.johnsoncenter.org) features resources for improving nonprofit leadership and management and assisting with acquisition of community and regional information and technical skills. The Johnson Center offers faculty service-learning grants and provides support for university efforts that promote the study of philanthropy and nonprofit leadership. The Johnson

The Michigan Alternative and Renewable Energy Center (MAREC)

Collection on Philanthropy at the Steelcase Library serves 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 to communities helping them assess needs, forecast trends for effective problem solving, and measure social impact of programs and services.

Nationally, by enhancing the impact of foundations and nonprofit organizations. The Grant making School (www.grantmakingschool.org) is the first university-based continuing education program to teach principles of advanced grant making to foundation program officers, and the *Nonprofit Good Practice Guide* (www.npgoodpractice.org) is the premier internet-based technical assistance resource for nonprofit managers.

The Johnson Center's numerous initiatives, in addition to those mentioned above, strive to provide current information, accurate data, and services relevant to the changing needs of the philanthropic sector.

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 250 kW molten carbonate fuel cell, a 30 kW combine heat power micro turbine, a 30 kW photovoltaic solar panel, and a 80 kW nickel metal hydride battery system. This energy center is also a new energy technology and business incubator that will create and attract new business to the region.

MAREC has received a \$1 million grant from the Michigan Public Services Commission to build a plant that will convert animal manure to methane gas and subsequently to electricity. This is a key initiative to aid our 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.

MAREC also conducts Energy Audits for Commercial organizations. This program focuses on assessing energy consumption using sophisticated light emission mapping an air-flow sampling, and computational software. Recommendations of energy savings are made based on such results, replacement technologies, and return on investment.

In addition, MAREC ensures that Grand Valley State University will be a leader in developing interdisciplinary alternative energy education within its campus and in collaboration with the Muskegon Community College.

MAREC promotes and attract high technology business development in Muskegon and the region. MAREC has 4,000-square-foot of space devoted to incubating businesses that focus on innovative development in advanced energy technologies that are expected to be

Regional Math and Science Center

a catalyst for economic development and job growth in the area. Currently there are three privately funded start up companies located at MAREC.

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 assists local school districts with curriculum development services that support the Michigan Curriculum Framework in science and mathematics. The center's staff is available for consultation, and a resource collection of exemplary teaching materials is open to pre-service teachers and local educators.

The center is a leader in developing partnerships and collaborative programs to benefit teachers and pre-college students. Grand Valley State University and the West Michigan community provide financial and human resources to deliver programs such as the Science Update Seminar, Michigan Science Olympiad, Summer Science Adventure Camps, Science Technology and Engineering Preview Summer (STEPS) Camp for Girls, and Building Science and Mathematics Leader programs.

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 Web site www.gvsu.edu/wri.

West Michigan Science & Technology Initiative

The West Michigan Science & Technology Initiative (WMSTI) at Grand Valley State University is dedicated to growing and diversifying the community economy by creating an environment that inspires innovation and supports the commercialization of science and technology.

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.

Client product development needs are met by incubator/accelerator amenities through the New Venture Center located on the 5th floor of the Cook-DeVos Center for Health Sciences.

The ultimate goal of the West Michigan Science & Technology Initiative is the generation of new jobs and diversification of the regional economy. With help from our economic partners and a growing commitment to our leading life science researchers and entrepreneurs, West Michigan will become a global center for one or more segments of the life science industry.

The West Michigan Science & Technology Initiative is located at the Cook-DeVos Center for Health Sciences, office 532.

Van Andel Global Trade Center

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 center enters into strategic partnerships with members of the University and the business community to accomplish this objective.

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 international trade resources. The VAGTC has a corporate membership program that offers high value, high quality services to companies from Battle Creek to Traverse City, and Detroit to the Lakeshore.

The VAGTC has offered training programs in eight different states, and has provided training to over four-thousand employees. Since its inception in 1999, the VAGTC has offered consulting services to over 250 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

- 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 of international trade for Amway, Jay Van Andel is 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 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. 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 and maintains the day-to-day operations of 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.

Academic Programs

African/African American Studies Minor (AAA)

Coordinator: Jacques Mangala.

The African/African American Studies program at Grand Valley State University provides a foundation for understanding the history and culture of African Americans and their representations in social scientific and artistic discourses, in addition to the critical tools needed to examine the social construction of African American lives and community. Although the course of studies is intended to cast light on all aspects of African American community, the dispersion of African culture beyond the continent of Africa situates the program in studies and discourses in Africa, the United States, Central and South America, and the Caribbean—wherever people of African descent are found. The perspective presented is that of the North American, the U.S. student, looking within the United States and then outward to Africa and other locations of the diaspora to understand what African American experience means.

The minor in African/African American Studies requires 21 units (approximately seven courses); AAA core courses are intended to provide students with

1. A critical perspective on research and representations of African Americans within a variety of disciplines.
2. The social science methodology requisite to engaging in research on African American social institutions.
3. Knowledge of African American cultural expression in the humanities and arts.
4. Knowledge of the history, ideas, and sociocultural issues defining African American experience.
5. Opportunities to apply knowledge and research skills to the analysis and understanding of local African American communities.
6. The skills and knowledge necessary to participate in and contribute to African American intellectual life and community.

The African/African American Studies program is recommended for students seeking teaching certification or majoring in anthropology, criminal justice, education, English, history, humanities, liberal studies, sociology, and social work. The program offerings are also supportive of and complementary to Latin American studies, women's studies, and multicultural studies.

Students minoring in African/African American Studies are required to complete 21 hours of coursework.

Students who minor in African/African American Studies must complete three core courses:

AAA 202 African Diaspora

AAA 301 Perspectives on African/African American Studies

AAA 340 African American Culture and Social Thought

Students should be alert to the presence of courses offered through the vehicle of the Special Topics (AAA 380) and Issues in Africana Studies (AAA 390) as well as African American studies related courses offered in English, geography, history, Latin American studies, social science, sociology, and women's studies. Such offerings may be used to complete the 21 hours of coursework. Consult with the program coordinator regarding special topics or courses from other departments that may qualify as course electives for the minor.

African/African American Studies encourages students to participate in study abroad programs. Opportunities are available through the University partnership with the University of Cape Coast, Ghana, and in Brazil, Ghana, South Africa, and Tunisia through Council's study abroad program sites. Additional opportunities are available through direct enrollment in African universities. Information is available through the program coordinator and the Barbara H. Padnos International Center.

Courses of Instruction

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. Three credits. Offered winter semester.

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. Three credits. Offered fall semester. Prerequisite: WRT 150.

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. Prerequisite: WRT 150. Three credits.

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. Three credits.

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 Civil Rights Theme. Offered winter semester. Three credits.

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. Three credits.

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. Prerequisite: Sophomore standing. Three credits.

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. Three credits.

African/African American Studies

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. Three credits.

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. Three credits.

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. Offered spring semester. Prerequisites: junior standing. Three credits.

AAA 380 Special Topics Seminar. 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. One to three credits.

AAA 390 Issues in African Studies. An indepth analysis of a specific issue in African/African American studies from an interdisciplinary approach, for example, African American identity, the impulse toward separatism in African American social institutions, the Africanization of American identity and cultural expression, and contemporary elaborations of the "black code." Offered fall and winter semesters. Prerequisites: Three credits in any African/African American Studies course offering or US 201 or SOC 382. Three credits.

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. One to three credits.

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. One to six credits.

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. Prerequisite: Nine hours in the department and written permission of the instructor before registration. One to four credits.

Courses from Participating Departments

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, 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. Three credits.

ENG 205 Literatures in English. Introduction to British, American, and other literatures written in English organized around a theme, period, or nationality. The course emphasizes close reading, writing skills, and introduces students to a variety of genres and cultural contexts for reading and understanding literature. Fulfills Philosophy and Literature Foundation. Offered fall and winter semesters. Prerequisites: Fulfillment of the freshman writing requirement. Three credits.

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 of odd-numbered years. Prerequisites: GPY 235 or permission of instructor. Three credits.

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. Three credits.

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 and junior standing. Three credits.

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 210 or junior standing. Three credits.

Aging and Adult Life Minor

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.

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
LIB 314 Life Journey
PSY 332 Adult Development and Aging
SOC 388 Middle Age and Aging

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

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

Courses of Instruction

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 202 or BMS 208 and BMS 290; credit or concurrent enrollment in SOC 388 or permission of the instructor. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

Anthropology (ANT)

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

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.

Requirements for a Major in Anthropology

The wide scope and holistic nature of anthropology mean that students should have opportunities to experience three kinds of coursework: (1) courses concerned with the discipline;

(2) courses specializing in a sub-discipline of anthropology; and (3) courses in disciplines related to anthropology.

Students majoring in anthropology may earn either a B.A. or a B.S. degree. The B.A. degree requires third-semester proficiency in a foreign language; the B.S. degree requires the completion of a one-year sequence in one of the following natural sciences (BIO 120 & 121, CHM 115 & 116, GEO 111 & 112, or PHY 220 & 221) and one upper level natural science course from the same discipline.

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:

- ANT 204 Introduction to Cultural Anthropology
- ANT 206 Human Origins
- ANT 220 Introduction to Archaeology
- ANT 310 Perspectives in Bioanthropology or ANT 346 Kinship and Culture
- ANT 405 Anthropological Theory
- ANT 495 Practicing Anthropology (capstone)

Cognate Degrees:

B.A.

- Third-semester proficiency in a foreign language.

B.S.

- One upper level natural science course

 - One year of science courses
- Or
- Either
- BIO 120 General Biology I and BIO 121 General Biology II
- Or
- GEO 111 Exploring the Earth and GEO 112 Earth History
- Or
- PHY 220 General Physics I and PHY 221 General Physics II
- Or
- CHM 115 Principles of Chemistry I and CHM 116 Principles of Chemistry II

Other Required Courses:

3 credits in Sociology

- ANT 300 Research Methods in Anthropology
- ANT 307 Field Techniques and Laboratory Methods in Anthropology 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
- ANT 315 Comparative Religions
- ANT 330 Ethnology of Selected World Areas
- ANT 346 Kinship and Culture

Anthropology

ANT 355 Migration in Americas

ANT 360 Ethnology of Mesoamerica

ANT 370 Cross-cultural Perspectives on Gender

Archaeology:

ANT 325 Archaeology of North America

ANT 347 Environments and Cultures of the Great Lakes Region

ANT 350 Archaeology of Mid-East

Biocultural:

ANT 310 Perspectives in Bioanthropology

ANT 316 Death, Burial, and Culture

ANT 320 Culture and Disease

ANT 340 Culture and Environment

Note: Some ANT 380's may meet elective categories.

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.

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.

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.

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.

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.

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.

Career practicum 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.

Sample Curriculum B.A.

First Year

Fall

- Electives/General Education

ANT 204 Introduction to Cultural Anthropology

ANT 206 Human Origins

Winter

- Electives/General Education

ANT 220 Introduction to Archaeology

Second Year

Fall

- First Semester Language
- Electives/General Education

STA 215 Introductory Applied Statistics

Winter

- ANT Subfield Requirement
- Second Semester Language
- Electives/General Education

Anthropology

Third Year

Fall

- Third Semester Language
- ANT Subfield Requirement
- Electives/General Education

ANT 300 Research Methods in Anthropology

Fourth Year

Spring/Summer

ANT 307 Field Techniques and Laboratory
Methods in Anthropology
or ANT 490 Practicum: Career-Service

Winter

- ANT Subfield Requirement
- Electives/General Education

ANT 346 Kinship and Culture

Sample Curriculum B.S.

First Year

Fall

- Electives/General Education

ANT 204 Introduction to Cultural
Anthropology

ANT 206 Human Origins

Winter

- Electives/General Education

ANT 220 Introduction to Archaeology

Second Year

Fall

- First Semester Science
- Electives/General Education

STA 215 Introductory Applied Statistics

Winter

- ANT Subfield Requirement
- Second Semester Science
- Electives/General Education

Third Year

Fall

- Upper Level Science
- ANT Subfield Requirement
- Electives/General Education

ANT 300 Research Methods in Anthropology

Winter

- ANT Subfield Requirement
- Electives/General Education

ANT 310 Perspectives in Bioanthropology

Fourth Year

Spring/Summer

ANT 307 Field Techniques and Laboratory
Methods in Anthropology
and ANT 490 Practicum: Career-Service
(Credits: 1 to 9)

Fall

ANT 405 Anthropological Theory

Winter

ANT 495 Practicing Anthropology (capstone)

Requirements for a Minor in Anthropology

A student who minors in anthropology is required to complete 21 hours in the department, including the courses listed below.

The remaining 12 credit hours must come from 300 and 400 level courses.

ANT 204 Introduction to Cultural Anthropology

ANT 206 Human Origins

ANT 215 Origins of Civilization or ANT 220 Introduction to Archaeology
or
ANT 220 Introduction to Archaeology

Courses of Instruction

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. Three credits.

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 Science Foundation; fulfills World Perspectives requirement. Offered fall and winter semesters. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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 Sciences Foundation. Offered fall and winter semesters. Four credits.

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; nine credits in anthropology. Three credits.

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. Prerequisite: Permission of instructor. One to nine credits.

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 of even-numbered years. Prerequisites: ANT 206 and ANT 300. Four credits.

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

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present disposition of American Indian populations. Fulfills U.S. Diversity requirement. Part of American Mosaic theme. Offered fall and winter semesters. Three credits.

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. Three credits.

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. Three credits.

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 socio-cultural 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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisites: ANT 204 and ANT 300. Fulfills World Perspectives requirement. Three credits.

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. Prerequisite: Junior or senior status in anthropology, biology, geology, resource management, or sociology. Three credits.

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, ANT 220, MES 201, or prior approval of the instructor. Three credits.

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 Revolution and Evolution in Americas

theme. Offered fall semester of odd-numbered years. Prerequisite: At least one general education diversity (World Perspective or US Diversity) course. Three credits.

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 Revolution and Evolution in the Americas theme. Offered fall of even-numbered years. Three credits.

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. Prerequisite: ANT 204 or ANT 206. Three credits.

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. Three credits.

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. One to three credits.

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 semester. Prerequisite: Senior standing as an anthropology major. Three credits.

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. One to nine credits.

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 winter semester. Prerequisites: Senior standing and ANT 405. Three credits.

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 and ANT 405 (may register concurrently with ANT 405), acceptance of formal written proposal and permission of faculty member. Three credits.

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. One to four credits.

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.

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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. Prerequisite: STA 215. Three credits.

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. Part of the Gender, Society, and Cultural theme. Offered winter semester. Three credits.

Art and Design (ART)

Chair: Clark, P. Professors: Henke, Seley, Wong-Ligda; Associate Professors: Eggers, Fisher, Keister, Strom, Thomas, Weis, Wittenbraker, Zettle-Sterling; Assistant Professors: Campbell, Chen, Colley, Danielson, Hosterman, Lee, Viviano, Zaszlavik.

The Department of Art and Design offers courses in studio art and art history with degree programs leading to a B.A. or B.S. degree in studio art and a B.F.A. degree in studio art with an emphasis in ceramics, graphic design, illustration, jewelry and metalsmithing, painting, printmaking, or sculpture. In conjunction with the School of Education, the department also offers a B.A. or B.S. degree in art education with full state certification.

Under the guidance of an art advisor, students may choose either a generalized art program (B.A. or B.S.) or a focused track (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. A minor program is available in studio art. Because of recent increases in enrollment, non-art majors can only be admitted to some art studio classes at final registration (Contact the department for assistance).

Course work is augmented by field trips, a campus exhibition program, visiting artists, and international programs. Internships and independent study also enhance classwork, especially in graphic design, where off-campus field experience is required.

The department is accredited by the National Association of Schools of Art and Design.

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.

Transfer Students

1. 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.
2. 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.

Degree Requirements

B.F.A. Degree

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. Entry requirements:

- After completing the Foundation program (ART 150, 151, 152, 153, 155, and 157), students are evaluated for entrance into the design and fine arts programs.
- A 2.75 GPA must be maintained in the upper level courses for a BFA.
- Foundation and Junior Reviews.
 - Upon completion of the Foundation program (ART 150, 151, 152, 153, 155, and 157), all art students are required to submit their collective work for faculty review.
 - Two semesters before their B.F.A. exhibition, all B.F.A. students are required to submit a sample of their work since Foundations 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.
- Graduating seniors must have a B.F.A. show and a final acceptance of their work by the art and design faculty, earning a grade of at least a C. The fine arts and illustration seniors will have a group exhibition. The graphic design seniors will conduct a boardroom presentation to the art and design faculty, culminating in an exhibition of their work. See the B.F.A. Handbook for details.

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.

Foundations Credits: 18

(Must be taken during freshman year):

ART 150 Foundations: 2-D Design
 ART 151 Foundations: 3-D Design
 ART 152 Foundations: Color and Design
 ART 153 Creative Problem Solving
 ART 155 Foundations: Introduction to Drawing I
 ART 157 Foundations: Introduction to Drawing II

Art History Credits: 12

- Art History electives Credits: 6

ART 221 Survey of Art History I
 ART 222 Survey of Art History II

Note: Completion of the art history component of the B.F.A. program is a prerequisite for ART 495, Senior Project: Issues in Art.

Emphases

Ceramics Credits: 54

- Studio electives Credits: 18
- ART 245 Introduction to Jewelry and Metalsmithing

Graphic Design Credits: 54

- Studio electives Credits: 18¹
 - Business practice course²
- ART 210 Graphic Design I
 ART 211 Graphic Design II

¹Studio electives may be selected in art, photography, or film and video. Electives in other areas must be approved by an advisor.

²Business practice courses include BUS 201 Legal Environment for Business, MKT 350 Marketing Management, CAP 210 Fundamentals of Advertising, and CAP 220 Fundamentals of Public Relations.

Art and Design

ART 270 Introduction to Sculpture
ART 275 Introduction to Ceramics
ART 376 Intermediate Ceramics 1: Wheel Throwing
ART 377 Intermediate Ceramics 2: Voice/Concept
ART 401 Senior Seminar
ART 477 Advanced Ceramics 1
ART 478 Advanced Ceramics 2
ART 479 Glaze Calculation
ART 495 Issues in Art (capstone)
ART 498 Senior Project

Illustration Credits: 54

- Studio electives Credits: 15

ART 212 Graphic Design for Illustrators
ART 257 Life Drawing
ART 258 Intermediate Drawing
ART 260 Introduction to Painting
ART 265 Introduction to Printmaking
ART 280 Introduction to Illustration
ART 381 Intermediate Illustration I
ART 382 Intermediate Illustration II
ART 413 Portfolio
ART 415 Senior Project: Graphics/Illustration
ART 482 Advanced Illustration I
ART 483 Advanced Illustration II
ART 495 Issues in Art (capstone)

Painting Credits: 51

- Printmaking or Illustration Credits: 3
- Metals, Sculpture, or Ceramics Credits: 3
- Studio electives Credits: 9)

ART 257 Life Drawing
ART 258 Intermediate Drawing
ART 260 Introduction to Painting
ART 355 Advanced Drawing I
ART 361 Intermediate Painting I
ART 362 Intermediate Painting II
ART 401 Senior Seminar
ART 462 Advanced Painting I
ART 463 Advanced Painting II
ART 495 Issues in Art (capstone)
ART 498 Senior Project

ART 257 Life Drawing
ART 310 Graphic Design III
ART 312 Graphic Design IV—Experience Design
ART 410 Graphic Design V
ART 413 Portfolio
ART 415 Senior Project: Graphics/Illustration
ART 417 Practicum in Graphic Design
ART 418 Practicum in Television Graphics
or ART 491 Internship in Studio Art
ART 495 Issues in Art (capstone)
CPH 171 Photography I³
or CPH 175 Understanding Still Photography³

Jewelry/Metalsmithing Credits: 54

- Studio electives Credits: 18

ART 245 Introduction to Jewelry and Metalsmithing
ART 270 Introduction to Sculpture
ART 275 Introduction to Ceramics
ART 345 Jewelry Repair
ART 346 Intermediate Jewelry and Metalsmithing I
ART 347 Intermediate Jewelry and Metalsmithing II
ART 401 Senior Seminar
ART 445 Business Practices for the Artist
ART 447 Advanced Jewelry and Metalsmithing I
ART 448 Advanced Jewelry and Metalsmithing II
ART 495 Issues in Art (capstone)
ART 498 Senior Project

Printmaking Credits: 54

- Metals, Sculpture, or Ceramics Credits: 3
- Studio electives Credits: 9)

ART 257 Life Drawing
ART 258 Intermediate Drawing
ART 260 Introduction to Painting
ART 265 Introduction to Printmaking
ART 355 Advanced Drawing I
ART 356 Advanced Drawing II
ART 366 Intermediate Printmaking I
ART 367 Intermediate Printmaking II
ART 401 Senior Seminar
ART 467 Advanced Printmaking I
ART 468 Advanced Printmaking II
ART 495 Issues in Art (capstone)
ART 498 Senior Project

³CPH 171 or 175 and comprehensive program selected in consultation with advisor. Access to studio courses in the School of Communication cannot be guaranteed for art majors.

Sculpture Credits: 54

- Studio electives Credits: 18

ART 245 Introduction to Jewelry and Metalsmithing

ART 270 Introduction to Sculpture

ART 275 Introduction to Ceramics

ART 321 Digital 3D

ART 371 Intermediate Sculpture 1: Fabrications

ART 372 Intermediate Sculpture 2: Replications

ART 401 Senior Seminar

ART 472 Advanced Sculpture 1

ART 473 Advanced Sculpture 2

ART 495 Issues in Art (capstone)

ART 498 Senior Project

Visual Studies Credits: 54

(Learning plan revision and signature required each semester). 5–8 Courses in Emphasis (4 different courses at least once, max 2 times any one course)

- Studio Electives 6–9

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

Studio Art

Art majors seeking a B.A. or B.S. degree must complete a minimum of 45 credits in art and design.

Degree Requirements

Upon completion of the foundation program, 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.

Students in the B.A./B.S. program in studio art (not art education) may experience difficulty in enrolling in the specific art courses they wish to take.

Students seeking a major in studio art can earn either the B.A. or B.S. degree. Requirements include completion of the following:

- Art history electives Credits: 9
- Two courses in different 2-D areas (Prints, Painting, Graphic Design, Drawing, or Illustration) Credits: 6
- Two courses in different 3-D areas (Ceramics, Metals, or Sculpture) Credits: 6
- Two intermediate level studio courses in one area Credits: 6

ART 150 Foundations: 2-D Design

ART 151 Foundations: 3-D Design

ART 152 Foundations: Color and Design

ART 155 Foundations: Introduction to Drawing I

ART 157 Foundations: Introduction to Drawing II

ART 495 Issues in Art (capstone)

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B.A. degree cognates:

Foreign language (third-semester proficiency in a foreign language).

B.S. degree cognates:

Science (three courses)

CS 150 Introduction to Computing

or PHI 103 Logic

STA 215 Introductory Applied Statistics

And Either

SS 300 Research Methods in the Social Sciences

or STA 216 Intermediate Applied Statistics

Art Education (Teacher Certification)

All students entering art education must follow the program leading to LQ certification (K–12 comprehensive with no teachable minor). Students who have completed all of their coursework by July 2006 for LX certification (as outlined in their catalog of record), must pass their state examinations by July 2007.

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 painting, printmaking, ceramics, sculpture, or metalsmithing. All art education students must complete the entire freshman foundation program and submit their work from the courses for Foundation Review along with all other art students. See details above. Four courses in art history, including ART 221 and 222, are also required.

Students must have a 3.0 minimum GPA in art in order to become eligible for entrance into the School of Education and for teacher assisting. The methodology courses, ART 332, ART 333 and ART 334 must be taken before arranging for teacher assisting and directed teaching. Students should consult the School of Education for the specific requirements concerning teacher assisting and directed teaching.

Required Curriculum for Art Education

- Four introductory studio courses Credits: 12
- Two drawing courses Credits: 6
- Two intermediate studio emphasis courses Credits: 6
- One advanced studio emphasis course Credits: 3
- Two studio/art education electives Credits: 6
- Two art history electives Credits: 6

ART 150 Foundations: 2-D Design

ART 151 Foundations: 3-D Design

ART 152 Foundations: Color and Design

ART 153 Creative Problem Solving

ART 155 Foundations: Introduction to Drawing I

ART 157 Foundations: Introduction to Drawing II

ART 221 Survey of Art History I

ART 222 Survey of Art History II

ART 332 Introduction to Art Education

ART 333 Curriculum Development and Practice

ART 334 Teaching the Nontraditional Canon

ART 495 Issues in Art (capstone)

B.A. degree cognates:

Foreign language (third-semester proficiency in a foreign language).

B.S. degree cognates:

Science (three courses)

CS 150 Introduction to Computing

or PHI 103 Logic

STA 215 Introductory Applied Statistics

And Either

SS 300 Research Methods in the Social Sciences

or STA 216 Intermediate Applied Statistics

Career Opportunities

The following are among career opportunities open to students who major in art.

Advertising art director, art editor, ceramist*, crafts supervisor, creative director, display artist, school teacher, gallery operator, graphic designer, illustrator, jeweler, master printer*, metal-smith*, museum curator*, museum display designer*, museum educator*, painter*, print-maker*, sculptor*, set designer, model maker (sculptors), and supervisor museum school*.

Sample Curriculum for B.S. or B.A. Program

A general fine arts curriculum (check specific major requirements with your advisor) working toward a B.S. or B.A. degree.

First Year

- Five general education courses

ART 150 Foundations: 2-D Design

ART 151 Foundations: 3-D Design

ART 152 Foundations: Color and Design

ART 155 Foundations: Introduction to Drawing I

ART 157 Foundations: Introduction to Drawing II

Third Year

- Two courses from art history; six studio courses
- Four general education courses or electives

Fourth Year

- Art electives
- General electives

ART 495 Issues in Art (capstone)

Second Year

- Six courses from art history and studio requirements
- Four general education courses or electives

**Recommended Curricula for B.F.A. Program —
Fine Arts Credits: 122**

Freshman Year

Fall Semester Credits: 17

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 (Basic skill requirement)

WRT 150 Strategies in Writing (Basic skill requirement)

Winter Semester Credits: 15

- Two general education courses

ART 152 Foundations: Color and Design

ART 157 Foundations: Introduction to Drawing II

And Either

ART 151 Foundations: 3-D Design

or ART 153 Creative Problem Solving

*May require graduate training after the B.F.A. at the M.A. or M.F.A. level.

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Sophomore Year

Fall Semester Credits: 15

- Fine art studio of choice: ceramics, drawing, metals, painting, printmaking, sculpture Credits: 6
- Two general education courses Credits: 6

ART 221 Survey of Art History I

Junior Year

Fall Semester Credits: 15

- Art history elective Credits: 3
- Fine art studio of choice Credits: 6
- Fine art studio: Follow emphasis program Credits: 3
- One general education course Credits: 3

Senior Year

Fall Semester Credits: 15

- Emphasis: Fine art studio Credits: 3
- One studio elective Credits: 3
- One general education course Credits: 3

ART 401 Senior Seminar

ART 495 Issues in Art (capstone)

Winter Semester Credits: 15

- Fine art studio of choice Credits: 6
- Two general education courses Credits: 6

ART 222 Survey of Art History II

Winter Semester Credits: 15

- Art history elective Credits: 3
- Fine art studio of choice Credits: 6
- One art studio course selected from emphasis listing Credits: 3
- One general education course Credits: 3

Winter Semester Credits: 15

- Fine art studio (choice) Credits: 3
- One general education course Credits: 3
- One general elective Credits: 3

ART 498 Senior Project

Recommended Curricula for B.F.A. Program — Graphic Design Credits: 122

Freshman Year

Fall Semester Credits: 17

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 (Basic skill requirement)

WRT 150 Strategies in Writing (Basic skill
requirement)

Winter Semester Credits: 15

- Two general education courses Credits: 6

ART 152 Foundations: Color and Design

ART 157 Foundations: Introduction to
Drawing II

And Either

ART 151 Foundations: 3-D Design or

ART 153 Creative Problem Solving

Sophomore Year

Fall Semester Credits: 15

- One general education course Credits: 3

ART 210 Graphic Design I

ART 221 Survey of Art History I

ART 257 Life Drawing

CPH 171 Photography I

or CPH 175 Understanding Still
Photography

Winter Semester Credits: 15

- One studio elective Credits: 3
- Two general education courses Credits: 6

ART 211 Graphic Design II

ART 222 Survey of Art History II

Junior Year

Fall Semester Credits: 15

- Art history elective Credits: 3
 - One studio elective Credits: 3
 - Business practice course Credits: 3
 - One general education course Credits: 3
- ART 310 Graphic Design III

Winter Semester Credits: 15

- Two studio elective Credits: 6
 - One general education course Credits: 3
- ART 218 Design History
ART 312 Graphic Design IV—Experience Design

Senior Year

Fall Semester Credits: 15

- One general education course Credits: 3
- ART 410 Graphic Design V
ART 413 Portfolio
ART 417 Practicum in Graphic Design
or ART 418 Practicum in Television Graphics
or ART 491 Internship in Studio Art
ART 495 Issues in Art (capstone)

Winter Semester Credits: 15

- Two studio elective Credits: 6
 - Two general education courses Credits: 6
- ART 415 Senior Project: Graphics/
Illustration

Requirements for a Minor in Studio Art

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:

- ART 101 Introduction to Art
ART 150 Foundations: 2-D Design
ART 151 Foundations: 3-D Design
ART 155 Foundations: Introduction to Drawing I

Courses of Instruction

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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisites: ART 150, ART 151, ART 155. Three credits.

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. Three credits.

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. Three credits.

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ART 157 Foundations: Introduction to Drawing II. A continuation of techniques and media from Introduction to Drawing I. Offered fall and winter semesters. Prerequisite: ART 155. Three credits.

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 the Graphic Design or Illustration emphasis; permission of instructor. Three credits.

ART 211 Graphic Design II. Graphic design is explored in its broadest applications, including symbology and logo design. Students learn to create visual messages that are aesthetically appealing as well as informative. Offered winter semester. Prerequisite: ART 210. Three credits.

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 fall semester. Prerequisite: Admission to illustration emphasis. Three credits.

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. Three credits.

ART 221 Survey of Art History I. A survey of art history from prehistoric times to the Renaissance. Offered fall semester. Three credits.

ART 222 Survey of Art History II. A survey of art history from the Renaissance to the present day. Offered winter semester. Three credits.

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. Four credits.

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. Three credits.

ART 257 Life Drawing. A continuation of techniques and media from Introduction to Drawing, with emphasis on the human figure. Offered fall and winter semesters. Prerequisite: ART 157. Three credits.

ART 258 Intermediate Drawing. An exploration of pictorial concepts in drawing in a variety of media with the emphasis upon individual expression. Offered winter semester. Prerequisite: ART 257. Three credits.

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. Three credits.

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. Prerequisites: ART 152, ART 157. Three credits.

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. Three credits.

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. Three credits.

ART 280 Introduction to Illustration. An overview of the illustration field covering historical and contemporary perspectives, aesthetic sensitivity, and professional practicality. Offered fall and winter semesters. Prerequisite: Completion of Foundations. Three credits.

ART 307 Digital Prepress. This course is an in depth exploration into the methods of commercial printing and corresponding software packages. This course will aid students in understanding how to manipulate digital technology and conventional printing techniques to their advantage, to increase the quality of their work utilizing this knowledge. Offered fall semester. Prerequisite: ART 211. Three credits.

ART 310 Graphic Design III. An advanced studio course covering principles that guide the development of creative solutions for educational and communication design. The student learns to manipulate typography, symbolism, illustration, and photography in a given space, which may take the form of advertisements, newspapers, periodicals, books, annual reports, signs, or direct mail. Offered fall semester. Prerequisite: ART 211. Three credits.

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. Prerequisite: ART 310. Three credits.

ART 313 3-D for Graphic Design. Introduction to the fundamental development of dimensional construction which refines and integrates many design principles. Imaginative use of materials and surface graphics as well as marketing and production problems are explored. Offered winter semester. Prerequisite: ART 210. Three credits.

ART 321 Digital 3D. “Introduces students to three dimensional computer technologies and their application in studio art practice. Activities focus on using good computer “craft, employing appropriate compositional principles, and choosing subjects and content that engage viewers and encourage rich conceptual associations. Offered fall semester. Prerequisite: Junior status.

ART 325 Nineteenth-Century Art. A survey of art in Europe during the nineteenth century. Offered fall semester of even-numbered years. Prerequisite: ART 222. Three credits.

ART 326 Early 20th Century Art. A survey of the art and culture of Europe and North America from 1900-1945, incorporating contemporary and historical critical and theoretical texts. Offered winter semester of odd years. Prerequisite: ART 222. Three credits.

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 fall semester. Prerequisites: ART 222 or equivalent. Three credits.

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. Four credits.

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 150, ART 151, ART 152, ART 153, ART 155 and ART 157. Three credits.

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. Three credits.

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

Art and Design

curriculum in a K–12 setting. Offered fall and winter semesters. Prerequisites: ART 332 and ART 333; permission of instructor. Three credits.

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. Prerequisite: ART 245 or permission of instructor. One credit.

ART 346 Intermediate Jewelry and Metalsmithing I. The study of casting, related production techniques, mold making, gypsy stone setting, and die forming with continued stress on fabrication techniques and increased emphasis on the exploration of conceptual issues. Offered winter semester. Prerequisite: ART 245. Three credits.

ART 347 Intermediate Jewelry and Metalsmithing II. The study of raising (angle and anti-clastic), forging, patinations, hinges, connections and findings, and introduction to specialized equipment placed with the context of personal exploration and research. Offered fall semester. Prerequisite: ART 346. Three credits.

ART 355 Advanced Drawing I. Advanced exploration of drawing techniques with emphasis upon personal expression. Offered fall and winter semesters. Prerequisite: ART 258. Three credits.

ART 356 Advanced Drawing II. Advanced exploration of drawing techniques with emphasis upon personal expression. Offered fall and winter semesters. Prerequisite: ART 355. Three credits.

ART 361 Intermediate Painting I. Intermediate projects using a variety of styles, subjects, and techniques. Offered fall and winter semesters. Prerequisite: ART 260. Three credits.

ART 362 Intermediate Painting II. Intermediate projects using a variety of styles, subjects, and techniques. Offered fall and winter semesters. Prerequisite: ART 361. Three credits.

ART 366 Intermediate Printmaking I. A continuation of ART 265. Color and scale and combining printmaking media are emphasized. Offered fall and winter semesters. Prerequisite: ART 265. Three credits.

ART 367 Intermediate Printmaking II. A continuation of ART 366. Color and scale and combining printmaking media are emphasized. Offered fall and winter semesters. Prerequisite: ART 366. Three credits.

ART 371 Intermediate Sculpture 1: Fabrications. Emphasis placed on techniques and concepts related to fabrication. Additive processes with wood and metal (wood joinery and construction, metal welding and finishing, surface treatments) are learned in conjunction with their application to projects exploring ideas related to fabricating such as function, invention, movement, narrative, and imagination. Offered winter semester. Prerequisite: ART 270. Three credits.

ART 372 Intermediate Sculpture 2: Replications. Emphasis is placed on techniques and concepts related to replication. Molding and casting processes with clay, plaster, rubber, plastic, and metal are learned in conjunction with their application to projects exploring ideas related to multiples, hybrids and questions of authenticity and originality. Offered fall semester. Prerequisite: ART 371. Three credits.

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 fall and winter semesters. Prerequisite: ART 275. Three credits.

ART 377 Intermediate Ceramics 2: Voice/Concept. Students will work on large-scale sculptures, while pursuing their own ideas. Students will work in small series of ideas and begin to research and explore concepts that are important to them. Students who wish to continue

throwing must apply the same practice and research as students pursuing sculptural form. Offered fall and winter semesters. Prerequisite: ART 275. Three credits.

ART 380 Special Topics in Art. 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. Prerequisites vary. One to three credits.

ART 381 Intermediate Illustration I. Fundamentals of illustration with an emphasis on digital imaging methods. Offered fall and winter semesters. Prerequisite: ART 280. Three credits.

ART 382 Intermediate Illustration II. Fundamentals of illustration with an emphasis on realistic representation. Offered fall and winter semesters. Prerequisite: ART 381. Three credits.

ART 385 Figure Painting. Introduction to painting the figure, with an emphasis on perceptual accuracy. Offered fall and winter semesters. Prerequisite: ART 361. Three credits.

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 & Notes — Art Majors: Completion of Foundations; Non-majors: Junior standing and instructor permission. Three credits.

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 winter semester. Prerequisites & Notes — Art Majors: Completion of Foundations; Non-majors: Junior standing and instructor permission. Three credits.

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 winter semester. Prerequisites & Notes — Art Majors: Completion of Foundations; Non-art majors: Junior standing and instructor permission. Three credits.

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 & Notes — Art Majors: Completion of Foundations; Non-majors: Junior standing and instructor permission. Three credits.

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 a central elements. This includes ephemeral and kinetic objects, performance, sound works, and works incorporating moving images (may be repeated once for credit). Offered fall semester. Prerequisites & Notes — Art Majors: Completion of Foundations; Non-majors: Junior standing and instructor permission. Three credits.

ART 399 Independent Readings in Art. A course giving students with special interests an opportunity to explore texts, periodical, and reference materials under the guidance of an art faculty member. Offered fall and winter semesters. Prerequisite: Permission of the instructor. One to four credits.

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

Art and Design

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. Three credits.

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. Prerequisite: ART 312; passage of Junior Review. Three credits.

ART 413 Portfolio. Refinement and development of a body of work constituting a professional portfolio. Offered fall semester. Prerequisite: Senior standing in major; passage of Junior review. Three credits.

ART 415 Senior Project: Graphics/Illustration. Development of a body of work focusing on a specific aspect of graphic design or illustration in which the student wishes to specialize. The work will be shown along with the student's portfolio as the senior show. Offered fall and winter semesters. Prerequisite: ART 410 or ART 483. Three credits.

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. Prerequisite: ART 310. Graded credit/no credit. Three credits.

ART 418 Practicum in Television Graphics. Students work on assignments under a practicing designer at WGVU-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. Prerequisite: ART 310. Graded credit/no credit. Three credits.

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 years. Prerequisites: ART 221 and ART 222. Three credits.

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 even years. Prerequisite: Junior standing, or permission of instructor. Three credits.

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. Two credits.

ART 447 Advanced Jewelry and Metalsmithing I. The focus at this level is on ideas that challenge traditionally held concepts and perceptions in the search of a personal interpretation. Technical and material concerns will be addressed as needed for realization of the work. Work should begin to show a cohesive idea. Offered fall and winter semesters. Prerequisite: ART 347. Three credits.

ART 448 Advanced Jewelry and Metalsmithing II. The focus of this course is the demonstration of the use of knowledge of metalsmithing materials, techniques and design concepts to explore new ground and ask new questions in a search for a personal statement. A body of work exploring a particular idea is required. May be repeated for credit. Offered fall and winter semesters. Prerequisite: ART 447. Three credits.

ART 462 Advanced Painting I. A continuation of ART 361 with advanced and more individual problems. Offered fall and winter semesters. Prerequisite: ART 362. Three credits.

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. Prerequisite: ART 462. Three credits.

ART 467 Advanced Printmaking I. A continuation of ART 367 with additional emphasis on quality printing, experimental printing and content issues. Offered fall and winter semesters. Prerequisite: ART 367. Three credits.

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. Prerequisite: ART 467. Three credits.

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. Three credits.

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 complimented with readings, presentations, and class trips relating to contemporary art. May be repeated for credit. Offered fall and winter semesters. Prerequisite: ART 472. Three credits.

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. Three credits.

ART 478 Advanced Ceramics 2. Students continue to define concepts with further individuality and creative solutions to forming, surface resolution, mixed media, combinations, installation and conceptual work. They may begin work for 498 if they are ready. Includes further reading and research in their areas of interest. Art 478 may be repeated for credit. Offered fall and winter semesters. Prerequisite: ART 477. Three credits.

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 semester. Prerequisite: ART 376 or ART 377 or ART 477. Three credits.

ART 482 Advanced Illustration I. Development of a personal style of illustration supported by an examination of historical trends. Offered fall and winter semesters. Prerequisite: ART 382. Three credits.

ART 483 Advanced Illustration II. Development of personal styles of illustration supported by an examination of contemporary trends. Offered fall and winter semesters. Prerequisite: ART 482. Three credits.

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. One to six credits.

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 pre-arranged by the department, are limited in number, and follow prescribed campus internship

Art History Major

policy. Offered on sufficient demand. Prerequisite: permission of department. Graded credit/no credit. One to six credits.

ART 495 Issues in Art (capstone). A seminar composed of lectures, discussions, papers, and assigned readings intended to give the student an understanding of his or her own place as a visual artist in the historical, social continuum of our time. Offered fall and winter semesters. Prerequisite: Senior standing in B.A., B.S., or B.F.A. program. Three credits.

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. Prerequisite: ART 497. Six credits.

ART 499 Independent Study in Art. Advanced and independent work for students who have exhausted a regular course sequence and who wish to pursue a specialized project or medium under the guidance of the faculty. B.A. and B.S. students may not use 499 to fulfill their 45-credit major requirement. Offered fall and winter semesters. Prerequisite: Prior arrangement with a specific faculty. One to six credits.

Art History Major

The art history major at Grand Valley State University will offer 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 Grand Valley campus.

The program's emphasis on visual analysis, research, critical thinking, presentations, and writing prepare students for a wide variety of careers. These transferable skills are excellent preparation for later professional studies such as law, business, and arts administration. For students interested in pursuing graduate study in art history, the degree provides a foundation for university teaching, art writing, as well as gallery or museum work.

Requirements for the Art History Major

All art history majors will earn a B.A. degree. In addition to the general education requirements, including third semester language proficiency, students are required to complete 39 credit hours toward the major.

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 that cover a range of historical periods and cultures. Students will 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 Credits: 1 to 3

CLA 250 Classical Art and Archaeology Credits: 3

Proposed courses to be included: ART 322 Medieval Art; ART 323 Renaissance Art; ART 324 Baroque Art

Modern and Contemporary Art

Choose two courses

ART 325 Nineteenth-Century Art Credits: 3

ART 326 Early 20th Century Art Credits: 3

ART 327 Art Since 1945 Credits: 3

ART 380 Special Topics in Art Credits: 1 to 3

World Art

Choose one course

ART 380 Special Topics in Art Credits: 1 to 3

ART 420 Asian Art Credits: 3

Proposed course to be included: ART 422 Islamic Art

Elective Courses: 6 credit hours

Students will select at least two elective courses. These may include courses emphasizing the analysis of visual culture offered by other departments.

ART 325 Nineteenth-Century Art Credits: 3

ART 326 Early 20th Century Art Credits: 3

ART 327 Art Since 1945 Credits: 3

ART 380 Special Topics in Art Credits: 1 to 3

ART 420 Asian Art Credits: 3

ART 421 Surrealism Credits: 3

CLA 250 Classical Art and Archaeology Credits: 3

COM 225 Film Culture Credits: 3

COM 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

Studio Requirements: 6 credit hours

Students are required to take two studio art courses to enrich their understanding of the artistic processes they examine as art historians.

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

Choose one 200-level studio course in any emphasis area. Students must obtain permission of the instructor.

Behavioral Science (BSC)

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

Proposed course to be included: ART 496 Senior Thesis

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.

Behavioral Science (BSC)

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.

Degree Requirements

Students must complete a minimum of 36 hours, in the major. For the psychology concentration, the 36 hours should also include PSY 360 and PSY 492 (capstone). For the sociology concentration, the 36 hours should also include 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 listing 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.

Behavioral Science Major (Psychology Concentration)

Psychology and sociology cooperate to offer a major in behavioral science for those students who want a broad background in the behavioral sciences.

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.

Biology (BIO)

Chair: Menon. Professors: Luttenton, Lombardo, Northup, Rogers, N. Shontz, Thorpe; Associate Professors: Blackman, Dunn, Greer, Griffin, Hunt, Jacquot, Joseph, MacDonald, Menon, Morgan, Ostrow, Staves, Trier, Vigna; Assistant Professors: Burton, Dietrich, Dobson, Ghiavsand, Henshaw, Lopez, Matthews, McClinton, Nordman, Nikitin, Rueth, Snyder, Stone, Weese.

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.

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.

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, 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.

Biology Major for the B.S. or B.A. Degree

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

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 1, 2, 3, and 4 below. Emphases are optional.

1. General University Degree Requirements

As identified in the General Academic Regulations section of the catalog.

2. Biology Core

(25 semester credits):

BIO 120 General Biology I*

BIO 121 General Biology II

BIO 215 General Ecology

BIO 375 Genetics*

BIO 376 Genetics Laboratory*

BIO 405 Cell and Molecular Biology

and BIO 406 Cell and Molecular Biology Laboratory

BIO 495 Evolutionary Biology**

3. Biology Electives

To reach a total of 38 credits from among biology courses numbered 209 or above (except BIO 355) and the following:

BMS 208 Human Anatomy

BMS 212 Introductory Microbiology

BMS 213 Laboratory in Microbiology

BMS 290 Human Physiology

BMS 291 Laboratory in Human Physiology

BMS 309 Laboratory in Human Anatomy

Plant Biology

One course must be taken from the Plant Biology category.

BIO 303 Plants and Fungi

BIO 323 Aquatic Plants

BIO 333 Systematic Botany

BIO 403 Plant Structure and Function

BIO 413 Freshwater Algae

BIO 423 Plant Biotechnology

BIO 573 Plants of the Great Lakes Area with permission

Animal Biology

One course must be taken from the Animal Biology category.

BIO 222 Natural History of Vertebrates

BIO 232 Natural History of Invertebrates

BIO 272 Insect Biology and Diversity

BIO 302 Comparative Vertebrate Anatomy

BIO 342 Ornithology

*Satisfies B.S. degree cognates. B.A. students must take the listed courses and satisfy the foreign language requirement.

**Capstone course required for bachelor's degree.

BIO 352 Animal Behavior
 BIO 362 Fisheries Biology
 BIO 412 Mammalogy
 BIO 422 Embryology
 BIO 432 Comparative Animal Physiology
 BIO 572 Field Zoology with permission
 BMS 208 Human Anatomy
 BMS 290 Human Physiology
 BMS 291 Laboratory in Human Physiology
 BMS 309 Laboratory in Human Anatomy

Excluded Courses

The following courses are excluded from the biology major.

BIO 103 The Biology of People
 BIO 105 Environmental Science
 BIO 107 Great Lakes and Other Water Resources
 BIO 109 Plants in the World
 BIO 205 Genetics for K–8 Pre-Service Teachers
 BIO 206 Ecology for K–8 Pre-service Teachers
 BIO 310 Biological Diversity of the Americas
 BIO 311 Biological Basis of Society
 BIO 355 Human Genetics

4. Cognates

(Minimum of 23 credits)

a. Chemistry

CHM 115 Principles of Chemistry I
 CHM 116 Principles of Chemistry II
 and either
 CHM 231 Introductory Organic Chemistry
 and CHM 232 Biological Chemistry
 or
 CHM 241 Organic Chemistry For Life Sciences I
 and CHM 242 Organic Chemistry For Life Sciences II

b. Statistics and Mathematics

MTH 125 Survey of Calculus*
 or MTH 201 Calculus I*
 or STA 215 Introductory Applied Statistics*

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.

PHY 200 Physics for the Life Sciences
 or PHY 220 General Physics I
 or PHY 230 Principles of Physics I

*Satisfies B.S. degree cognates. B.A. students must take the listed courses and satisfy the foreign language requirement.

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 Science and Mathematics Advising, Resource, and Transition (S.M.A.R.T.) Center located in 377 Padnos, (616) 331-8585. Premedical students majoring in biology should complete the following:

CHM 115 Principles of Chemistry I
CHM 116 Principles of Chemistry II
CHM 241 Organic Chemistry For Life Sciences I
CHM 242 Organic Chemistry For Life Sciences II
PHY 220 General Physics I
PHY 221 General Physics II

Additional Electives

BIO 302 Comparative Vertebrate Anatomy
BIO 357 Environmental Microbiology
BIO 422 Embryology
BIO 432 Comparative Animal Physiology
BMS 208 Human Anatomy
BMS 212 Introductory Microbiology
BMS 213 Laboratory in Microbiology
BMS 290 Human Physiology
BMS 291 Laboratory in Human Physiology
BMS 309 Laboratory in Human Anatomy
CHM 351 Introduction to Physical Chemistry
CHM 461 Biochemistry I
CHM 462 Techniques in Biochemistry
CHM 463 Biochemistry II

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 requires applicants to accumulate a minimum of 240 hours of contact with the veterinary profession as well as substantial experience with animals, both small and large. 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 Science and Mathematics Advising, Resource, and Transition (S.M.A.R.T.) Center located in 377 Padnos, (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
 CHM 116 Principles of Chemistry II
 CHM 241 Organic Chemistry For Life Sciences I
 CHM 242 Organic Chemistry For Life Sciences II
 CHM 461 Biochemistry I
 PHY 220 General Physics I
 PHY 221 General Physics II

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
 BIO 232 Natural History of Invertebrates
 BIO 302 Comparative Vertebrate Anatomy
 BIO 303 Plants and Fungi
 BIO 352 Animal Behavior
 BIO 422 Embryology
 BIO 432 Comparative Animal Physiology

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
 BIO 215 General Ecology
 BIO 375 Genetics
 BIO 376 Genetics Laboratory
 BIO 405 Cell and Molecular Biology
 BIO 406 Cell and Molecular Biology Laboratory
 BIO 495 Evolutionary Biology (capstone)

And a plant biology course

From the following:

BIO 303 Plants and Fungi
 BIO 323 Aquatic Plants
 BIO 333 Systematic Botany
 BIO 403 Plant Structure and Function
 BIO 413 Freshwater Algae
 BIO 423 Plant Biotechnology
 BIO 573 Plants of the Great Lakes Area with permission

Biology

5. Plant Biology Emphasis

Requires the following as biology electives.

BIO 303 Plants and Fungi

BIO 333 Systematic Botany

BIO 403 Plant Structure and Function

6. Animal Biology Emphasis

Requires the following as biology electives.

BIO 222 Natural History of Vertebrates

BIO 232 Natural History of Invertebrates

BIO 302 Comparative Vertebrate Anatomy

BIO 432 Comparative Animal Physiology

7. Wildlife Biology Emphasis

Requires the following as biology electives and the NRM course as a cognate.

BIO 222 Natural History of Vertebrates

BIO 333 Systematic Botany

BIO 342 Ornithology

BIO 408 Wildlife Management

NRM 281 Principles of Soil Science

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

BIO 450 Stream Ecology

Additional Courses

All students must also choose at least one course from each of the following three categories:

Category 1

BIO 362 Fisheries Biology

or

BIO 442 Fish Ecology

Category 2

BIO 232 Natural History of Invertebrates

Category 3

BIO 323 Aquatic Plants or

BIO 413 Freshwater Algae

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) is highly recommended

CHM 241 Organic Chemistry For Life Sciences I

CHM 242 Organic Chemistry For Life Sciences II

CHM 461 Biochemistry I

CHM 462 Techniques in Biochemistry

and either

PHY 220 General Physics I

or PHY 230 Principles of Physics I

as cognates

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.

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.

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's 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

Biology

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.

Degree Requirements for a Minor in Biology

The biology minor consists of a minimum of 24 credits in biology exclusive of BIO 103, 105, and 107. 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

BIO 121 General Biology II

BIO 325 Human Sexuality

One course chosen from each of the following three categories:

Genetics category

BIO 355 Human Genetics

or BIO 375 Genetics

and BIO 376 Genetics Laboratory

Animal Biology category

BIO 222 Natural History of Vertebrates

BIO 232 Natural History of Invertebrates

BIO 342 Ornithology

BIO 572 Field Zoology (with permission only)

BMS 202 Anatomy and Physiology

or

BMS 208 Human Anatomy

and

BMS 309 Laboratory in Human Anatomy

Plant Biology category

BIO 303 Plants and Fungi

BIO 323 Aquatic Plants

BIO 333 Systematic Botany

BIO 403 Plant Structure and Function

BIO 573 Plants of the Great Lakes Area (with permission only)

Additional Requirements

The following courses count in the minor toward the required 24 credits in biology.

BMS 212 Introductory Microbiology

BMS 213 Laboratory in Microbiology

BMS 290 Human Physiology

BMS 291 Laboratory in Human Physiology

Cognate Courses

CHM 109 Introductory Chemistry

or CHM 115 Principles of Chemistry I

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
- BMS 212 Introductory Microbiology
- BMS 213 Laboratory in Microbiology
- BMS 290 Human Physiology
- BMS 291 Laboratory in Human Physiology
- BMS 309 Laboratory in Human Anatomy

Master of Science in Biology

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.

The Master of Science in Biology degree program is designed to meet the needs of baccalaureate-trained professionals. Programs can be tailored for professionals to make them more competitive 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 encouraged 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.

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.

Biology

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.

Degree Requirements

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

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.

Aquatic Sciences Emphasis

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

Master of Education Degree

The M.Ed. degree 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 group (general) 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 Undergraduate and Graduate 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 Undergraduate and Graduate Catalog description.

Upon admission to the program, the student and an advisor from the Biology Department or the Department of Biomedical Sciences 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:

Biology

- BIO 400-level courses with permission of advisor

BIO 525 Teaching Reproductive Health

BIO 557 Microbiology for Teachers

BIO 565 Modern Genetics

BIO 572 Field Zoology

BIO 573 Plants of the Great Lakes Area

BIO 575 Ecology of the Great Lakes

BIO 680 Special Topics in Biology

BIO 699 Independent Study

BMS 410 Immunology

BMS 412 Medical Bacteriology

BMS 508 Advanced Human Physiology

BMS 680 Special Topics in the Biomedical Sciences

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 positions, 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 POFE 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, Grand Valley State University, Allendale, Michigan, 49401-9403. Telephone (616) 331-2470.

Courses of Instruction

BIO 103 The Biology of People. The behavior, anatomy, physiology, and evolution of humans are studied, with the goal of explaining how their internal systems and external environments interact and are controlled. Does not count toward a biology major or minor. Fulfills Life Sciences Foundation. Part of Human Journey theme. (3-0-2) Offered fall, winter, and summer semesters. Four credits.

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. Three credits.

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. Four credits.

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 every semester. Four credits.

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. Prerequisite: High school chemistry, CHM 109, or CHM 115 (CHM 109 or CHM 115 may be taken concurrently). (3-0-3) Fulfills Life Sciences Foundation. Four credits.

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 semesters. Prerequisite: BIO 120. Four credits.

BIO 180 Selected Topics. Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: variable. One to four credits.

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 every semester. Prerequisites: BIO 120, BIO 121, MTH 110, (CHM 109 or CHM 201 recommended). Two credits.

BIO 206 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. 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 semesters. Prerequisites: BIO 120, BIO 121. Two credits.

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 sophomore standing (BIO 121 recommended). Four credits.

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. Prerequisite: BIO 121. Three credits.

BIO 232 Natural History of Invertebrates. Anatomy, physiology, embryology, evolution, and natural history of the major groups of invertebrate animals. Those of the Great Lakes region will be emphasized. (2-0-3) Offered winter semester. Prerequisite: BIO 121. Three credits.

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). Three credits.

BIO 280 Selected Topics. Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: variable. One to four credits.

BIO 302 Comparative Vertebrate Anatomy. Phylogeny and anatomy of vertebrates. (2-0-4) Offered winter semester. Prerequisite: BIO 121. Four credits.

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. Prerequisite: BIO 121. Four credits.

Biology

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) winter semester. Prerequisite: Junior standing and completion of the Life Sciences General Education category. Three credits.

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 Revolution and Evolution in the Americas theme. (3-0-0) Offered winter semester. Prerequisite: Junior standing and completion of the Life Science General Education Section. Three credits.

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. Prerequisite: Junior standing and completion of the Life Science General Education Requirement. Three credits.

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 semester. Prerequisite: Completion of the General Education Life Science Requirement. Three credits.

BIO 323 Aquatic Plants. Aquatic vascular plants and algae of the Great Lakes region with emphasis on taxonomy, physiology, and ecological distribution. (2-0-3) Offered fall semester. Prerequisite: BIO 121. Three credits.

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 winter semester. Three credits.

BIO 328 Biomedical Ethics. Examination of the values, ideas, and technologies that humans have used, are using, and may use in the future with respect to biomedical issues. The application of ethical theories to practical dilemmas in health treatment. Part of Ethics theme. (3-0-0) Offered fall, winter, and summer semesters. Prerequisite: Junior standing. Three credits.

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 Perspectives from the Outside theme. (3-0-0) Offered winter semester. Prerequisite: Junior standing. One course in biology or psychology recommended. Three credits.

BIO 333 Systematic Botany. Principles and methods of taxonomy of vascular plants. (2-0-3) Offered winter semester. Prerequisite: BIO 121. Three credits.

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. Part of Ethics theme. (3-0-0) Offered fall, winter, and summer semesters. Prerequisite: Junior standing. Three credits.

BIO 340 Microtechnique. Theory, procedures, and techniques of microscope slide preparation using a range of biological materials. (1-0-3) Two credits.

BIO 342 Ornithology. Identification, classification, anatomy, physiology, behavior, and life histories of birds. (2-0-3) Offered winter and occasional summer semesters. Prerequisite: BIO 121. Three credits.

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. Junior Standing. Three credits.

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. Three credits.

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 occasional spring/summer semesters. Prerequisite: BIO 120 or BIO 103, or permission of instructor. Three credits.

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, BIO 121, and BIO 215 or permission of instructor. Four credits.

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. Four credits.

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. Concurrent enrollment in BIO 376 is required. (3-0-0) Offered fall and winter semesters. Prerequisites: BIO 121 (or BMS 208) and BIO 120. Three credits.

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. One credit.

BIO 380 Selected Topics. Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: Variable, and permission of instructor. One to four credits.

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. One credit.

BIO 399 Selected Experiences in Biology. Supervised independent laboratory, field, or other scholarly activity in biology. Topic and amount of credit must be arranged with faculty member and approved by department chair before registration. May be elected for up to five credits toward a biology degree. Offered fall, winter, and spring/summer semesters. Prerequisite: Permission of department chair. One to four credits.

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. Three credits.

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 fall semester. Prerequisites: BIO 120 and BIO 121 and CHM 231 or CHM 241. Four credits.

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 and winter semesters. Prerequisites: BIO 375 and BIO 376; CHM 232 or CHM 242 (may be taken concurrently). Four credits.

Biology

BIO 406 Cell and Molecular Biology Laboratory. A unified experimental approach to cell and molecular biology with emphasis on instrumentation and student initiative. (0-0-4) Offered fall and winter semesters. Prerequisite: BIO 405 (may be taken concurrently). Two credits.

BIO 408 Wildlife Management. Wildlife population management; life histories, census techniques, and habitat evaluation (3-0-3). Offered winter semester. Prerequisites: BIO 215; BIO 222 and BIO 333 recommended. Four credits.

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. (3-0-3) Offered winter semester. Prerequisites: BIO 375 and BIO 376; a human genetics course, and CHM 232 may be substituted. Three credits.

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. Four credits.

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. Three credits.

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 and CHM 232 or CHM 461. Three credits.

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). Two credits.

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. One to four credits.

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. One to four credits.

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. (3-0-3) Offered fall semester. Prerequisites: BIO 120 and BIO 121, BIO 355 or BIO 375, and a course in zoology or anatomy, or permission of instructor. Three credits.

BIO 423 Plant Biotechnology. Study of plant development and its control by hormones, environment and genome, and introduction to current techniques and topics in plant biotechnology, such as another culture, protoplast preparation and fusion, embryogenesis, organogenesis, genetic transformation and developmental mutants. (2-0-2) Offered winter semester. Prerequisite: BIO 376. Three credits.

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. (0-0-4) Offered fall semester. Prerequisites: BIO 406. Two credits.

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. Four credits.

BIO 440 Limnology. Ecology of lakes and streams with emphasis on the physical, chemical, and biological factors affecting their productivity. (2-0-4) Offered every second fall semester. Prerequisite: BIO 215 or permission of instructor. Four credits.

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. Three credits.

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. Four credits.

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. Three credits.

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. Four credits.

BIO 470 Conservation Biology. Theoretical concepts and research applications in the multi-disciplinary and applied science of maintaining the planet's biodiversity at the genetic, species, and ecosystem levels. Topics include distribution, functions, and value of biodiversity; causes and consequences of biodiversity loss; conservation solutions; and social, political, legal, ethical, and economic aspects of biodiversity conservation. (3-0-0) Offered fall semester. Prerequisite: BIO 215. Three credits.

BIO 480 Selected Topics. Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: variable. One to four credits.

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. One to six credits.

Biology

BIO 494 Biology in the 21st Century. Four major biological topics that will have significant impact in the 21st century are genetics, food production, environmental degradation, and population growth. Future K-8 teachers will discuss these topics in light of understanding their impact and importance in the science curriculum. (2-1-0) Offered fall and winter semesters. Prerequisites: BIO 120, BIO 121, and nine additional credits in biology (the last three credits may be taken concurrently). (capstone for Group Science–Biology Emphasis Majors). Three credits.

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 occasional summer semesters. Prerequisites: Senior status and BIO 120, BIO 121, BIO 215, BIO 375, BIO 376, and CHM 231 or CHM 241. Three credits.

BIO 499 Research in Biology. Can be elected for up to five credits toward the biology major. Number of hours of credit and topic to be arranged with faculty member involved. Offered fall, winter, and summer semesters. Prerequisite: A minimum grade point average of 3.0 in biology and permission of the department. One to four credits.

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 of every third year. Prerequisites: bachelor's degree and teacher certification. Three credits.

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 of every third year. Prerequisites: bachelor's degree, including a year each of biology and chemistry, and teacher certification. Four credits.

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 of every third year. Prerequisites: bachelor's degree and familiarity with Mendelian genetics. Three credits.

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 of every third year. Prerequisites: One year of college-level biology; bachelor's degree. Three credits.

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 of every third year. Prerequisites: One year of college-level biology; bachelor's degree. Three credits.

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. Four credits.

BIO 580 Selected Topics. Readings, lecture, discussions, lab, or field experience (or any combination) on a specific biological topic. Prerequisites: variable. One to four credits.

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. Three credits.

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. One to three credits.

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. Three to nine credits.

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. Three to nine credits.

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. Three to nine credits.

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. BIO 610, STA 622, and completion or concurrent enrollment in BIO/NRM 691, BIO/NRM 693, or BIO/NRM 695. Three credits.

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. Prerequisite: permission of instructor, student's committee chair, and department chair. One to three credits.

Biomedical Sciences (BMS)

Chair: Nieuwkoop. Professors: Kopperl, Nieuwkoop, Nochera, Strickler; Associate Professors: D. Burg, M. Burg, Capodilupo, Hecht, Nizielski, Nochera; Assistant Professors: Adams, Baxter, Graham, Kipp, Linn, Richiert, Sridhar, Sylvester.

Degrees offered: Bachelor of Science in Biomedical Sciences and Master of Science in Biomedical Sciences.

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.

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.

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.

Biomedical Sciences Major

Program Advisors: Adams, Baxter, D. Burg, M. Burg, Capodilupo, Graham, Hecht, Kipp, Kopperl, Linn, Nieuwkoop, Nizielski, Nochera, Richiert, Sridhar, Sylvester.

The biomedical sciences major consists of courses prescribed by professional schools (medical, dental, osteopathic, veterinary, pharmacy, graduate) as essential to the successful completion of a professional school curriculum, plus electives necessary to provide educational breadth and maturity. Although the requirements of professional schools are similar, there are some differences. Because it is impossible to tailor one curriculum to meet the requirements of every professional school, it is the student's responsibility, in consultation with an advisor, to see that the requirements are fulfilled for the particular professional school(s) in which the student is interested. Initial academic advising for the preprofessional areas is also available through the Science and Mathematics Advising, Resource, and Transition (S.M.A.R.T.) Center located in 377 Padnos, (616) 331-8585. This major allows sufficient flexibility to accommodate additional specific professional school requirements. The degree also prepares students for employment in research laboratories in industry, academia, and government.

Career Opportunities

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.

Major Requirements

1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. Required Biomedical Sciences Courses

- BMS 208 Human Anatomy
- BMS 212 Introductory Microbiology
- BMS 213 Laboratory in Microbiology
- BMS 290 Human Physiology
- BMS 291 Laboratory in Human Physiology
- BMS 301 Introduction to Research in the Biomedical Sciences
- BMS 495 Concepts in Wellness*

*Capstone course

3. Required Cognate Courses

BIO 120 General Biology I
 BIO 355 Human Genetics
 CHM 115 Principles of Chemistry I
 CHM 116 Principles of Chemistry II
 CHM 232 Biological Chemistry
 CHM 241 Organic Chemistry For Life Sciences I
 CHM 242 Organic Chemistry For Life Sciences II
 CHM 461 Biochemistry I
 MTH 122 College Algebra
 MTH 123 Trigonometry
 PHY 220 General Physics I
 PHY 221 General Physics II
 STA 215 Introductory Applied Statistics

4. Biomedical Science Courses

Six additional hours of upper-division biomedical sciences courses
 BIO 405 Cell and Molecular Biology
 BIO 406 Cell and Molecular Biology Laboratory
 BIO 422 Embryology
 or CHM 461 Biochemistry I (may be included in these six hours)

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 208 Human Anatomy
 BMS 212 Introductory Microbiology
 BMS 213 Laboratory in Microbiology
 BMS 290 Human Physiology
 BMS 291 Laboratory in Human Physiology
 BMS 312 Bacterial Genetics
 BMS 313 Bacterial Genetics Laboratory
 BMS 322 Bacterial Physiology
 BMS 323 Bacterial Physiology Laboratory
 BMS 499 Research in the Biomedical Sciences to 3 (Capstone course)

3. Required Cognate Courses

BIO 120 General Biology I*
BIO 355 Human Genetics
 or BIO 375 Genetics
 and BIO 376 Genetics Laboratory
CHM 115 Principles of Chemistry I
CHM 116 Principles of Chemistry II
CHM 241 Organic Chemistry For Life Sciences I
CHM 242 Organic Chemistry For Life Sciences II
MTH 122 College Algebra
MTH 123 Trigonometry
PHY 220 General Physics I
PHY 221 General Physics II
STA 215 Introductory Applied Statistics*

And Either

CHM 232 Biological Chemistry
 or CHM 461 Biochemistry I

4. Science Courses

Six additional hours of upper-division science courses from the following:

BIO 414 Molecular Biology of the Gene
BMS 410 Immunology
BMS 411 Immunology Laboratory
BMS 412 Medical Bacteriology
BMS 413 Medical Bacteriology Laboratory
BMS 431 Medical Virology
CHM 462 Techniques in Biochemistry

Nutritional Science Emphasis

Program Advisors: 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.

*B.S. cognate course sequence: STA 215; BIO 120; BMS 290–291.

2. Required Biomedical Sciences Courses

BMS 105 Basic Nutrition
 BMS 208 Human Anatomy
 BMS 212 Introductory Microbiology
 BMS 213 Laboratory in Microbiology
 BMS 290 Human Physiology*
 BMS 291 Laboratory in Human Physiology*
 BMS 301 Introduction to Research in the Biomedical Sciences
 BMS 306 Advanced Human Nutrition
 BMS 307 Advanced Clinical Nutrition
 BMS 404 Community Nutrition
 BMS 407 Nutrition in the Life Cycle
 BMS 415 Nutrition and Physical Performance
 BMS 495 Concepts in Wellness**

3. Required Cognate Courses

BIO 120 General Biology I*
 BIO 355 Human Genetics
 or BIO 375 Genetics
 and BIO 376 Genetics Laboratory
 CHM 115 Principles of Chemistry I
 CHM 116 Principles of Chemistry II
 CHM 232 Biological Chemistry
 CHM 241 Organic Chemistry For Life Sciences I
 CHM 242 Organic Chemistry For Life Sciences II
 MTH 122 College Algebra
 MTH 123 Trigonometry
 PHY 220 General Physics I
 PHY 221 General Physics II
 STA 215 Introductory Applied Statistics*

Master of Biomedical Sciences

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

1. Requirements for graduate admission as identified in the Admissions section of the Grand Valley State University Undergraduate and Graduate Catalog.
2. GPA of 3.0 (B) from all undergraduate courses and satisfactory score from the General Test of the Graduate Record Examination.
3. Names of three references.
4. Completion of undergraduate courses in anatomy, physiology, microbiology, and statistics. Coursework in chemistry is highly recommended.

*B.S. cognate course sequence: STA 215; BIO 120; BMS 290–291.

**Capstone course

Degree Requirements

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
BMS 508 Advanced Human Physiology
BMS 523 Epidemiology
BMS 601 Experimental Design

Thesis Credits: 6

BMS 695 Master's Thesis Research to 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
BMS 679 Clinical Practicum to 6
NUR 642 Teaching Health Professionals

3. Clinical Electives-6

PT 675 Clinical Education III

Courses of Instruction

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. Three credits.

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. One credit.

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. Three credits.

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. One to four credits.

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. Four credits.

BMS 205 Food Service Sanitation. An introduction to sanitation in the food service industry for management and employees in restaurants, catering establishments, motels and hotels, and food wholesaling and warehousing companies. Covers food-borne illness and its etiology, safe food handling procedures, food and facility inspection, and management. Lectures and field trips. Offered winter semester. Three credits.

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: C or better in both CHM 109 (or CHM 115) and BIO 120, or in BMS 202. Three credits.

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, CHM 231 and CHM 232, or permission of instructor. Three credits.

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. Prerequisite: BMS 212 or concurrent enrollment. One credit.

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. Three credits.

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. Offered winter semester. Three credits.

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. One to four credits.

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 CHM 231 or CHM 241; prerequisite or co-requisite: CHM 232 or CHM 242. A physics course is recommended. Three credits.

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. Prerequisite or co-requisite: BMS 290 or the equivalent. One credit.

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,

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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: CHM 231 or CHM 241, STA 215, and one 200-level biomedical sciences course. Three credits.

BMS 305 Clinical Nutrition. This course has two objectives: to enable students to understand normal digestion, absorption, and metabolism of nutrients at a sophisticated level, and to make them aware of the nutritional needs of diseased patients. Pathophysiology of the gastrointestinal system will be considered. Offered fall and winter semesters. Prerequisites: BMS 290 or BMS 291 and CHM 232. Three credits.

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 291 or MOV 304, and CHM 232 or CHM 461. Three credits.

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. Prerequisite: BMS 306. Three credits.

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 every semester. Prerequisites: B- or better in BMS 208. One credit.

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. Prerequisites: BMS 212 and BMS 290 or BMS 291 or permission of instructor. Three credits.

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 or equivalent or instructor's permission. Three credits.

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 BMS 213 or BIO 357, and BIO 355 or BIO 375. Three credits.

BMS 313 Bacterial Genetics Laboratory. A selected set of experiments to demonstrate important principles of bacterial genetics, including basic microbial methodology, mutagenesis, and gene transfer. (0-0-4) Offered fall semester of even numbered years. Prerequisite: BMS 312 or concurrent registration. One credit.

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 BMS 213 or BIO 357 or permission of instructor. Three credits.

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. Prerequisite: BMS 322 or concurrent registration. One credit.

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. Prerequisite: BMS 208 and BMS 309 or equivalent human anatomy course. Two credits.

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). Three credits.

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 202 or BMS 208 and BMS 290; credit or concurrent enrollment in SOC 388 or permission of the instructor. Three credits.

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. One to six credits.

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: Written permission of instructor prior to registration. One to three credits.

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 306. Three credits.

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. Prerequisite: BMS 306. Three credits.

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. BMS 280 and BMS 281 or permission of instructor. Three credits.

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 or BMS 213, and CHM 232 or CHM 242 or permission of instructor. Three credits.

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. One credit.

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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. Prerequisites: BMS 212 and CHM 232 or CHM 242 or permission of instructor. Three credits.

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. Two credits.

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. Prerequisite: BMS 306. Three credits.

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 or permission of instructor. Two credits.

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. Prerequisite: BMS 416 or concurrent registration. One credit.

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. Prerequisites: BMS 208 and BMS 309. One credit.

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. Prerequisite: BMS 427. Three credits.

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 or BMS 213 and organic chemistry or permission of instructor. Three credits.

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. Prerequisites: BMS 212 and organic chemistry or permission of instructor. Two credits.

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 organic chemistry or permission of instructor. Three credits.

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. Prerequisites: BMS 208 and BMS 309 or equivalent. Four credits.

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. Prerequisite: BMS 208 and BMS 309 or permission of instructor. Four credits.

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. Prerequisite: Admission to the Physical Therapy or Physician's Assistant Studies program. Four credits.

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. Two credits.

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. Three credits.

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. One to four credits.

BMS 485 Preprofessional Seminar. A review of the professional school application process, including entrance examinations, application procedures, financial aid, and experiences of past students currently enrolled in professional programs. Offered winter semester. One credit.

BMS 490 Clinical Practicum in CLS. Theory and practicum in clinical laboratory sciences under the direction of an affiliate program in cytogenetic technology, cytotechnology, histotechnology, or medical technology. Students register for 15 hours in the fall and winter semesters. The 30 credits will be distributed according to which clinical practicum the student completes. Fifteen credits.

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. Offered every semester. Prerequisites & Notes: 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. Three credits.

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. One to three credits.

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. Prerequisite: BMS 290 or BMS 291 or permission of instructor. Three credits.

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. BMS 212 and CHM 232 or CHM 242, or permission of instructor. Three credits.

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. BMS 212 and CHM 232 and 242, or permission of instructor. Three credits.

BMS 523 Epidemiology. An introduction to the study of the distribution and determinants of disease frequency in people. Offered fall semester. Prerequisites: BMS 222 and STA 215 or permission of instructor. Two credits.

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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 or permission of instructor. Three credits.

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. BMS 208 or equivalent. Four credits.

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. BMS 208, BMS 309 or equivalent anatomy courses. Four credits.

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. Three credits.

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. Prerequisite: BMS 508 or permission of instructor. Three credits.

BMS 611 Theory and Practice of Infection Control. A study of identification and control of hospital-associated infections. Offered on demand. Prerequisite: Graduate standing, a microbiology course, or experience as a health care professional; permission of instructor required for others. Three credits.

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: A course in medical microbiology or permission of instructor. Three credits.

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 permission of instructor. Three credits.

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. Three to six credits.

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. Prerequisite: BMS 601. A signed contract must be submitted before registration. One to three credits.

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. Three credits.

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. Three to six credits.

Seidman College of Business

Dean: Williams. Associate Dean: Reifel; Faculty: Accounting and Taxation: Cannon, Danko, DeBruine, de la Rosa, Dunn, Fanning, Godwin, Goldberg, Grant, Harris, Kessler, Lindquist, Ratliff-Miller, Sopariwala, Stovall, Veazey, Williams, Yuhás; Economics: Dalmia, Giedeman, Isely, Lowen, Ogura, Reda, Reifel, Sicilian, Simons, Singh, Smith, Sun; Finance: Bhagwat, Blose, Chang, Dimkoff, Edwards, Gondhalekar, Griggs, Pettengill, Sundaram, Willey; Management: Akbulut, Crampton, Frey, Hall, Hodge, IsHak, Jones-Ridders, Joshi, Klein, Kosalge, Koste, Kumar, Levenburg, Magal, Margulis, McKendall, Mishra, Mothersell, Motwani, Mudde, Sanchez, Sanford, Swift, Subramanian; Marketing: Benet, Cotter, Emden, Good, Kraft, Lane, Pope, Robideaux, Rudolph, Rumery, Taylor, Wolter. Graduate Business Programs Director: Bajema. Undergraduate Business Program Director: Brownley. Special Programs Coordinator: Schmid.

Accreditation: The Seidman College of Business is accredited by the AACSB International—The Association to Advance Collegiate Schools of Business. The accounting program has separate programmatic accreditation by AACSB International.

Mission Statement

The Seidman College of Business provides a rigorous learning environment, with a student focus, a regional commitment, and a global perspective. In its teaching, scholarship, and service activities the College innovates, applies knowledge, and integrates concepts.

Programs and Objectives

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 a combination MSN/MBA in conjunction with the Kirkhof College of Nursing and dual M.B.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 BBA 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

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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.

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.

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.

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 development, and information services in the field of entrepreneurship. The center fosters interaction with the state and local community through its participation in the Great Lakes Venture Quest (a statewide business plan competition), sponsorship of various workshops and seminars, and through coordination of programs with other local business organizations. 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. In this regard, the center is supported and coordinated with the local and state offices of the Small Business Technology Development Centers.

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 dialogue groups should contact Robert Frey.

Family Owned Business Institute

The Family Owned Business Institute (FOBI) was established in partnership with the Grand Rapids Area Chamber of Commerce to promote, preserve, influence, and impact family

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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, large and small, 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.

The institute is guided by an advisory board comprised of leading family business executives, professional service providers, and by university faculty. The institute fosters research through its Research Scholars programs, its professional relationships and data sources, and its affiliation with national and international organizations. FOBI's Web site, fobi.gvsu.edu, is designed to facilitate the search for information on 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 Web site at: www.misbtdc.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 Web site is: <http://www.misbtdc.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.gvbizinfo.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.

Seidman Financial Planning Certificate Program

The Seidman Financial Planning Certificate Program (SFPC) is a non-credit program that fulfills a growing demand among financial planning professionals for the CERTIFIED

FINANCIAL PLANNER™ or CFP™ certification.* Those who successfully complete this CFP Board-Registered Program will be qualified to sit for the CFP™ Certification Examination. The SFPC program consists of six noncredit courses that cover principles of financial planning including insurance, investments, retirement, personal income tax, and estate planning. All of the courses in the program follow guidelines established by the Certified Financial Planner Board of Standards. More information is available on our Web site at www.gvsu.edu/business/fp.

Endowed Chairs

L. William Seidman Chair in Accounting

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 as Assistant to the President of the United States for Economic Affairs.

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.

Executive-in-Residence

The Seidman College of Business sponsors the Executive-in-Residence program, which gives students and faculty an opportunity to gain personal insight into the everyday activities and complexities of managing a business. Top executives donate one or more days to teaching and fielding questions from faculty and students in the classroom and in more informal meetings.

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.

*CFP™ and CERTIFIED FINANCIAL PLANNER™ are certification marks owned by the Certified Financial Planner Board of Standards, Inc. These marks are awarded to individuals who successfully complete the CFP Board's initial and ongoing certification requirements. Grand Valley State University does not certify individuals to use the CFP™ and CERTIFIED FINANCIAL PLANNER™ certification marks. CFP certification is granted only by the Certified Financial Planner Board of Standards to those persons who, in addition to completing an educational requirement such as this CFP Board-Registered Program, have met its ethics, experience and examination requirements.

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.

Washington Campus Program

Seventeen universities have recognized the importance of training private sector managers and leaders in the art of working with the federal government and have established the Washington Campus Program. These colleges and universities are Grand Valley, Arizona State, the University of California at Berkeley, the University of California at Los Angeles, Cornell University, 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 summer selected graduate and undergraduate students spend a week in Washington D.C., attending classes, special lectures, and hearings, and conducting library research. The students stay in appropriate facilities in Washington. Undergraduate students must be upper division members of the Honors College or in excellent academic standing. 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 and undergraduate students can contact Seidman Undergraduate Student Services.

Study Abroad Test Drive

The Study Abroad Test Drive program is for business students who are interested in experiencing another culture but may not have the time for a semester or year to study abroad. The program offers adventure, business, and culture by escorting students to an international destination for a week to ten days over semester breaks. This program provides a glimpse of another culture for a reasonable length of time, is directed by business faculty, and is offered at a reasonable price. Not for course credit, destinations may vary.

Student Organizations

Presidents 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 all 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 business men 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.

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 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

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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: 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 an upper level cumulative GPA in declared area of concentration of at least a 3.0 (based on a 4.0 scale) and a cumulative overall GPA of at least 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.

Student Awards

Wall Street Journal Award. 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

Richard H. Giles Memorial Scholarships. Richard H. Giles, founder of the Grand Rapids Arthur Andersen office, was an active member of the business community. Richard H. Giles Memorial Scholarships are awarded to full-time (averaging 9 credit hours or more per semester) graduate degree-seeking Master of Science in Accounting students who show promise of making outstanding contributions in the field of public accounting. Each winter faculty nominate qualified candidates based on academic record and classroom observations. Recipients are expected to demonstrate good scholarship, interpersonal skills, and

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continued involvement in the business community. Recipients will receive up to \$4,000 (\$2,000 per semester) towards tuition & fees. Application is by faculty invitation.

Accounting Alumni Scholarship. The Accounting Alumni Scholarship Fund was established to recognize outstanding full-time undergraduate accounting students who show promise of making significant contributions in the field of accounting. Each winter the faculty nominate qualified candidates based on academic record and classroom observations. Recipients are expected to demonstrate good scholarship, interpersonal skills, and continued involvement in the business community. Recipients will receive up to \$1,000 (\$500 per semester) towards tuition and fees. Application is by faculty invitation.

The Don Klein Graduate Scholarship in Accounting. This scholarship was created by the Seidman College of Business and Accounting Department alumni in honor of Professor Emeritus and former Accounting Department Chair, Don Klein. Candidates must be accepted in the Master of Science in Accounting program to be eligible to receive this scholarship of full in-state tuition cost of 33 credits. Applicants must have completed an undergraduate business degree with a minimum of 3.75 GPA; have a minimum of 600 GMAT score; demonstrated leadership, service, and involvement in extra-curricular activities; and strong interpersonal and communication skills. Students must enroll full-time and complete the program within two academic years. Deadline for application is March 1 annually.

Hungerford, Aldrin, Nichols & Carter, P.C. Accounting Scholarship. Hungerford, Aldrin, Nichols & Carter, P.C. has been one of Grand Rapids' CPA and consulting firms since 1941. Each year the firm awards one \$2,000 scholarship to a fulltime student who is either a junior or senior accounting major and has expressed an interest in a career in public accounting in West Michigan. Each winter the faculty nominate qualified candidates based on academic record and classroom observations. The firm selects the scholarship winner from faculty nominations.

TEI Accounting/Tax Scholarship. The West Michigan Chapter of the Tax Executives Institute (TEI) established a scholarship for undergraduate accounting majors with an interest in tax. To be eligible, students must not be currently affiliated with a CPA firm and must intend to enroll in one or more graduate tax courses before the end of the next school year. Recipients are expected to demonstrate good scholarship, interpersonal skills, and continued involvement in the business community. Recipients receive up to \$1000 (\$500 per semester) towards tuition for graduate tax courses. Application is by faculty invitation. Each winter the faculty nominate qualified candidates based on academic record and classroom observations.

American Production and Inventory Control Society (APICS) Scholarship. Each year a scholarship is given to an undergraduate or graduate student interested in production and inventory control. The student is selected on the basis of scholarship and financial need. The \$600 award is provided by the Grand Rapids chapter of the American Production and Inventory Control Society.

L.V. Eberhard Business Scholarship. One or two \$1,000 renewable scholarships are given each year to entering freshmen majoring in a business field. Applicants must have a minimum 3.5 GPA and 29 ACT (1300 SAT) composite score. For renewal, students must maintain a 3.0 after 25 credits, 3.25 after 55 credits, and a 3.5 after 85 credits. Recipients are selected by the Seidman College of Business.

L.V. Eberhard Graduate Research Assistantship. One graduate research assistantship is awarded each year. The amount of the award is \$7,500, including tuition. Applicants must

have a minimum 3.5 undergraduate GPA and a minimum GMAT score of 600. For renewal, students must maintain a 3.5 GPA. Recipients are selected by the Seidman College of Business.

Newton D. Becker Scholarship Award. Each spring, a graduating senior in the accounting program is given a scholarship to attend the Becker C.P.A. review course.

Earl Harper Management Scholarship. Each year, \$500 scholarships are awarded to an African-American management major. Qualified students must have earned a minimum of a 2.5 GPA after completing 15 credits at Grand Valley. The recipient is selected by the Multicultural Advisory Council.

Marilyn and B. P. Sherwood III Scholarship. One or two \$500 scholarships are awarded each year to women MBA candidates. The candidates may be either full-time or part-time students. The award is based on both scholarship and financial need.

Business Study Abroad Scholarship. The purpose of this scholarship is to provide support to undergraduate and graduate students of business who enhance their university studies by studying in a foreign country. Scholarships of approximately \$500 will be awarded each year (the number will depend on the amount of funding). Applications can be found on the Seidman International Business Programs Web site at www.gvsu.edu/intl-bus/ and must be submitted by April 1.

BOMA Scholarship. This scholarship offered by the Building Owners and Managers Association of Greater Grand Rapids (BOMA) provides \$1000 award to an undergraduate business student who is a business economics real estate major or has an interest in a real estate or a real estate related career. To be eligible, applicants must be full-time students who have completed the junior year with a minimum overall 3.0 GPA. The recipient is selected by the Seidman College of Business.

The Steelcase Inc. Seidman College of Business Diversity Scholarship. This scholarship was created by Steelcase, Inc. to advance and support persons of color in their pursuit of an undergraduate degree from the Seidman College of Business. Undergraduate candidates are eligible to apply for this scholarship beginning with their junior year. Recipients must be enrolled full-time and have a cumulative GPA of 2.75 or better. Scholarships will be renewed annually without re-application and may be received for up to a total of four semesters provided they continue to meet the qualifications. Scholarship amounts vary. The recipients will be chosen by the Seidman College of Business. The deadline is February 1st annually and forms are available online and in the Seidman Undergraduate Advising office, Multicultural Affairs office or the Financial Aid office.

The Kathleen B. Vogelsang Seidman College of Business Scholarship for Women. This scholarship, initiated by Seidman alumna Kathleen B. Vogelsang, provides \$500 per year to non-traditional, women students studying in the Seidman College of Business. Candidates may be either undergraduate or graduate students, must have had prior employment experience, must be enrolled for at least six credits, and must have at least a 3.0 GPA. Initial recipients will have their scholarships automatically renewed for an additional five semesters if they continue to meet the criteria.

The Jack J. Korff Seidman College of Business Finance Scholarship. This scholarship, initiated by Jack J. Korff, provides varying amounts of financial aid to Seidman College of Business students who major in Finance. Entering junior year students with a cumulative 3.0 GPA and who demonstrate financial need are eligible. Initial recipients will have this scholarship automatically renewed for an additional three semesters if they continue to meet the criteria.

The Hilda C. Holder Scholarship for Women in Business. This scholarship, created by Dr. Arnold C. Ott and Mrs. Marion P. Ott, provides varying amounts of financial aid to needy junior or senior undergraduate or graduate female business degree-seeking students. Applicants must be enrolled full-time, must have a cumulative 3.0 GPA, and must demonstrate financial need. Initial recipients will have this scholarship automatically renewed for an additional five semesters if they continue to meet the criteria.

The Barry Castro Business Ethics Scholarship. This scholarship, created in memory of Seidman management professor Barry Castro, provides \$1,500 per year to entering junior level Seidman students who have a cumulative 3.0 GPA, are enrolled as a full-time BBA degree-seeking student, and who can demonstrate a strong interest in business, ethics, and philosophy. Initial recipients will have this scholarship automatically renewed for one additional year if they continue to meet the criteria.

J.C. Huizenga Scholarship. This scholarship, created by J. Patrick Sandro in honor of J. C. Huizenga, entrepreneur and founder of National Heritage Academies, provides varying amounts of financial aid to needy junior or senior business students with at least a 3.0 GPA or to graduate business students with at least a 3.4 GPA. Applicants must be enrolled for at least 3 credit hours and must demonstrate financial need. Initial recipients will have this scholarship automatically renewed for an additional five semesters if they continue to meet the criteria.

A. Scott and Ruth P. Koeze Graduate Business Scholarship. This scholarship, initiated by A. Scott and Ruth P. Koeze, leaders of Koeze Company, provides awards of not more than one-third of tuition for the enrolled semester academic load of the MBA recipient. Candidates must have completed background requirements for the MBA, be enrolled for at least three credit hours, and be maintaining at least a 3.0 GPA. First priority is given to candidates who have demonstrated financial need and secondary priority is given to students with undergraduate degrees in the arts of humanities. Initial recipients will have this scholarship automatically renewed if they continue to meet the criteria.

H. James and Carole Lynn Campbell Williams Scholarship in Business. The scholarship was created by Seidman Dean H. James Williams and his wife Carol Lynn Campbell Williams to honor their parents Reverend Hubert Sam and Reverend Lula Mae Williams and Clarence Charles and Rose Holiday Campbell. The scholarship provides varying amounts of money to needy business students whose family residences are inside the boundaries of either Flint or Grand Rapids, Michigan. Entering freshmen with a high school GPA of at least 3.5 and a 26 or greater ACT score who have been admitted into Seidman or are pre-business are eligible to apply. Also, upper class students admitted into Seidman are also eligible if they have at least a 3.0 GPA. Applicants must demonstrate financial need. Initial recipients will have this scholarship automatically renewed for an additional eight semesters if they continue to meet the criteria.

Robert H. and Barbara Wood Entrepreneurship Scholarship. This scholarship, initiated by Robert H. and Barbara Wood, provides varying amounts of financial aid to full-time juniors admitted to the Seidman college of Business who are pursuing either an entrepreneurship minor or an entrepreneurship certificate. Financial need is not a consideration. Applicants must include a personal essay with their application. Initial recipients will have this scholarship automatically renewed for an additional three semesters if the recipient maintains at least a 2.5 GPA.

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 pre-

pare students for careers in various business areas as well as for admission into graduate and professional schools.

Admission

The Seidman College admits a select few students directly into the Business College as freshmen each year. This honor is reserved for students who have a 26 or higher composite score on the ACT and a 3.5 or higher high school GPA. In order to continue early-admitted status, students must maintain an overall GPA of 2.75. 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.

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.

Business

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.

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.

Requirements for the B.B.A. Degree

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.

See General Academic Regulations for general education details. It is strongly recommended that students complete all 200-level business core and cognate courses prior to enrolling in 300- and 400-level Seidman College courses.

Business Core

The business core courses acquaint students with various fields in business and help them learn to communicate, to interact, and to assume responsible positions in their chosen fields. Students majoring in business administration must complete the following core courses:

ACC 212 Principles of Financial Accounting
 ACC 213 Principles of Managerial Accounting
 BUS 201 Legal Environment for Business
 FIN 320 Managerial Finance
 MGT 268 Introduction to Management Information Systems
 MGT 303 Introduction to International Business
 MGT 331 Concepts of Management
 MGT 366 Operations Management
 MGT 495 Administrative Policy
 MKT 350 Marketing Management

Additional Requirements

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
 MGT 340 Business, Social Change and Ethics
 MKT 375 Marketing Ethics
 MGT 438 Business Ethics

Additionally

Additionally, students are required to take three upper-division Seidman courses not applied to the major, minor, or cognate (9 credits total). Students pursuing a second B.B.A. major may apply these courses to the second major. Students who have completed graduate accounting courses with a grade 3.0 or better may obtain a waiver of an equivalent number of these courses or credits. Contact the Seidman Undergraduate Student Services Office for assistance.

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Cognate Requirements

- Upper-division economics course (not ECO 490)

CS 150 Introduction to Computing

ECO 200 Business Economics

or both ECO 210 Introductory Macroeconomics

and ECO 211 Introductory Microeconomics

STA 215 Introductory Applied Statistics

Quantitative Group

choose one:

MGT 361 Management Science*

MTH 122 College Algebra

MTH 125 Survey of Calculus

MTH 201 Calculus I

PHI 103 Logic

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 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 their 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.

Accounting

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 (C.P.A.) and/or the Certified Management Accountant (C.M.A.) examination. Accountancy also provides an excellent undergraduate background for a degree in law.

Major Requirements

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

One of the following:

ACC 240 Financial Accounting Applications

ACC 310 Intermediate Accounting I

ACC 311 Intermediate Accounting II

ACC 340 Accounting Systems

One of the following two courses:

ACC 317 Individual Income Taxation

or ACC 318 Entity Taxation

One of the following two courses:

ACC 321 Cost Strategy and Decision Making

or ACC 322 Cost Systems and Control Techniques

And one of the following two courses:

ACC 413 Internal Auditing

or ACC 414 Auditing Theory and Practice

*May also be used as one of the four required upper-division elective courses.

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 Web site 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 Web site at <http://www.imanet.org/ima/index.asp>.

Business Economics

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.

- Three additional economics electives at or above the 300-level.

ECO 312 Applied Microeconomics

ECO 313 Business Cycles and Growth

ECO 495 Senior Economic Project (Capstone)

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

ECO 313 Business Cycles and Growth

ECO 435 Urban Economics

ECO 436 Real Estate Economics

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ECO 495 Senior Economic Project (Capstone)

FIN 350 Real Estate Principles

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

GPY 307 Introduction to Computer Mapping/Geographic Information Systems

GPY 309 Introduction to City and Regional Planning

PA 307 Local Politics and Administration

PA 439 Community Analysis

Finance

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.

Required Courses:

Business core,

FIN 321 Investments

FIN 322 Intermediate Managerial Finance

FIN 422 Advanced Managerial Finance

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

ACC 311 Intermediate Accounting II

ACC 318 Entity Taxation

ACC 321 Cost Strategy and Decision Making

ACC 322 Cost Systems and Control Techniques

ECO 312 Applied Microeconomics

ECO 313 Business Cycles and Growth

ECO 414 Money and Banking

ECO 480 Econometrics and Forecasting

FIN 331 Risk and Insurance

FIN 350 Real Estate Principles

FIN 380 Seminar in Finance

FIN 420 Bank Management

FIN 428 Security Analysis and Portfolio Management

FIN 429 International Financial Management

FIN 490 Finance Internship

FIN 499 Independent Research

(Note that the economics course 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.

International 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 non-business 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 substitutions may be made. Students should contact the Seidman Undergraduate Student Services Office early in their program for a suggested pattern of coursework.

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
 ECO 369 International Economic Issues
 FIN 429 International Financial Management
 MGT 433 International Human Resource Management
 MGT 466 International Management and Multinational Corporations
 MKT 359 Multinational Marketing

One course from the following group:

ECO 349 Emerging Markets Issues
 ECO 365 Comparative Economic Systems
 PLS 315 International Political Economy

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
 GPY 220 Cultural Geography. Credits: 3
 GPY 235 World Regional Geography. Credits: 3

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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 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.

Management

The management program includes both a major and a minor (see Minor Programs for a complete description of the management minor).

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 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

MGT 334 Labor and Employment Law

MGT 336 Compensation and Benefits Management

MGT 431 Advanced Human Resources Management

MGT 432 Grievance Administration, Arbitration, and Collective Bargaining

And one of the following:

MGT 355 The Diversified Workforce

MGT 430 Organizational Development
or MGT 433 International Human Resource Management

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*

MGT 362 Computers in Operations Management

MGT 367 Manufacturing and Planning and Control

And two of the following courses:

MGT 363 Managing Quality

MGT 364 Service Operations Management

MGT 365 Strategic Management of Operations

Plus two of the following courses:

MGT 337 Supply Chain Management

MGT 466 International Management and Multinational Corporations

MGT 467 Advanced Topics in Operations Management

MKT 457 Logistics and Transportation

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,

CS 160 Programming with Visual Basic

CS 333 Database Management and Implementation

MGT 350 Principles of Electronic Commerce

MGT 371 Systems Analyses and Design

MGT 451 Introduction to E-Commerce Applications

MGT 452 Advanced E-Commerce Applications

Electives:

Any one of the following:

MGT 351 Enterprise Information Systems

MGT 360 Business Process Redesign

*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.

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MGT 471 Enterprise Systems Configuration

MGT 475 Customized ERP Solutions

Marketing

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.

General 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

MKT 352 Marketing Research

MKT 451 Marketing Strategy

Distribution and Logistics

This emphasis focuses on designing and implementing the best strategy for companies to use in getting goods to their customers in a way that maximizes customer service and minimizes cost. Attention is directed towards the strategic management of distribution assets, customer service, finished goods inventory control, transportation, warehousing, and international distribution planning. Students with this emphasis obtain distribution and logistics management positions with manufacturers, wholesalers, retailers, third party logistics service companies, and transportation providers.

Required Courses:

Business core,

MKT 351 Consumer Behavior

MKT 352 Marketing Research

MKT 354 Distribution Institutions and Logistics

MKT 357 Retailing

MKT 451 Marketing Strategy

MKT 457 Logistics and Transportation

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

MKT 352 Marketing Research

MKT 353 Marketing Negotiations

MKT 356 Professional Selling

MKT 451 Marketing Strategy

MKT 456 Sales Management

General Business

The 18-credit-hour major in general business develops students' ability to perceive, identify, and analyze problems, communicate potential solutions, make decisions, and monitor results. By allowing students to take courses in several business disciplines instead of concentrating on a specific emphasis, a major in general business increases students' ability to choose courses that meet their individual needs.

Required Courses

Business core; one upper-division business course each in accounting (ACC 317 or 318 recommended), finance, management, and marketing, except independent study or internship; one additional upper-division business elective; and one three-credit business internship. Students may choose the internship experience in any business discipline: ACC, BUS, ECO, FIN, MGT, or MKT. Students with extensive business experience may meet with an advisor to discuss substituting an alternative course for their internship experience.

Minor Programs

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.

Accounting

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.

Business

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.

Business

Required Courses:

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
ACC 213 Principles of Managerial Accounting
BUS 201 Legal Environment for Business
FIN 320 Managerial Finance
MGT 331 Concepts of Management
MKT 350 Marketing Management

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
ECO 211 Introductory Microeconomics

Entrepreneurship

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.

The following required courses need to be completed in sequence:

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.

ENT 150 Entrepreneurial Quest
ENT 151 New Venture Feasibility
ENT 250 Entrepreneurial Finance and Accounting
ENT 251 Entrepreneurial Management and Marketing
ENT 350 Entrepreneurial Business Plan
ENT 351 Entrepreneurial Project

International Business

The undergraduate minor program in international business is for both business and non-business 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
MGT 303 Introduction to International Business

Four courses from the following list:

ACC 330 International Accounting
ECO 349 Emerging Markets Issues
ECO 365 Comparative Economic Systems

ECO 369 International Economic Issues
 FIN 429 International Financial Management
 MGT 466 International Management and Multinational Corporations
 MKT 359 Multinational Marketing

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.

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
 MGT 333 Human Resource Management
 or MGT 334 Labor and Employment Law
 MGT 339 Business and Society
 or MGT 438 Business Ethics

And Either

MGT 355 The Diversified Workforce
 or MGT 466 International Management and Multinational Corporations

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.

Entrepreneurship Certificate (ENT)

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

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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.

Certification 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 achieve a cumulative 2.5 GPA in these 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
(MGT 330 has the following prerequisites: ACC 213, FIN 320 and MKT 350)

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

Graduate Business Programs

The Seidman College of Business seeks mature graduate candidates who, as a result of their work experience or previous college education, are interested in expanding or continuing their professional education in business administration, accounting, or taxation. The college expects these candidates to make effective use of opportunities to obtain academic and program advice from the faculty and program administrators and to make maximum use of the program flexibility to plan courses around their professional objectives. Although program demands are rigorous, the results are exciting and rewarding. Candidates are expected to maintain the highest ethical standards at all times.

Admission Requirements

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: $(\text{GPA for last 60 semester hours of undergraduate coursework} \times 200) + \text{GMAT score}$. 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 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 550 on the TOEFL.

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.

Academic Advising

Candidates seeking the M.B.A., M.S.A., or M.S.T. degree can meet with the graduate programs director at the Richard M. DeVos Center in Grand Rapids to discuss career interests, professional objectives, and program plans.

Candidates should call the Seidman College Graduate Office at the DeVos Center for an appointment.

Business

Graduate course registration can be completed by phone or at any Grand Valley campus. The programs director will assist the candidate in making registration arrangements.

Transfer Credit

A maximum of nine semester hours of transfer credit will be given for appropriate graduate courses completed with a grade of B or better at another accredited college or university. These transfer 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 admissions to the Seidman graduate program. No transfer credit will be given for BUS 681.

An exception to the transfer policy exists for transfer credit from MSU College of Law for the J.D./MBA and J.D./M.S.T. dual degrees. Students earning either dual degree may transfer 12 credits from MSU College of Law with grades of at least 2.0.

Academic Review

A cumulative GPA of 3.0 or higher is required in all graduate-level courses. Additionally, a cumulative GPA of 3.0 is required in all 600-level courses that fulfill graduation requirements for the graduate business degree. Each candidate must receive a grade of C or better in all graduate-level courses that fulfill graduation requirements for the M.B.A., M.S.A., or M.S.T. degree. In the case of core 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 be repeated or another course substituted to meet the minimum overall GPA requirement.

A graduate candidate whose GPA falls below 3.0 after completion of nine hours of graduate-level coursework will be placed on academic probation. Such candidates must achieve at least a 3.0 GPA overall after the next nine hours of coursework to remain in the program. A GPA of 2.0 or below after nine hours of graduate-level courses means automatic dismissal from the college.

Background Studies

Candidates must have a base of underlying knowledge relevant to business. For the M.B.A. and M.S.A. programs, this background must be in information systems, accounting, finance, statistics, legal environment, economics, marketing, and operations. Courses taken to fulfill background studies are not counted as part of the 33-hour requirement for the graduate degrees. Many individuals will have completed in their undergraduate programs some or all of the courses that fulfill the background studies requirements.

To ensure the integrity of background studies, courses meeting the requirements must be taken at an accredited college or university and have earned a minimum grade of B. Students not meeting these criteria may be required to complete additional comparable background work. A candidate may complete the special accelerated 500-level course(s) offered by the Seidman College in the relevant area(s); complete appropriate courses in the undergraduate program at Grand Valley or any other regionally-accredited college or university; or pass one or more qualifying examinations. Questions should be addressed to the graduate programs director.

Computer word-processing and spreadsheet skills are required for all graduate courses and for most background courses. Those students who are not computer proficient are advised to complete an appropriate undergraduate computer course during their first semester.

Candidates who have not yet become degree-seeking may be allowed to enroll in 500-level courses with permission of the program director. Students choosing to enroll for 500-level coursework prior to admission should be aware that admission requires both an acceptable GMAT score and strong academic performance.

The relationship between background studies and the M.B.A. curriculum requires that all background studies be complete by the time the student enrolls for 600-level courses. An exception is made for 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 course(s), as documented in this catalog, must be complete. Students admitted to graduate programs other than the M.B.A. may enroll for M.B.A. courses with the permission of the graduate programs director. Such students are not required to complete all program prerequisites but must have met the specific prerequisite(s), as documented in this catalog, for the course(s) for which they are enrolling.

Background Equivalencies

Background 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
Information Systems	MGT 510 (2 credits)	MGT 268 (3 credits)
Accounting	ACC 511 (3 credits)	ACC 212 and 213 (6 credits)
Statistics	FIN 521 (2 credits)	STA 215 (3 credits)
Finance	FIN 522 (2 credits)	FIN 320 (3 credits)
Legal Environment	BUS 531 (2 credits)	BUS 201 (3 credits)
Economics	ECO 542 (3 credits)	ECO 210 and 211 (6 credits)
Marketing	MKT 551 (2 credits)	MKT 350 (3 credits)
Operations	MGT 561 (2 credits)	MGT 366 (3 credits)

Degree Requirements

The M.B.A., M.S.A., and M.S.T. programs consist of 33 semester hours of 600-level graduate coursework. Each degree can be completed in one calendar year if the candidate has completed all background requirements and studies full time in the Seidman College. If the candidate has not completed background studies, the master's programs can be completed in approximately two calendar years of full-time study.

Candidates who intend to study part time and who have completed the background studies requirements can expect to complete the graduate programs within two years by electing two graduate courses each semester, including summer sessions.

M.B.A. Program

All M.B.A. candidates must complete the following five courses:

- BUS 610 Management Information Systems & Org Processes
- BUS 631 Leadership and Organizational Dynamics
- BUS 671 Global Competitiveness
- BUS 677 Business Ethical Problems & Perspectives Credits: 1.5
- BUS 681 Strategy (Capstone)

Electives

In addition, all M.B.A. candidates must complete at least four of the following five directed electives:

Business

ACC 611 Contemporary Managerial Accounting

ECO 641 Business Economics and Strategy

FIN 621 Financial Policy for Managers

MGT 661 Operations Management

MKT 651 Marketing Management

Additional Elective Information

All candidates registering for 600-level business courses must be degree-seeking in the M.B.A. program or have permission of the program director.

All students must complete 33 credit hours of 600-level business coursework, including the core courses listed above and at least four of the five directed electives, also listed above. BUS 681, Strategy, is a capstone course and may not be taken until other core courses and four directed electives are completed or concurrent with other required courses if it is their last semester.

The balance of the program, two to three additional business electives, will depend on the candidate's objectives and career interests and should be planned in consultation with the program director. Individuals choosing a generalist M.B.A. degree should take all five directed electives to provide the breadth of the traditional M.B.A. Individuals wanting depth in a particular area are advised to complete electives in the particular discipline.

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 a fourth elective, which lengthens the M.B.A. program by one course (three 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.

M.S.A. Program

The M.S.A. program provides Grand Valley students with a specialized degree to successfully enter the fields of public, industry, and not-for-profit accounting. The M.S.A. degree meets the educational requirements for CPA certification adopted by the Michigan State Board of Accountancy.

All students must complete a program plan with their faculty advisor prior to beginning course work. Courses are selected by the student and advisor to ensure that the graduate program meets the individual student needs based on previous course work and career goals. Students will not be granted credit for ACC 609, 610, 614, or 615 if they have satisfactorily completed an undergraduate course in individual taxation, intermediate accounting, auditing, or corporation taxation, respectively. Questions should be directed to the faculty advisor or the graduate programs director.

Program Requirements

All M.S.A. candidates must complete at least five graduate accounting courses, including the following:

ACC 613 Financial Statement Analysis
 ACC 616 Financial Accounting Systems
 ACC 617 International Accounting
 ACC 618 Advanced Accounting
 ACC 620 Accounting Theory

Additional Program Requirements

At least one additional graduate accounting course and the remaining 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.

M.S.T. Program

Each M.S.T. candidate must complete eleven three-credit courses, including a minimum of seven graduate tax courses. Five courses are required:

ACC 622 Tax Research and Writing
 ACC 624 Corporate Tax I
 ACC 627 Estate, Gift, and Trust I
 ACC 629 Partnership Taxation
 ACC 636 Taxation Problems, Planning, and Current Issues

Electives

Two graduate tax elective courses to be selected from the remaining graduate tax offerings:

ACC 623 Sales, Exchanges, and Other Property Dispositions
 ACC 625 Corporate Tax II
 ACC 628 Fiduciary Income Tax
 ACC 630 Multistate Taxation
 ACC 631 Employee Benefit Plans and Deferred Compensation
 ACC 632 Tax Accounting
 ACC 633 International Tax Practice
 ACC 634 Directed Study and Report
 ACC 635 Advanced Tax Subjects
 ACC 639 Federal Tax Practice and Procedure

Additional Elective Information

The remaining four electives may be selected from among Seidman graduate tax courses or, with faculty advisor approval, other Seidman graduate offerings or graduate program offerings outside the Seidman College of Business.

Certain cognates must be completed before graduation. They may be completed as part of the student's undergraduate program prior to admission to the M.S.T. program or completed anytime between admission and program completion. These cognates include accounting and economics and at least four subjects from among legal environment, computers and information systems, marketing, finance, and statistics.

Students must complete a program plan with their faculty advisor prior to beginning course work.

Business

All candidates registering for 600-level taxation courses must be degree-seeking in the M.S.T. program or have permission of the faculty advisor and graduate programs director. Only those tax courses numbered between ACC 622 and ACC 639 qualify to be taken prior to admission. Students must also have taken a college-level income tax course within the past five years or have permission of the faculty advisor.

Combined M.S.N./M.B.A.

The Kirkhof College of Nursing and Seidman College of Business offer a combined Master of Science in Nursing and Master of Business Administration (M.S.N./M.B.A.). Persons wishing this degree must meet the admission requirements of both Colleges with the exception that satisfactory performance (minimum score of 400 each on the qualitative and quantitative scales, and 4 on analytical writing) on only the Graduate Record Exam (GRE), rather than the GMAT, is required. Applicants for the MSN/MBA may be admitted to the joint program or to either the MSN or the MBA, depending on each division's admission committee review and decision. The combined M.S.N./M.B.A. is designed to prepare graduate nurses for professional opportunities in health care delivery systems.

Requirements

All M.S.N./M.B.A. candidates must complete the M.B.A. background requirements listed below except FIN 521.

Also Required

Are the following four three credit courses:

BUS 610 Management Information Systems & Org Processes

BUS 631 Leadership and Organizational Dynamics

BUS 671 Global Competitiveness

BUS 681 Strategy

Candidates must also complete:

At least three of the following four three-credit M.B.A. courses:

ACC 611 Contemporary Managerial Accounting

ECO 641 Business Economics and Strategy

FIN 621 Financial Policy for Managers

MGT 667 Service Management

MKT 651 Marketing Management

Candidates must complete the following M.S.N. courses:

NUR 521 Theoretical Perspectives in Nursing I

NUR 522 Theoretical Perspectives of Nursing II

NUR 529 Health Care System, Policy, and Finance

NUR 530 Advanced Nursing Strategies

NUR 531 Professional Role Development

NUR 622 Advanced Pathophysiology I

NUR 623 Advanced Pathophysiology II

NUR 646 Nursing Administration

NUR 648 Administrative Practicum

NUR 690 Research Development in Nursing

STA 610 Applied Statistics for Health Professions

Scholarly Project Options (candidates select one)

NUR 692 Nursing Protocol Exploration

and NUR 693 Nursing Protocol Development

NUR 694 Thesis Preparation
 and NUR 695 Master's Thesis
 NUR 696 Nursing Research Practicum (four credits or two credits plus related elective)
 NUR 697 Nursing Comprehensive Examination (one credit plus two electives)

Advanced Practice Nurse Specialty

Candidates may choose to earn the Advanced Practice Nurse in addition to the M.S.N./M.B.A. Completion of the following additional courses is required for this specialty. Candidates selecting this option are not required to complete NUR 648.

Select one of the following

Descriptions of the M.S.N. courses are contained in the nursing section of the catalog.

Adult/Elderly

NUR 610 Advanced Assessment
 NUR 620 Clinical Pharmacology
 NUR 654 Practicum I: Adult/Elderly
 NUR 655 Practicum II: Adult/Elderly
 NUR 656 Practicum III: Adult/Elderly

Child

NUR 610 Advanced Assessment
 NUR 620 Clinical Pharmacology
 NUR 629 Developmental Health Management: Child
 NUR 684 Advanced Pediatric Nursing: Theory I
 NUR 685 Advanced Pediatric Clinical Practice I
 NUR 686 Advanced Pediatric Nursing: Theory II
 NUR 687 Advanced Pediatric Clinical Practice II
 NUR 688 Advanced Pediatric Nursing: Theory III
 NUR 689 Advanced Pediatric Clinical Practice III

Family

NUR 610 Advanced Assessment
 NUR 620 Clinical Pharmacology
 NUR 670 Practicum I: Family
 NUR 671 Practicum II: Family
 NUR 672 Practicum III: Family

Women

NUR 610 Advanced Assessment
 NUR 620 Clinical Pharmacology
 NUR 673 Practicum I: Women
 NUR 674 Practicum II: Women
 NUR 675 Practicum III: Women

Mental Health

BMS 528 Neuropathology
 NUR 610 Advanced Assessment
 NUR 620 Clinical Pharmacology
 NUR 628 Nursing Therapeutics: Mental Health
 NUR 676 Health Perspectives: Mental Health

Business

NUR 677 Practicum I: Mental Health
NUR 678 Practicum II: Mental Health
NUR 679 Practicum III: Mental Health

Dual M.B.A./J.D.

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 Law 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 Law 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 core courses and four of five directed electives. Specific coursework to be transferred to the M.B.A. from MSU Law must be planned with the MBA program director. Students are referred to the Associate Dean of MSU Law for advising for the J.D. and the specific M.B.A. transfer courses.

Dual M.S.T./J.D.

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 Law 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 Law must be planned with the M.S.T. program director. Students are referred to the Associate Dean of MSU Law for advising with respect to the J.D. and the specific M.S.T. transfer courses.

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.

Study Abroad

Seidman College of Business offers a special topic business course, International Business in Europe, that culminates in a two-week summer session in Grenoble, France. The program is designed to give students an experience-based understanding of issues that affect companies that do business internationally. Students meet regularly during the spring semester and then spend two weeks in France attending lectures led by ESC Grenoble faculty and meeting with executives from European companies.

Distinguished Executives 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.

E-Commerce Certificate

An e-commerce certificate in marketing is comprised of four specific marketing and management courses (MGT 668 and MKT 652, 654, and 661). The courses are offered in a six-month block, primarily online, and are specially structured and scheduled to maximize the value of the unique combination of course content. The courses must be taken simultaneously with the cohort group. The e-commerce program is offered alternate winter semesters. M.B.A. students are eligible for the certificate program. Students may complete the e-commerce certificate program as the elective portion of the M.B.A. degree.

Tuition for the e-commerce program includes materials and software and is managed by the Seidman College.

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.

Graduate Assistantships

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

Undergraduate Courses of Instruction

Following each undergraduate and graduate course description is a listing of the prerequisites required for class registration. It is the policy of the Seidman College of Business that no credit shall be earned for any course if, at any time, it is found that the student

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has not met the prerequisites as determined by the chairperson of the department offering the course.

Accounting

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. Three credits.

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. Three credits.

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. One credit.

ACC 308 Governmental and Non-for-Profit Accounting. Accounting and auditing principles for governmental and non-for-profit entities. Offered winter semester. Prerequisite: ACC 212. Three credits.

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. Prerequisite: ACC 212 and ACC 240. Three credits.

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. Prerequisite: ACC 310. Three credits.

ACC 317 Individual Income Taxation. Consideration of the basic theory and practice applicable to the determination of the taxable income of individuals. The course will cover the individual income tax formula including the determination of income, the role of deductions and credits, and simple and complex property transactions. Offered fall and winter semesters. Prerequisite: ACC 212. Three credits.

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. Prerequisite: ACC 212 and ACC 317 recommended. Three credits.

ACC 321 Cost Strategy and Decision Making. This course will examine cost accounting activities such as activity-based costing (ABC) and activity-based management (ABM), special analysis for decision-making, product and service pricing, cost-volume-profit analysis, flexible budgeting, strategic analysis, theory of constraints, transfer pricing, capacity management, performance evaluation and sales, profitability, mix, yield, and productivity variances. Offered fall and winter semesters. Prerequisite: ACC 213. Three credits.

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. Three credits.

ACC 330 International Accounting. Survey of the major differences between accounting systems around the world and the business practices and environments within which these systems developed and function today. Basic study of the accounting issues affecting multinational companies, including consolidations, price changes, and inflation, foreign currency transactions and translation, transfer pricing, and international taxation. May be offered any semester. Prerequisite: ACC 212. Three credits.

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. Prerequisite: ACC 212, ACC 240, MGT 268. Three credits.

ACC 341 Project Management. This course incorporates the theory of how to manage projects, especially accounting projects, into actual practice. The course covers the fundamentals of project management using current software. Topics include integration management, costing, quality, collaboration, project life cycles, control, risk management, procurement, evaluation, and other essential topics. Offered Winter semester. Prerequisites: MGT 268. Three credits.

ACC 380 Special Studies 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. One to three credits.

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. Three credits.

ACC 414 Auditing Theory and Practice. Professional development in the basic concepts of auditing. Internal control procedures, the collecting, testing, and analyses of evidential data, and the auditor's report are discussed. Integrating accounting information systems and continuous auditing are introduced. Offered fall semester. Prerequisites: ACC 310, ACC 340 strongly recommended. Three credits.

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 electronic commerce, the Internet, client/server networking, and enterprise systems. Offered winter semester. Prerequisites: ACC 413 or ACC 414, or permission of instructor. Three credits.

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. One to six credits.

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. One to three credits.

Business

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. Three credits.

BUS 180 Selected Topics in Business. Topics covered will reflect special interests of students and/or instructor. Offered as demand warrants. One to three credits.

Business

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. Three credits.

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 380 Selected Topics in Business. Topics covered will reflect special interests of the students and/or the instructor. Offered as demand warrants. Prerequisite: Permission of instructor. One to three credits.

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. One to three credits.

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. One to six credits.

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. One to three credits.

Economics

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 Sciences Foundation. Offered fall and winter semesters. Three credits.

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, sophomore standing recommended. Three credits.

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. Offered every semester. Prerequisites: MTH 110, sophomore standing recommended. Fulfills Social Sciences Foundation. Three credits.

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. Offered every semester. Prerequisites: MTH 110, sophomore standing recommended. Fulfills Social Sciences Foundation. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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 economics; 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. Three credits.

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 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. Three credits.

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. Three credits.

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. Three credits.

Business

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. Three credits.

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. Three credits.

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. One to three credits.

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. Three credits.

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. Three credits.

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. Three credits.

ECO 440 Public Finance. The justification for the provision of some goods and services by government, analysis of government decision-making, the design of fair and efficient taxation, and the relationships among federal, state, and local government. Offered winter semester. Prerequisites: ECO 211 or ECO 200. Three credits.

ECO 480 Econometrics and Forecasting. Gives students a working knowledge of sources of economic and business data, empirical model building, and economic interpretation of statistical results. Topics include regression analysis, designing models, forecasting and hypothesis testing. Emphasis on business and policy applications. Offered every other year. Prerequisites: ECO 200, ECO 210 or ECO 211, and STA 215. Three credits.

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. One to six credits.

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. Three credits.

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. One to four credits.

Entrepreneurship

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. Three credits.

ENT 151 New Venture Feasibility. This course focuses on the process of developing an idea from a product concept into a product design that has a market and commercial feasibility. Students will have 'hands on' and applied opportunities to develop their concepts within different environments including, graphics, design and prototyping. Offered fall and winter semester. Prerequisite: ENT 150. Three credits.

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. Prerequisite: ENT 151. Three credits.

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 250. Three credits.

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. Prerequisite: ENT 251. Three credits.

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. Prerequisite: ENT 350. Three credits.

Finance

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. Three credits.

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. Three credits.

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. Three credits.

Business

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. Prerequisite: 320, ECO 200, ACC 213, and STA 215. Three credits.

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. Prerequisite: Junior standing or permission. Three credits.

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. Three credits.

FIN 380 Seminar 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. Three credits.

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. Prerequisite: FIN 320. Three credits.

FIN 422 Advanced Managerial Finance. Application of principles of finance to solving selected business case problems and analyzing current financial topics. Offered fall and winter semesters. Prerequisite: FIN 322. Three credits.

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. Three credits.

FIN 428 Security Analysis and Portfolio Management. A sophisticated analysis of investment securities from the viewpoint of establishing meaningful evaluation techniques. Develops practical strategies for constructing efficient portfolios by the study of risk analysis, random walk, and other theoretical concepts. Offered winter semester. Prerequisite: FIN 321. Three credits.

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. Three credits.

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. One to six credits.

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. One to three credits.

Management

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. Prerequisite: CS 150. Three credits.

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. Offered winter semester. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: MGT 331. Three credits.

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. Three credits.

MGT 336 Compensation and Benefits Management. Provides students with an understanding of the compensation system. Emphasis on the design, development, and implementation of a total compensation system that balances internal consistence with external competitiveness. Prerequisite: MGT 333. Three credits.

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. Three credits.

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. Three credits.

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. Offered every semester. Three credits.

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. Three credits.

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,

Business

overview of the technological infrastructure and a discussion of critical legal, societal and management issues. Offered fall and winter semesters. Prerequisites: MGT 268. Three credits.

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 winter semester. Prerequisites: MGT 268. Three credits.

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 Perspectives from the Outside theme. Three credits.

MGT 360 Business Process Redesign. This course explores business processes and their place in the modern business organization. It will emphasize concepts, techniques, methods and skills needed to identify, analyze and redesign business processes. Business Process Redesign software will be used extensively. Offered fall semester. Prerequisites: MGT 268. Three credits.

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: CS 150, STA 215. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

MGT 380 Selected Topics in Management. Analysis and discussion of advanced topics, contemporary problems, and new or controversial topics. Specific topics will reflect interest of students and instructors. Offered on sufficient demand. Prerequisite: Permission of instructor. Three credits.

MGT 430 Organizational Development. Examines change as a dynamic and essential process in organizations and explores the manager's role as a change agent. Emphasis is given to the ability to plan, initiate, and implement changes with the potential to improve the functioning of organizations and their members. Prerequisite: MGT 331. Three credits.

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. Three credits.

MGT 432 Grievance Administration, Arbitration, and Collective Bargaining. Problems and issues in the negotiation of collective bargaining agreements in the public and private sectors. Grievance procedures and arbitration under a union contract. The resolution of disputes over wages, seniority, work assignments, and other common employment relations will be covered. Prerequisite: MGT 334. Three credits.

MGT 433 International Human Resource Management. Focus on the effects of globalization on human resource activities and facilitates development of a set of skills essential for a successful career as a global manager. Prerequisite: MGT 333. Three credits.

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. Prerequisite: Family business background or permission of the instructor. Three credits.

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. Prerequisite: 331 or permission of the instructor. Three credits.

MGT 451 Introduction to E-Commerce Applications. An introduction to tools, techniques, concepts and principles related to developing high-impact Web-based applications. Offered winter semester. Prerequisite: MGT 350. Three credits.

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 fall semester. Prerequisite: CS 333 and MGT 451. Three credits.

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. Three credits.

Business

MGT 467 Advanced Topics in Operations Management. This course provides a framework for effectively managing processes and employees in manufacturing organizations. Emphasis is given to the processes involved in initiating and implementing changes in management policies, products, and technologies. Course format includes a mixture of lectures, readings, case analysis, and real-world exercises. Offered once yearly. Prerequisites: MGT 366. Three credits.

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 winter semester. Prerequisite: CS 160, MGT 268, and CS 353. CS 353 can be taken concurrently. Three credits.

MGT 475 Customized ERP Solutions. Students will learn how to customize Enterprise Resource Planning software using programming languages like ABAP, SAP's proprietary language. Students will learn generalized programming concepts as well as the specifics of programming with ABAP. Students will explore the difficulties associated with making changes to "off-the-shelf" software. Offered winter semester. Prerequisites: MGT 471 or MGT 472. Three credits.

MGT 480 Corporate Projects. 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. Three credits.

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. One to six credits.

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. Three credits.

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. One to three credits.

Marketing

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. Three credits.

MKT 351 Consumer Behavior. An overall view of some of the basic perspectives of consumer motivation and behavior. Offered every semester. Three credits.

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. Three credits.

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 semester. Prerequisites: Admitted to Seidman College of Business or permit. Three credits.

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 semester. Three credits.

MKT 356 Professional Selling. The principles of professional salesmanship and their practical application in the marketing mix. Actual sales presentations by students are included. Offered fall and winter semesters. Prerequisite: MKT 350. Three credits.

MKT 357 Retailing. Introduction to retailing with emphasis on profit elements, pricing and merchandising policies, inventory, and merchandise control. Offered fall and winter semesters. Prerequisite: MKT 350. Three credits.

MKT 358 Advertising and Marketing Communications. A managerial analysis and examination of the nonpersonal demand generating element of the firm's marketing efforts. Includes study of communication theory; advertising; market, audience, and target segmentation and selection; media analysis; public relations; publicity; and most other nonpersonal communications activities. These elements are strongly related to personal selling in the private sector firm. Offered fall and winter semesters. Prerequisite: MKT 350. Three credits.

MKT 359 Multinational Marketing. Emphasizes global marketing decision making from the manager's point of view. Examines how successful international companies, both large and small, decide which goods and services to market in specific parts of the world. Evaluates the strategies and tactics necessary for multinational marketing success. Offered fall semester. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

MKT 380 Selected 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. Prerequisite: Permission of instructor. Three credits.

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. Three credits.

Business

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. Prerequisite: MKT 350. Three credits.

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 semester. Prerequisites: MKT 356 or permission of instructor. Three credits.

MKT 457 Logistics and Transportation. Studies the role of transportation in the global supply chain and distribution channel, and the interaction of transportation with other supply chain logistics activities such as inventory control. Topics include logistics system design, transportation policy and infrastructure, each mode of freight transportation, and the management of transportation. Offered every other semester. Prerequisite: MKT 350. Three credits.

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. One to six credits.

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. One to three credits.

Graduate Courses

Accounting

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. Three credits.

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. Three credits.

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. Three credits.

ACC 611 Contemporary Managerial Accounting. Examines the use of information for cost management, decision-making, and performance evaluation and measurement. Topics include activity-based management, cost of unused resources, relevant costs for decision-making, productivity measurement, transfer pricing, theory of constraints, balanced scorecards, total quality management and just-in-time. Offered fall and winter semesters. Prerequisite: ACC 511 or equivalent. Three credits.

ACC 612 The Accountant's Legal Environment. An intensive course in business law with emphasis on those subjects that relate to the accountant's legal environment, including accountant's legal liability, federal securities regulation, sales law, insurance suretyship, antitrust law,

secured transactions, bankruptcy, property law, etc. Offered winter semester. Prerequisite: ACC 310. Three credits.

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. Prerequisite: ACC 511 or equivalent. Three credits.

ACC 614 Auditing. The nature of audit evidence, basic audit techniques and concepts, audit practices and procedures, professional ethics, statistical sampling, auditing through and around a computer, and audit reports. Course may not be taken for credit if student has received credit for ACC 414 or equivalent. Prerequisites: ACC 310, ACC 340 or its equivalent strongly recommended. Three credits.

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. Three credits.

ACC 616 Financial Accounting Systems. Study of financial information systems and related technologies. Includes review of traditional, current and emerging systems and technologies. Discussion of systems development practices, architectures, and environments. Study of business process models and transaction cycles with emphasis on internal controls. Prerequisite: MGT 268, ACC 511 or equivalents. Three credits.

ACC 617 International Accounting. Study of the various difficulties and accounting procedures for the multinational company. Includes currency translation problems, evaluation of assets of foreign countries, and the general consolidation problems of foreign subsidiaries' financial statements with the parent's accounting report. Prerequisite: ACC 511 or equivalent. Three credits.

ACC 618 Advanced Accounting. Accounting issues related to mergers and acquisitions, international operations, and governmental/nonprofit accounting. Offered fall and spring semester. Prerequisite: ACC 310. Three credits.

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. Three credits.

ACC 621 Advanced Cost Management. Using case analysis, this course examines the use of information for cost management and performance evaluation by exploring topics such as capacity management, activity-based costing and management, strategic cost management, balanced scorecard and incentive compensation systems. Offered fall and winter semesters. Prerequisite: ACC 611. Three credits.

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. Three credits.

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 principle residence, the disposition of business assets, installment sales, unstated interest, and sale-lease back transactions. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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 627. Three credits.

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. Three credits.

ACC 630 Multistate Taxation. Conceptual issues and constitutional framework of multistate taxation are developed and explored. Current issues, including Michigan taxes, are presented. Three credits.

ACC 631 Employee Benefit Plans and Deferred Compensation. Provides a survey of employee benefit plans and executive compensation under the Internal Revenue Code and ERISA, with an in-depth review of the requirements for qualified retirement plans, for welfare plans (medical, dental, vision, disability, etc.) and applicable federal mandates (COBRA, HIPAA, etc.), and for nonqualified and stock-based plans. Three credits.

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. Three credits.

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. Three credits.

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. One to three credits.

ACC 635 Advanced Tax Subjects. Offers an in-depth study of an advanced tax topic. Three credits.

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. Three credits.

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. Three credits.

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. ACC 629 or permission of Director. Three credits.

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. ACC 627. Three credits.

ACC 680 Selected 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. One to three credits.

ACC 690 Accounting Internship. Employment in an accounting capacity that is a new and significant experience for the student, including a minimum of 100 hours of work for every 1 credit of internship for a maximum of 3 credits. Students who have completed an internship at the undergraduate level will not be given credit for this course. The internship must be approved by the Accounting Chair. Prerequisites: Admission to the 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. One to three credits.

Business

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. Two credits.

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. Prerequisite: MGT 510. Three credits.

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

Business

of personal strengths and weaknesses when dealing with situations of managerial responsibility. Offered every semester. Three credits.

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. Prerequisites: ACC 511 and ECO 542. Three credits.

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: Approval of M.B.A. Program Director. Three credits.

BUS 660 Executive-in-Residence Topics. Taught by prominent area executives, course includes class discussion and examination of relevant business issues, principles, and methods. Variable content depending on instructor. Five-week module. Permit only. Course may be repeated up to three credits when content varies. Concurrent enrollment allowed. One credit.

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. Three credits.

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. One and a half credits.

BUS 680 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Admitted SBC or permit. One to four credits.

BUS 681 Strategy. Focuses on the job of the general manager in formulating and implementing short- and long-run business strategy. An integrative course that draws on knowledge and skills acquired in other courses. Offered fall and winter semesters. Prerequisite: Completion of all other core courses and at least four directed electives, or concurrently if taken in final semester. Three credits.

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. Three credits.

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. One to three credits.

Economics

ECO 542 Economic Reasoning. An examination of economic concepts, principles, definitions, and relationships. Designed to provide analytical micro and macroeconomic techniques and concepts necessary to reason from an economic point of view. Offered fall and winter semesters. Prerequisite: MTH 110. Equivalent to ECO 210 and ECO 211. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisites: ECO 542 and BUS 601, or equivalents. Three credits.

ECO 645 International Economic Issues. Selection of contemporary topics, including: effects of trade arrangements such as NAFTA and the European Union on business; opportunities for multinational enterprises in emerging markets; impacts on domestic industry of government trade policy; and the effects of interest and exchange rate fluctuations on trade strategy and capital flows. Prerequisite: Admitted or permit. Three credits.

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. Prerequisites: ECO 542 and BUS 601, or equivalents. Three credits.

ECO 680 Selected Topics in Economics. Analysis of contemporary and controversial issues in a specific area of economics. Although the course content is applications-oriented, it varies depending on students and faculty interests. Consult the current schedule of classes for details. Prerequisite: Approval of instructor. One to three credits.

Finance

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. Two credits.

FIN 522 Finance Principles for Managers. A development of the foundation tools of business finance for M.B.A. students. Typical 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. Two credits.

FIN 621 Financial Policy for Managers. Course presumes a thorough understanding of the principles of managerial finance. Emphasis on problem-solving, decision-making and actions leading to optimizing the value of business firms. Methods of incorporating risk analysis into decisions concerning management of working capital, capital budgeting, and capital structure. Analysis of alternative theories and procedures regarding financial goals, portfolio concepts, cost of capital and dividend policy. Selected aspects of international finance are discussed. Offered each semester. Prerequisite: FIN 522 or equivalent. Three credits.

Business

FIN 624 Investments. Covers the full risk/return spectrum of investment alternatives and the operations and regulations of markets. Presents the various technical methods of obtaining market profits. Prerequisite: FIN 621. Three credits.

FIN 626 Advanced Managerial Finance. Application of principles of finance to solving selected business case problems and analyzing current financial events. Prerequisite: FIN 621. Three credits.

FIN 628 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. Prerequisite: FIN 624. Three credits.

FIN 629 International Finance. Consideration of the problems of a world monetary order, including fixed versus floating exchange rates, the role of gold, key currencies, SDRs, balance of payments, etc. Subjects cover the current monetary system and its evolution, including international monetary agencies and the pivotal role of the U.S. dollar. Investigation of the sources of financing for trade and foreign direct investment such as national capital markets, government programs, foreign capital markets, Eurocurrencies and Eurobonds. Prerequisite: FIN 621. Three credits.

FIN 680 Selected Topics in Finance. Course content varies. Refer to schedule of classes to determine description and prerequisites. Students may repeat this course under different topics. One to three credits.

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. One to three credits.

Management

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. Two credits.

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. Two credits.

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. Three credits.

MGT 633 Management of Human Resources. Topics include employee evaluation and development, resistance to change, discipline, affirmative action, safety and health, rewards and compensation. A major course goal is the development of an administrative point of view for the purpose of achieving organizational objectives through the efforts of others. Prerequisite: BUS 631 or equivalent. Three credits.

MGT 635 Planned Change and Organizational Development. Addresses issues of individual, group, and organizational change from a strategic, problem-solving perspective. Strategies for changing organizational culture, enhancing creativity, building teams, and dealing with dysfunctional aspects of planned change are presented. Prerequisite: BUS 631. Three credits.

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. Prerequisite: BUS 531 or equivalent. Three credits.

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. Prerequisite: BUS 631. Three credits.

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. Prerequisite: MGT 561. Three credits.

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. Prerequisites: MGT 661 or MGT 366. Three credits.

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. Prerequisite: BUS 601. Three credits.

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. Prerequisite: BUS 601. Three credits.

MGT 668 Tools of E-Commerce. An introduction to fundamental tools of electronic commerce. Students will be exposed to tools typically used in creating high-impact applications. Topics include HTML, DHTML, JavaScript, Java applets, multimedia, and simple Web-based programming. The emphasis will be on increasing awareness and understanding of these tools in successful e-commerce activities. Prerequisite: When taken as part of the E-commerce Certificate Program, this course will co-requisite with MKT 652, MKT 654, and MKT 661. Three credits.

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. Three credits.

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. Prerequisites: FIN 522 and MKT 551. Three credits.

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. Prerequisites: FIN 522 and MKT 551. Three credits.

Business

MGT 680 Selected Topics in Management. 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. One to three credits.

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. One to three credits.

Marketing

MKT 551 Marketing Management: Principles and Institutions. An accelerated learning course covering the principles of marketing in sufficient depth to provide a background for M.B.A.-level marketing studies. Two credits.

MKT 651 Marketing Management. Focuses on developing an understanding of the role of markets and marketing in the macroeconomic environment, and on providing marketing managers with the knowledge and tools they will need to successfully analyze product markets and develop marketing strategies that will provide sustainable competitive advantage. Offered fall and winter semesters. Prerequisite: MKT 551 or equivalent. Three credits.

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: When taken as part of the E-Commerce Certificate Program, this course will co-requisite with MKT 654, MKT 661 and MGT 668. Three credits.

MKT 653 Analysis of Distribution Systems. In-depth examination of the fundamental structure of distribution systems in the U.S. economy. Emphasis on channels of distribution, transport modes, reseller systems, physical distribution management, and current policy issues. Prerequisite: 651 or permission of instructor. Three credits.

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. Prerequisite: When taken as part of the E-Commerce Certificate Program, this course will co-requisite with MKT 652, MKT 661 and MGT 668. Three credits.

MKT 655 Promotional Strategy. Provides students with an understanding of the communications process as it applies to advertising and other areas such as product symbolism, packaging, pricing, channels, and personal selling. Students are required to apply basic concepts in determining the objectives of a communications-promotion program, establishing the relative roles of personal selling and advertising, building an advertising campaign and determining the program budget. Prerequisite: MKT 651. Three credits.

MKT 658 International Marketing. Introduces a conceptual framework that enables the student to identify and better understand the dimensions that are operative within a global marketing environment. Explores the relationship between these dimensions and specific elements of a marketing program. While the course does not dwell on exporting per se, reasonable coverage is given to factors affecting the development of exporting activities. Prerequisite: MKT 651. Three credits.

MKT 660 Marketing Research and Analysis. An examination of marketing information needs and resources including the collection and dissemination of primary and secondary data and the cost-benefit consequences of all information gathering procedures. Topics include

problem definition, research design, sampling techniques, data collection, analysis, etc. The emphasis is on conceptualizing, conducting, and evaluating marketing research. Prerequisite: MKT 651. Three credits.

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: When taken as part of the E-Commerce Certificate Program, this course will co-requisite with MKT 652, MKT 654, and MGT 668. Three credits.

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. Three credits.

MKT 680 Current 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. Prerequisite: MKT 651. One to three credits.

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. One to three credits.

Cell and Molecular Biology (CMB)

Program Director: Staves. Professors: Resau, Teh, Thorpe; Associate Professors: Blackman, D. Burg, M. Burg, Capodilupo, Hecht, Leonard, Linn, Ostrow, Staves; Assistant Professors: Chakrabarti, Dietrich, Hart, McClinton, Nikitin, Powers, Richiert, Sridhar, Tsou, Wallar, Weese.

Cell and Molecular Biology is the study of all the biochemical, biophysical, and genetic processes in cells and is the basis for such applied fields as 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. This interdisciplinary program draws its faculty and courses from the biology, biomedical sciences, chemistry, and physics departments. A unique and critical part of Grand Valley's CMB degree is the independent research/internship students will participate in. Each student will have a research mentor from the faculty of one of the participating departments at Grand Valley State University or from an area business or research institute, ensuring that students will get practical experience conducting original research in an area of their interest. This will be critical when applying for jobs or graduate programs.

Many upper-level classes in the CMB degree have several prerequisites, thus it is important for students to start the 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.

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 subdisciplines of biotechnology, molecular

Cell and Molecular Biology

genetics, pharmacology and biomedicine is most rapidly growing area of the life sciences today, with advances made on a daily basis.

- Environmental biotechnology products make it possible to clean up hazardous waste more efficiently by harnessing pollution-eating microbes without the use of caustic chemicals.
- DNA fingerprinting has dramatically improved criminal investigation and forensic medicine, as well as afforded significant advances in anthropology and wildlife management.
- Consumers already are enjoying biotechnology foods 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 more than tripled in size since 1992, with revenues increasing from \$8 billion in 1992 to \$39 billion in 2003.
- 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 biotechnology law, pharmaceutical and drug sales, market analysis and education.

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 BS 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, 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 CHM 116
BIO 375 CHM 241
BIO 376 CHM 242
CHM 115 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.

Major Requirements

Completion of a major in Cell and Molecular Biology requires the following:

1. General University Degree Requirements

As identified in the General Academic Regulations section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. The Cell and Molecular Biology Core Requirements

(* indicates B.S. degree cognates, number of credits in parentheses):

BIO 120 General Biology II (4)
 BIO 375 Genetics (3)
 BIO 376 Genetics Laboratory (1)
 *BIO 405 Cell and Molecular Biology (4)
 BIO 406 Cell and Molecular Biology Laboratory (2)
 BIO 426 Nucleic Acids Analysis (2)
 CHM 115 Principles of Chemistry I (5)
 CHM 116 Principles of Chemistry II (5)
 CHM 241 Organic Chemistry for the Life Sciences I (4)
 *CHM 242 Organic Chemistry for the Life Sciences II (4)
 CHM 461 Biochemistry I (4)
 CHM 462 Techniques in Biochemistry (3)
 CMB 250 Introduction to Biotechnology (3)
 CMB 495 Perspectives and Issues in CMB (Capstone) (2)
 *STA 215 Introductory Applied Statistics (3)

3. A Choice Between Two Microbiology Courses

Option A

BIO 357 Environmental Biology (4)
 Or

Option B

BMS 212 Introductory Microbiology (3)
 and BMS 213 Laboratory in Microbiology (1)

4. A Choice Between Two Math/Physics Sequences:

Option A (13 credits)

MTH 125 Survey of Calculus (3)
 and PHY 220 General Physics I (5)
 and PHY 221 General Physics II (5)
 Or

Option B (19 credits)

MTH 201 Calculus I (5)
 and MTH 202 Calculus II (4)
 and PHY 230 Principles of Physics I (5)
 and PHY 231 Principles of Physics II (5)

5. Independent Research Experience

A choice between an independent research experience at a private industry or research lab or at Grand Valley:

Option A

CMB 490 Internship in CMB (3)
 Or

Option B

CMB 499 Independent Research in CMB (3)

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

Cell and Molecular Biology

elective courses they wish. For those students who desire more science in their CMB curriculum, the following is a list of suggested electives.

- BIO 411 Genetics of Development and Cancer (3)
- BIO 414 Molecular Biology of the Gene (3)
- BIO 416 Advanced Genetics Laboratory (2)
- BIO 422 Embryology (3)
- BIO 423 Plant Biotechnology (3)
- BIO 432 Comparative Animal Physiology (4)
- BMS 208 Human Anatomy (3)
- BMS 290 Human Physiology (prereq: BMS 208) (3)
- BMS 291 Laboratory in Human Physiology (prereq: BMS 208) (1)
- BMS 310 Basic Pathophysiology (prereq: BMS 290/291) (3)
- BMS 311 Pharmacological Aspects of Health Science (prereq: BMS 310) (3)
- BMS 312 Bacterial Genetics (3)
- BMS 313 Bacterial Genetics Laboratory (1)
- BMS 322 Bacterial Physiology (prereq: BMS 212/213) (3)
- BMS 323 Bacterial Physiology Laboratory (pre/coreq: BMS 322) (1)
- BMS 410 Immunology (prereq: BMS 212/213) (3)
- BMS 411 Immunology Laboratory (pre/coreq: BMS 410) (1)
- BMS 431 Medical Virology (prereq: BMS 212/213) (3)
- CHM 351 Introduction to Physical Chemistry (3)
- CHM 463 Biochemistry II (3)
- PHY 320 Optics (prereq: PHY 231) (4)

Sample Curriculum

First Year

- BIO 120
- CHM 115 and 116
- MTH/STA
- WRT 150
- 3 Gen Ed classes

Second Year

- CMB 250
- MTH/STA
- CHM 241 and 242
- Microbiology
- BIO 375 and 376
- 2 Gen Ed classes

Third Year

- BIO 405 and 406
- CHM 461 and 462
- PHY 220 and 221
- CMB elective
- 2 Gen Ed courses

Fourth Year

- CMB 490/499 (3 credits each semester)
- CMB 495
- BIO 426
- 3 CMB electives
- 3 Gen Ed courses

Master of Science in Cell and Molecular Biology

Cell and molecular biology (CMB) is the study of all the developmental, genetic, biochemical and biophysical processes within cells whereas biotechnology is the manipulation of these developmental, genetic, biochemical, and biophysical processes for human purposes. The outcome of a study in cell and molecular biology is an increased understanding of how cells (and thus whole organisms as well) function, while the outcome of a study in biotechnology is an increased understanding of how to manipulate cells for our own ends. Jobs requiring skills in these fields exist in government, academia and industry and can be generally divided into laboratory workers, principal investigators (lead scientists) and faculty positions. The principal investigators and faculty typically have earned Ph.D.s, whereas laboratory workers have bachelors or master's-level training. The cell and molecular biol-

ogy M.S. with its research emphasis is the appropriate degree for students who wish to go into research and may wish to go on to earn a Ph.D., whereas the cell and molecular biology M.S. with its biotechnology emphasis is ideal for students aiming for a career working in, or managing, an applied science laboratory.

The choice of emphasis will depend on the student's individual career goals. Those looking for direct employment in the biotechnology sector will choose the biotechnology emphasis, while those who may be interested in further post-graduate study at the Ph.D. level or who may want to combine this training with other career options will choose research emphasis. The biotechnology emphasis provides students with a practical and applied curriculum which is closely tied to the scientific workforce needs of business/industry and includes an intensive internship experience. In contrast, the research emphasis offers traditional inquiry-based laboratory research culminating in a thesis. Students in both emphases will have access to the same course offerings but those in Biotechnology will have a more structured plan of coursework. The biotechnology emphasis is a "professional science master's" (PSM) program designed and developed in parallel with two new similar programs in biostatistics and in medical and bioinformatics. Additional information about the Professional Science Master's program concept may be found in the PSM 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, candidates must satisfy all of the following admissions criteria:

- Grade point average of 3.0 (B) from all undergraduate coursework or a satisfactory score on the GRE or GMAT.
- Resume detailing work experiences and accomplishments.
- Personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.
- Written recommendations from at least two individuals who are in positions to attest to the applicant's successful completion of the program.

Applicants must have an underlying knowledge base relevant to graduate study in cell and molecular biology. 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 deficiencies with appropriate graduate or undergraduate courses, as recommended by a faculty advisor in the programs and approved by the Cell and Molecular Biology Admissions Committee and the Program Director.

Admission Process

The CMB Graduate Program Committee, led by the CMB Program Coordinator, will determine admissions to the program. This committee will have representatives from the departments of Biology, Chemistry, and Biomedical Sciences. The Professional Science Master's Program Coordinator will also participate in determination of student admissions to the biotechnology emphasis.

Admission to the M.S. in Cell and Molecular Biology program 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.

Advising

Critical to the success of students from diverse backgrounds and, thus, critical to the success of the program itself is the academic advising component and the individual plan of study prepared for and with each student. Once full or conditional admission has been granted, a faculty advisor in the cell and molecular biology program will be assigned to the student by the CMB Graduate Program Coordinator. The advisor will work closely with the student and the CMB Graduate Program Coordinator to ensure that each student is able to make satisfactory progress toward degree completion.

Another critical aspect of advising relates to a student's choice of emphasis within the cell and molecular biology M.S. The outcomes of each emphasis are quite different, so it's very important that students receive accurate and timely advising relating to emphasis choice. The CMB Graduate Program Coordinator and CMB faculty advisors will help students to clarify the differences in the two emphases in order to make the most appropriate emphasis choice based upon their backgrounds, interests, and career goals. Because of the shared courses and room for elective credits in each of the emphases, it is possible for students to move between them, with little or no "loss" of credits, if the decision to change emphases is made relatively early in a student's progress through the program.

Program Requirements

The cell and molecular biology M.S. degree, with its Research Emphasis and Biotechnology Emphasis, is an interdisciplinary program. The traditional Research Emphasis provides students with a solid core of coursework, multiple electives that allow students to develop knowledge and skill in a particular area of interest, and intensive research experience that culminates in a thesis. Students in the biotechnology emphasis take the same solid core of coursework as the research emphasis students, plus core courses and a seminar series in common with students in the other two professional science master's programs in medical and bioinformatics and biostatistics, as well as an intensive internship that will provide hands-on learning in the field.

Overall requirements for the M.S. in Cell and Molecular Biology consist of 35 credits, with a minimum cumulative GPA of 3.0. Consistent with Grand Valley policy, all courses must be completed within 8 consecutive years from entry into the first graduate course. The specific course requirements include:

Common Courses for both Research Emphasis and Biotechnology Emphasis

(9 credits)

CMB 505 Advanced Cell Biology
CMB 506 Advanced Molecular Biology
STA 622 Statistical Methods for Biologists*

Courses Specific to the Research Emphasis

(26 credits)

BIO 610 Scientific Methodology
CMB 695 Thesis Research
CMB 696 Perspectives in Cell and Molecular Biology (capstone)
Electives for Research Emphasis (minimum of 15 credits, with advisor approval)

*These courses are shared in a common core with the M.S. in Biostatistics and the M.S. in Medical and Bioinformatics.

Courses Specific to the Biotechnology Emphasis (26 credits)

CMB 610 Foundations of Biotechnology*

CMB 620 Cell and Tissue Culture

CMB 626 Nucleic Acids Laboratory

CMB 697 Colloquium in Biotechnology (capstone)

CS 661 Introduction to Medical and Bioinformatics*

PSM 650 Ethics and Professionalism in Applied Science*

PSM 661 Seminar in Professional Science Practice I*

PSM 662 Seminar in Professional Science Practice II*

PSM 691 Internship*

Electives for Biotechnology Emphasis (minimum of 5 cr, with advisor approval)

Electives

BIO 580 Selected Topics

BIO 680 Special Topics in Biology

BMS 680 Special Topics in the Health Sciences

CMB 580 Selected Topics

CMB 620 Cell and Tissue Culture

CMB 626 Nucleic Acids Laboratory

CMB 680 Special Topics

CS 635 Knowledge Discovery and Data Mining

STA 616 Statistical Programming

Departmental Contact

Cell and Molecular Biology Graduate Program Coordinator or Professional Science Master's Program Coordinator, 212 Henry Hall, c/o Biology Department, Grand Valley State University, Allendale, MI 49401

Courses of Instruction

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. Prerequisites: BIO 120; CHM 115 and 116. Three credits. Offered fall and winter semesters.

CMB 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics.

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. Prerequisites: BIO 499 or BMS 499 or CHM 499. Three credits. Offered winter semester.

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. Prerequisites: Admission to a graduate program in the life sciences. Three credits. Offered: Winter Semester.

CMB 506 Advanced Molecular Biology. Theory, history, techniques, and current research in selected areas of molecular biology. Topics include DNA replication, repair and recombination;

*These courses are shared in a common core with the M.S. in Biostatistics and the M.S. in Medical and Bioinformatics.

Chemistry

control of gene expression; signal transduction; isolation, cloning and sequencing of DNA. Prerequisites: Admission to a graduate program in the life sciences. Three credits. Offered: Fall Semester.

CMB 580 Selected Topics. Readings, lecture, discussions, seminars, or lab experience (or any combination) on a specific topic related to cell and molecular biology. Prerequisites: Variable; depends on topic. Credits: Variable, 1-4. Offered: On sufficient demand.

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. Prerequisites: Admission to a professional science master's program. Three credits. Offered: Winter Semester.

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. Prerequisites: Admission to a graduate program in the life sciences. Two credits. Offered: Winter Semester.

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. Prerequisites: Admission to a graduate program in the life sciences. Two credits. Offered: Winter Semester.

CMB 680 Special Topics. Lecture and/or laboratory course on topics of current interest related to cell and molecular biology. Prerequisites: Variable; depends on topic. Credits: Variable, 1-4. Offered: On sufficient demand.

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. Prerequisites: Graduate status in the Research Emphasis of the Cell and Molecular Biology M.S. and approval of the CMB Graduate Program Coordinator. Credits: Variable, 1-9. Offered: On demand.

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. Prerequisites or Corequisite: CMB 695. Two credits. Offered: Winter Semester.

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. Prerequisites or Corequisite: PSM 691. Two credits. Offered: Winter Semester.

Chemistry (CHM)

Chair: Carlson; Professors: Baum, Carlson, Gracki, Matchett, Miller, Nikkel, Richmond; Associate Professors: Bender, Henderleiter, Karpen, Leonard, McBane, Qi, Schaertel, Smart, Tanis; Assistant Professors: Hart, Herrington, Kovacs, Lawrence, Ngassa, Soman, Wallar, Winchester, Witucki, Yezierski.

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.

Accreditation: The Chemistry Department is accredited by the Committee on Professional Training of the American Chemical Society.

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.

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.

Major Requirements

Completion of a major in chemistry requires the following:

1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

Chemistry

2. Core Courses

A grade of C (2.0) or better in each of the following core chemistry courses.

- CHM 115 Principles of Chemistry I
- CHM 116 Principles of Chemistry II
- CHM 222 Quantitative Analysis
- CHM 225 Instrumental Analysis I
- CHM 245 Principles of Organic Chemistry I⁴
- CHM 246 Principles of Organic Chemistry I Lab⁴
- CHM 247 Principles of Organic Chemistry II⁴
- CHM 248 Principles of Organic Chemistry II Lab⁴
- CHM 391 Chemistry Seminar I³

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.

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
- CHM 355 Physical Chemistry Laboratory II
- CHM 356 Physical Chemistry I
- CHM 358 Physical Chemistry II
- CHM 372 Inorganic Chemistry Lab Techniques
- CHM 461 Biochemistry I
- CHM 471 Advanced Inorganic Chemistry¹
- CHM 491 Chemistry Seminar II³

Elective Course

One elective course from the following:

- CHM 441 Advanced Organic Chemistry
- CHM 442 Polymer Chemistry
- CHM 463 Biochemistry II
- CHM 473 Organometallic Chemistry

Upper-level Chemistry Lab Courses

Including a total of 80 hours of lab time (lab hours listed in parentheses).

- CHM 322 Environmental Chemical Analysis (42)

¹Capstone course.

²Completion of MTH 201, PHY 230, and PHY 231 satisfies the B.S. degree cognate for professional emphasis. Completion of MTH 201, PHY 220, and PHY 221 satisfies the B.S. degree cognate for all other emphases.

³Required of all chemistry majors. 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 391 is required only of students who take their junior year in chemistry at Grand Valley.

⁴CHM 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.

- CHM 344 Qualitative Organic Analysis (42)
 CHM 425 Instrumental Analysis II (28)
 CHM 452 Advanced Synthetic Techniques (70)
 CHM 455 Physical/Computational Chemistry Lab II (28) — May substitute for CHM 355.
 CHM 462 Techniques in Biochemistry (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 I²
 MTH 202 Calculus II
 PHY 230 Principles of Physics I²
 PHY 231 Principles of Physics II²

Technical Emphasis

The technical emphasis may be selected by those students planning to seek employment after graduation.

- CHM 310 Industrial Chemistry
 CHM 344 Qualitative Organic Analysis
 CHM 351 Introduction to Physical Chemistry
 CHM 352 Applied Physical Chemistry
 CHM 425 Instrumental Analysis II¹
 CHM 491 Chemistry Seminar II

Elective Course

One elective course from the following:

- CHM 321 Environmental Chemistry
 CHM 322 Environmental Chemical Analysis
 CHM 441 Advanced Organic Chemistry
 CHM 442 Polymer Chemistry
 CHM 461 Biochemistry I

Cognate Courses

And the following cognate courses:

- CS 160 Programming with Visual Basic or
 CS 162 Computer Science I
 MTH 201 Calculus I²
 PHY 220 General Physics I²
 PHY 221 General Physics II²
 STA 215 Introductory Applied Statistics

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 certified minor and the Secondary Professional Program (College of Education). In addition, students in this emphasis must

¹Capstone course.

²Completion of MTH 201, PHY 230, and PHY 231 satisfies the B.S. degree cognate for professional emphasis. Completion of MTH 201, PHY 220, and PHY 221 satisfies the B.S. degree cognate for all other emphases.

Chemistry

complete one biology and one earth/space science course to meet state certification standards. BIO 121 or 120 and GEO 111 are recommended. 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

CHM 352 Applied Physical Chemistry

CHM 419 Chemistry in Secondary Education¹

Capstone course.

And Either

CHM 232 Biological Chemistry

or CHM 461 Biochemistry I

Cognate Courses

And the following cognate courses:

CHM 491 Chemistry Seminar II

MTH 201 Calculus I²

PHY 220 General Physics I²

PHY 221 General Physics II²

Biochemistry and Biotechnology Emphasis

The biochemistry and biotechnology emphasis prepares students for entrylevel employment in biotechnical or biomedical laboratories or for entry into professional health schools or biochemical graduate programs.

BIO 120 General Biology I

BIO 375 Genetics

BIO 376 Genetics Laboratory

CHM 351 Introduction to Physical Chemistry

CHM 352 Applied Physical Chemistry

CHM 461 Biochemistry I

CHM 462 Techniques in Biochemistry

CHM 463 Biochemistry II¹

CHM 491 Chemistry Seminar II

MTH 201 Calculus I²

PHY 220 General Physics I²

PHY 221 General Physics II²

Cognate Options

Choose 10 additional credits from these choices:

BIO 406 Cell and Molecular Biology Laboratory

BIO 416 Advanced Genetics Laboratory

BIO 423 Plant Biotechnology

BIO 426 Nucleic Acids Laboratory

or

BMS 312 Bacterial Genetics

and BMS 313 Bacterial Genetics Laboratory

or

BMS 322 Bacterial Physiology

and BMS 323 Bacterial Physiology Laboratory

¹Capstone course.

²Completion of MTH 201, PHY 230, and PHY 231 satisfies the B.S. degree cognate for professional emphasis. Completion of MTH 201, PHY 220, and PHY 221 satisfies the B.S. degree cognate for all other emphases.

CHM 490 Chemistry Laboratory Internship¹

CHM 499 Investigation Problems¹

Additional Choices for Cognate Options

BIO 357 Environmental Microbiology or

or

BMS 212 Introductory Microbiology

and BMS 213 Laboratory in Microbiology

Additional Choices for Cognate Options

BIO 432 Comparative Animal Physiology or

or

BMS 290 Human Physiology

and BMS 291 Laboratory in Human Physiology

Additional Choices for Cognate Options

BIO 405 Cell and Molecular Biology or

or

BIO 414 Molecular Biology of the Gene

Students interested in Graduate School

Should take the following:

Chemistry

Instead of CHM 351 and 352:

CHM 353 Physical/Computational Chemistry Lab I

CHM 355 Physical Chemistry Laboratory II

or CHM 455

CHM 356 Physical Chemistry I

CHM 358 Physical Chemistry II

CHM 455 Physical/Computational Chemistry Lab II

or CHM 355

Mathematics

MTH 202 Calculus II

Physics

Instead of PHY 220 and 221 take:

PHY 230 Principles of Physics I²

PHY 231 Principles of Physics II²

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

CHM 322 Environmental Chemical Analysis¹

CHM 351 Introduction to Physical Chemistry

¹Variable credit courses. Up to six credits in CHM 490 and 499 may apply. Internship and research projects must be approved in advance by advisor.

²Completion of MTH 201, PHY 230, and PHY 231 satisfies the B.S. degree cognate for professional emphasis.

Chemistry

CHM 352 Applied Physical Chemistry
CHM 491 Chemistry Seminar II
CS 150 Introduction to Computing
MTH 201 Calculus I²
OSH 414 Environmental Safety and Health Regulations
PHY 220 General Physics I²
PHY 221 General Physics II²
STA 215 Introductory Applied Statistics

1. Biology Track:

BIO 120 General Biology I
BIO 215 General Ecology

And any two of the following courses:

BIO 338 Environmental Ethics
BIO 357 Environmental Microbiology
BIO 440 Limnology

2. Natural Resources Management Track:

GEO 111 Exploring the Earth
NRM 281 Principles of Soil Science

And any two of the following courses:

GPY 307 Introduction to Computer Mapping/Geographic Information Systems
NRM 320 Introduction to Resource Systems
NRM 451 Natural Resource Policy
NRM 452 Watershed and Wetland Management

3. Geology Track:

GEO 111 Exploring the Earth
GEO 112 Earth History

And any two of the following courses:

GEO 440 Geohydrology
GEO 445 Introduction to Geochemistry
GPY 307 Introduction to Computer Mapping/Geographic Information Systems

Students interested in Graduate School

Are encouraged to take the following:

Instead of CHM 351 and 352:

Chemistry

CHM 353 Physical/Computational Chemistry Lab I
CHM 355 Physical Chemistry Laboratory II
or CHM 455
CHM 356 Physical Chemistry I
CHM 358 Physical Chemistry II
CHM 455 Physical/Computational Chemistry Lab II or CHEM 355
or CHM 355

¹Capstone course.

²Completion of MTH 201, PHY 230, and PHY 231 satisfies the B.S. degree cognate for professional emphasis.

Mathematics

MTH 202 Calculus II

Physics

Instead of PHY 220 and 221 take:

PHY 230 Principles of Physics I¹PHY 231 Principles of Physics II¹**Minor Requirements****1. Minimum Requirements**

A minor in chemistry requires a minimum of 24 credit hours, including the following courses:

CHM 115 Principles of Chemistry I

CHM 116 Principles of Chemistry II

CHM 221 Survey of Analytical Chemistry

CHM 241 Organic Chemistry For Life Sciences I

or CHM 245 Principles of Organic Chemistry I

and CHM 246 Principles of Organic Chemistry I Lab

And Either

CHM 242 Organic Chemistry For Life Sciences II or

CHM 247 Principles of Organic Chemistry II

and CHM 248 Principles of Organic Chemistry II Lab

Plus one elective course from the following:

CHM 232 Biological Chemistry

CHM 310 Industrial Chemistry

CHM 321 Environmental Chemistry

CHM 322 Environmental Chemical Analysis

CHM 351 Introduction to Physical Chemistry

CHM 419 Chemistry in Secondary Education

CHM 442 Polymer Chemistry

CHM 461 Biochemistry I

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

Sample Curriculum — B.S. Professional Emphasis

This option assumes students will complete the required skills and general education courses and select electives with the help of their advisor.

¹Completion of MTH 201, PHY 230, and PHY 231 satisfies the B.S. degree cognate for professional emphasis.

²Required of all chemistry majors. 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 391 is required only of students who take their junior year in chemistry at Grand Valley.

Chemistry

First Year

CHM 115 Principles of Chemistry I
CHM 116 Principles of Chemistry II
MTH 201 Calculus I
MTH 202 Calculus II
PHY 230 Principles of Physics I

Third Year

- CHM electives

CHM 353 Physical/Computational Chemistry Lab I
CHM 355 Physical Chemistry Laboratory II
CHM 356 Physical Chemistry I
CHM 358 Physical Chemistry II
CHM 372 Inorganic Chemistry Lab Techniques
CHM 391 Chemistry Seminar I

Second Year

CHM 222 Quantitative Analysis
CHM 225 Instrumental Analysis I
CHM 245 Principles of Organic Chemistry I
CHM 246 Principles of Organic Chemistry I Lab
CHM 247 Principles of Organic Chemistry II
CHM 248 Principles of Organic Chemistry II Lab
PHY 231 Principles of Physics II

Fourth Year

- CHM electives

CHM 461 Biochemistry I
CHM 471 Advanced Inorganic Chemistry
CHM 491 Chemistry Seminar II

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 test after they have completed the major with a 2.7 GPA. The following requirements must be completed for the major.

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.

M.Ed. with a Concentration in Chemistry Middle and High School Emphasis

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. program with a chemistry concentration requires a teaching certification with a major in chemistry and employment as a high school 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. 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 and an advisor from the Department of Chemistry will evaluate all previous course work taken in chemistry. A curricular plan reflecting the student's needs, interests, and goals will be agreed upon. The following courses must be taken to satisfy the chemistry concentration requirements.

- CHM 610 Graduate Research Seminar
- CHM 611 Research for Teachers
- CHM 612 Applications of Research to Teaching
- CHM 621 Education Research in Chemistry
- CHM 631 Inquiry Curriculum Development
- CHM 632 Inquiry Colloquium
- CHM 633 Applications of Chemistry Education

Courses of Instruction

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. Three credits.

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. (4-1-2) Offered every semester. Prerequisite: MTH 097 (may be taken concurrently). Fulfills Physical Sciences Foundation. Five credits.

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 or CHM 109, and MTH 110. Fulfills Physical Sciences Foundation. Five credits.

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. Five credits.

CHM 180 Special Topics in Chemistry. Special topics for the first year in college chemistry. Offered upon sufficient demand. Prerequisite: Permission of CHM department. One to three credits.

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. Four credits.

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

Chemistry

absorption spectroscopy and gas and liquid chromatography are also covered. (3-0-4) Offered fall and winter semesters. Prerequisite: CHM 116 or one full year of General Chemistry. Four credits.

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. Prerequisite: CHM 116. Corequisite: CHM 241 or CHM 245. Three credits.

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. Prerequisite: CHM 222. Three credits.

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, the major metabolic pathways, the biochemistry of nucleic acids, and protein synthesis. Does not apply to a chemistry major or minor. (5-0-0) Offered fall and winter semesters. Prerequisite: CHM 109 or equivalent. Five credits.

CHM 231 Introductory Organic Chemistry. An introduction to organic chemistry. Topics include the classes of organic compounds, reactions, synthesis, and mechanisms. Includes laboratory. (3-1-2) Offered every semester. Prerequisite: CHM 109 or CHM 116. Four credits.

CHM 232 Biological Chemistry. An introductory course in biochemistry. Topics include carbohydrates, proteins, lipids, nucleic acids, enzymes, metabolism, and protein synthesis. Includes laboratory. (3-1-2) Offered every semester. Prerequisite: CHM 231. Four credits.

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. Prerequisite: CHM 116. Four credits.

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. Prerequisite: CHM 241. Four credits.

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. Prerequisite: CHM 116. Corequisite: CHM 246. Three credits.

CHM 246 Principles of Organic Chemistry I Lab. An introduction to laboratory techniques and procedures of synthetic organic chemistry including analysis of organic compounds using modern spectroscopic techniques. (0-0-4) Offered fall semester. Prerequisite: CHM 116. Corequisite: CHM 245. One credit.

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. Corequisite: CHM 248. Three credits.

CHM 248 Principles of Organic Chemistry II Lab. A continuation of CHM 246, covering laboratory techniques and procedures of synthetic organic chemistry including analysis of organic compounds using modern spectroscopic techniques. (0-0-4) Offered winter semester. Prerequisites: CHM 245 and CHM 246. Corequisite: CHM 247. One credit.

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. Prerequisite: CHM 242. One credit.

CHM 280 Special Topics in Chemistry. Special topics for the second year in college chemistry. Offered upon sufficient demand. Prerequisite: Permission of CHM department. One to three credits.

CHM 310 Industrial Chemistry. An introduction to the principles of chemistry and chemical engineering used in industrial processes. Examines common chemical unit processes and the production methods for organic and inorganic chemicals. Pollution control equipment is also discussed as an integral part of chemical production. (2-0-0) Offered fall semester. Prerequisites: CHM 242 or CHM 247 or CHM 248; and MTH 125 or MTH 201. Two credits.

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. Prerequisite: CHM 231 or CHM 242 or CHM 247 or CHM 248. Three credits.

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. Three credits.

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. Three credits.

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). Three credits.

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). One credit.

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). Two credits.

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. One credit.

Chemistry

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. Three credits.

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). Three credits.

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. One credit.

CHM 380 Special Topics in Chemistry. Special topics for the third year in college chemistry. Offered upon sufficient demand. Prerequisite: Permission of CHM department. One to three credits.

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) Offered fall and winter semesters. Credited after second semester. One credit.

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. One or two credits.

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. Three credits.

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. Prerequisite: CHM 225. Three credits.

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). Three credits.

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. Prerequisite: CHM 242, CHM 247 or CHM 248, and CHM 351 or CHM 356 (CHM 351 or CHM 356 may be taken concurrently). Three credits.

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. Two credits.

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). Two credits.

CHM 461 Biochemistry I. Structure and function of biological compounds, bioenergetics, intermediary metabolism, and protein synthesis. (4-0-0) Offered fall and winter semester. Prerequisite: CHM 242, CHM 247 or CHM 248. Four credits.

CHM 462 Techniques in Biochemistry. Laboratory experiments and lectures covering techniques used in modern biochemical research. (1-0-6) Offered fall and winter semesters. Prerequisite: CHM 461 or permission of instructor. Three credits.

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. Three credits.

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. Prerequisite: CHM 351 or CHM 356 (CHM 351 or CHM 356 may be taken concurrently). Three credits.

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. Three credits.

CHM 480 Special Topics in Chemistry. Special topics for the fourth year in college chemistry. Offered upon sufficient demand. Prerequisite: Permission of CHM department. One to three credits.

CHM 490 Chemistry Laboratory Internship. Practical on-the-job training and independent study in specialized areas of chemistry. Offered on demand. Prerequisite: Chemistry major with a minimum of 20 hours in chemistry and permission of instructor. Can be taken for a maximum of four credits. One or two credits.

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) Offered fall and winter semesters. Credited after second semester. One credit.

CHM 499 Investigation Problems. Supervised research in chemistry for junior and senior chemistry majors. Offered every semester. Prerequisite: Permission of instructor. Can be taken for a maximum of seven credits. One to five credits.

CHM 580 Special Topics in Chemistry. Special topics appropriate for graduate study in college chemistry. Offered upon sufficient demand. One to three credits.

CHM 585 Workshop for Chemistry Teachers. Intended to expand the perspectives or break the teaching of specific topics in an introductory chemistry course. Special emphasis on lecture demonstrations, laboratory experiments, and computer programs. Offered summerbreak semester. Prerequisites: High school chemistry teacher and permission of instructor. Two credits.

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. Two credits.

City and Regional Planning Minor

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. Prerequisite: CHM 610. Corequisite: CHM 612. Three credits.

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. Prerequisite: CHM 610. Corequisite: CHM 611. One credit.

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. Three credits.

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. Prerequisite: CHM 621. Four credits.

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. One credit.

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. Prerequisite: CHM 632. One credit.

City and Regional Planning Minor

Coordinator: Wagendorp.

The professional field of planning is a dynamic and growing discipline that is concerned with improving the quality of community living by developing community plans, programs, and projects that make cities and towns more livable. Professional planners create a better living environment by planning, designing, and ultimately building better cities, towns, and urban regions. This process is undertaken with the assistance of public, private, and community organizations.

Career Opportunities

A minor in city and regional planning provides career opportunities in public, private, and nonprofit organizations, including such agencies as city planning offices, state and county transportation bureaus, United Way agencies, park and recreation organizations, neighborhood associations, federal offices, private architecture and planning establishments, utility companies, and many other types of organizations.

Requirements for a Planning Minor

Students who minor in planning are required to complete the following courses (26 credits):
GPY 307 Introduction to Computer Mapping/Geographic Information Systems

GPY 309 Introduction to City and Regional Planning
 GPY 310 Land Use Planning
 GPY 407 Advanced GIS
 GPY 410 Landscape Analysis
 PA 307 Local Politics and Administration
 PA 439 Community Analysis
 SS 324 Urbanization

Classics (CLA, GRK, HBR, LAT)

Chair: Rayor. Professors: Rayor; Associate Professors: Flaschenriem, Levitan, Pazdernik; Assistant Professors: Anderson, Morison.

Classics is the study of ancient Greece and Rome, which stand among the world's most exciting, important, and influential civilizations. As an interdisciplinary field, classics explores the history, art, literature, philosophy, and the religious traditions of Greek and Roman civilization, as well as its relationships to other civilizations and cultures throughout the world, including our own. The cultural riches of classical civilization make the study of classics as rewarding as anything the liberal arts have to offer, but the value of classics has another dimension as well. Insofar as classics explores what many have understood as the foundations of Western civilization, it can provide an informed and critical perspective on those foundations, illuminating the artistic, intellectual, and social traditions that have helped to make the Western world what it has become over the course of a hundred generations of human history.

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, it offers a valuable opportunity to investigate first-hand the works and traditions that have provided much of the intellectual background of their own chosen fields.

Greek (GRK) and Latin (LAT)

Greek and Latin are essential components of classics. Access to the languages in which the great writers of the ancient world thought and composed provides students with a special perspective on ancient culture and also can give them a unique insight into what are still crucial works in the fields of poetry, drama, history, philosophy, law, and mathematics. Most students also find that working with the classical languages greatly improves their understanding of English and their skills as readers and writers. Greek is especially important for students of literature and philosophy and for those who are preparing for seminary or who wish to read the New Testament in its original language. Latin will be of special benefit to students of literature, history, and law, students of modern Romance languages, and those who are interested in the culture of medieval and renaissance Europe.

Both Greek 201 and Latin 201 fulfill the B.A. requirement of a third-semester proficiency in a foreign language. Greek 202 and Latin 202 fulfill the Cultural Designation: World Perspectives requirement of the General Education Program.

Career Opportunities

Students of classics have a wide range of career opportunities before them. Many classics students pursue careers in teaching either at universities or at the secondary level, where recent enrollment trends have increased the demand for high school Latin teachers in particular. Others choose careers in publishing, archaeology, or museum work. Still others

Classics

who seek the rigorous liberal arts degree that classics provides will move into fields such as law, medicine, business, technology, communications, and the ministry, in which an undergraduate major in classics has been recognized as particularly attractive. In general, every field that values a broad education and habits of precise thought will welcome the student of classics.

Placement in Language Course

Students who have studied Latin in high school should take a placement examination prior to enrolling in Latin courses. Transfer students with prior college study in Latin or Ancient Greek should consult the department for 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.

Requirements for Major and Minor Programs

The Department of Classics offers major and minor programs in classics with five distinct tracks or emphases: Classical Languages (major only), Greek, Latin, Latin Secondary Education, and the Classical Tradition. Although all five combine the study of language and classical culture, they differ in focus and aim. Degree programs in Classical Languages, Greek, and Latin offer full courses of undergraduate study in classics that stress the languages and literature of the classical world. Whereas the Greek and Latin emphases encourage students to focus upon one of the two languages exclusively, the Classical Languages emphasis provides flexibility in pursuing a course of study in both Latin and ancient Greek. 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. Students seeking secondary certification in Latin as a teachable major or minor must complete the foreign language methods seminar, Education (FL) 331.

Grand Valley's innovative program in the Classical Tradition emphasizes 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. The program in the Classical Tradition affords students who seek a broad acquaintance with the classical world, but whose interests do not fit easily into other departmental programs, the opportunity to design individual programs to fit their talents, interests, and career goals.

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 either completing a major in one language and a minor in another or pursuing advanced study of the languages beyond the minimum requirements of the Classical Languages emphasis.

Students interested in classics should also note the following courses offered by related programs:

ANT 215 Origins of Civilization
 ANT 220 Introduction to Archaeology
 ANT 350 Archaeology of the Mid-East
 COM 203 Argument and Analysis
 ENG 204 World Mythology
 HST 345 The Ancient Mediterranean and Orient
 HST 350 Classical Greece and Rome
 HNR 211/212 Classical World I
 HNR 221/222 Classical World II
 HNR 300 Classical Mythology
 PHI 301 Ancient Great Philosophers
 PLS 231 Classical Political Thought

Classics, Classical Languages Emphasis

(minimum 36 hours):

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome

And

CLA 250 Classical Art and Archaeology

or CLA 320 Women in the Classical World

or PHI 301 Ancient Great Philosophers

Or

HNR 211 Classical World I

HNR 212 Classical World I

and

HNR 221 Classical World II

HNR 222 Classical World II

Additional Courses

- Minimum of 20 additional hours of either Greek or Latin, at least 6 hours in one language at 300 level or above and at least 6 credits in the other.

CLA 495 Notions of the Classics (capstone)

Classics, Greek Emphasis

(minimum 34 hours):

Classics

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome

And

CLA 250 Classical Art and Archaeology

or CLA 320 Women in the Classical World

or PHI 301 Ancient Great Philosophers Credits: 3

Or

HNR 211 Classical World I

HNR 212 Classical World I

and

HNR 221 Classical World II

HNR 222 Classical World II

Additional Courses

- Additional 18 hours of Greek at 300 level or above

CLA 495 Notions of the Classics (capstone)

Classics, Greek Emphasis Minor

(minimum 22 hours):

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome

And

CLA 250 Classical Art and Archaeology
 or CLA 320 Women in the Classical World
 or PHI 301 Ancient Great Philosophers

Or

HNR 211 Classical World I

HNR 212 Classical World I

and

HNR 221 Classical World II

HNR 222 Classical World II

Additional Courses

- Additional nine hours of Greek at 300 level or above; for three of these hours, the following course may be substituted.

CLA 275 Ancient Drama

Classics, Latin Emphasis

(minimum 34 hours):

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome

And

CLA 250 Classical Art and Archaeology

or CLA 320 Women in the Classical World

or PHI 301 Ancient Great Philosophers

Or

HNR 211 Classical World I

HNR 212 Classical World I

and

HNR 221 Classical World II

HNR 222 Classical World II

Additional Courses

- Additional 18 hours of Latin at 300 level or above

CLA 495 Notions of the Classics (capstone)

Classics

Classics, Latin Emphasis Minor

(minimum 22 hours):

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome

And

CLA 250 Classical Art and Archaeology

or CLA 320 Women in the Classical World

or PHI 301 Ancient Great Philosophers

Or

HNR 211 Classical World I

HNR 212 Classical World I

and

HNR 221 Classical World II

HNR 222 Classical World II

Additional Courses

- Additional nine hours of Latin at 300 level or above

Classics, Latin Secondary Education Emphasis

(minimum 34 hours):

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome

And

CLA 250 Classical Art and Archaeology
 or CLA 320 Women in the Classical World
 or PHI 301 Ancient Great Philosophers

Or

HNR 211 Classical World I
 HNR 212 Classical World I
 and
 HNR 221 Classical World II
 HNR 222 Classical World II

Additional Courses

- Additional 18 hours of Latin at 300 level or above, one of which must be LAT 351.
 CLA 495 Notions of the Classics (capstone)

Classics, Latin Secondary Education Emphasis Minor

(minimum 22 hours):

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome

And

CLA 250 Classical Art and Archaeology
 or CLA 320 Women in the Classical World
 or PHI 301 Ancient Great Philosophers

Or

HNR 211 Classical World I
 HNR 212 Classical World I
 and
 HNR 221 Classical World II
 HNR 222 Classical World II

Additional Courses

- Additional nine hours of Latin at 300 level or above, one of which must be LAT 351

Classics, Classical Tradition Emphasis

(minimum 37 hours):

Classics

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome

And

CLA 250 Classical Art and Archaeology

or CLA 320 Women in the Classical World

or PHI 301 Ancient Great Philosophers

Or

HNR 211 Classical World I

HNR 212 Classical World I

and

HNR 221 Classical World II

HNR 222 Classical World II

Additional Courses

- Additional six hours of Greek or Latin at 300 level or above
- Additional 15 hours of departmental and nondepartmental courses according to approved study plan.
- Senior Integrative Essay

CLA 495 Notions of the Classics (capstone)

Classics, Classical Tradition Emphasis Minor

(minimum 22 hours):

Classics Core Courses Hours: 13

Students electing both a major and a minor program in classics will substitute an approved set of six departmental hours for the Cultural Core in one of the programs.

Students minoring in one of the classical languages may, upon recommendation of the departmental advisor, substitute two courses in the other language for three hours in the cultural core.

All students electing a major or minor program in classics will complete the following set of core courses:

Language Core:

- Seven hours in Greek or Latin at 200 level or above.

Cultural Core:

Either

HST 350 Classical Greece and Rome
 And
 CLA 250 Classical Art and Archaeology
 or CLA 320 Women in the Classical World
 or PHI 301 Ancient Great Philosophers
 Or
 HNR 211 Classical World I
 HNR 212 Classical World I
 and
 HNR 221 Classical World II
 HNR 222 Classical World II

Additional Courses

• Additional nine hours from following, with a minimum of six hours from classics:

ANT 215 Origins of Civilization
 ANT 350 Archaeology of Mid-East
 CLA 250 Classical Art and Archaeology
 CLA 275 Ancient Drama
 CLA 287 Roman Law
 CLA 315 Ancient Religion
 CLA 320 Women in the Classical World
 CLA 345 Tradition and Reception
 CLA 380 Special Topics
 CLA 410 Literary Translation: Theory and Practice
 CLA 461 Studies in the Classical Tradition
 CLA 479 Classical Theater Workshop
 CLA 495 Notions of the Classics (capstone)
 COM 203 Argument and Analysis—Upon recommendation of departmental advisor.
 HNR 300 Classical Mythology
 HST 345 The Ancient Mediterranean and Orient
 PHI 220 Aesthetics—Upon recommendation of departmental advisor.
 PHI 301 Ancient Great Philosophers
 PLS 231 Classical Political Thought

Courses of Instruction

Courses in Greek, Hebrew, and Latin. All classes are conducted in English.

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. Four credits.

GRK 102 Elementary Ancient Greek II. Continuation of GRK 101. Language work will be supplemented with discussions of ancient Greek history and culture. Offered winter semester. Prerequisite: Completion of GRK 101. Four credits.

GRK 201 Intermediate Ancient Greek I. Continuation of GRK 102. Reading of an entire dialogue by Plato, such as the *Apology* or *Crito*. Offered fall semester. Prerequisite: Completion of GRK 102. Four credits.

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: Completion of GRK 201 or permission of the instructor. Three credits.

GRK 301 Introduction to Ancient Greek Literature. Survey of ancient Greek literature after Homer, including authors such as Sappho, Sophocles, Herodotus, and Plato, and passages from

Classics

the New Testament. Special attention to the development of different forms of writing in Greek (lyric, drama, history, philosophy) and to what the texts tell us about Greek society. Offered fall semester. Prerequisite: Completion of GRK 202 or permission of the instructor. Three credits.

GRK 302 Euripides. An introduction to ancient Greek drama through a close reading of one of Euripides' tragedies such as *Alcestis*, *Medea*, or *Hippolytus*. Special attention to the social, religious, and political context of the performances and to the staging, including the use of chorus, song, and spectacle. Offered winter semester. Prerequisite: Completion of GRK 301 or permission of the instructor. Three credits.

GRK 351 Greek Prose. Reading of philosophical, oratorical, or historical texts, such as Plato's *Symposium*, Lysias' court speeches, or Herodotus' *Histories*. Emphasis on the originality of the forms of prose that helped shape the Western tradition: the philosophical dialogue, the reflection of ordinary lives in oratory, and history as cultural anthropology. Offered fall semester. Prerequisite: Completion of GRK 301 or permission of the instructor. Three credits.

GRK 352 Greek Lyric Poetry. Survey of Greek lyric poetry in various meters and dialects, designed for both choral and solo performance. Authors include Archilochus, Sappho, and Simonides. Special attention to the themes of love, sexuality, and death, and to the status of lyric as social commentary and philosophical reflection performed in public. Offered winter semester in even-numbered years. Prerequisite: Completion of GRK 301 or permission of the instructor. Three credits.

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. One to three credits.

GRK 401 Greek Drama. Study of Aeschylean or Sophoclean tragedy or Aristophanic 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: GRK 301 or permission of the instructor. Three credits.

GRK 402 Greek Narrative. Study of Greek narrative in poetry or prose, from such texts as the Homeric Hymns, Homer's *Odyssey*, Thucydides' *Peloponnesian War*, or the New Testament. Offered winter semester in odd-numbered years. Prerequisite: GRK 301 or permission of the instructor. Three credits.

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. Four credits.

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. Completion of HBR 101. Four credits.

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. Completion of HBR 102. Four credits.

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. Completion of HBR 201 or permission of instructor. Four credits.

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. Four credits.

LAT 102 Elementary Latin II. Continuation of LAT 101. Offered winter semester. Prerequisite: Completion of LAT 101. Four credits.

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. Prerequisite: prior experience of Latin at secondary level or permission of instructor. Four credits.

LAT 201 Intermediate Latin I. Continuation of LAT 102. Introduction to the study of selected ancient authors. Offered fall semester. Prerequisite: LAT 102 or appropriate high school background. Four credits.

LAT 202 Intermediate Latin II. Readings in Virgil's Aeneid, supplemented by study of the history and culture of Augustan Rome. Offered winter semester. Prerequisite: Successful completion of LAT 201, or appropriate high school background. Fulfills World Perspectives requirement. Three credits.

LAT 301 Introduction to Latin Literature. A survey of Latin literature from Plautine comedy to the literature of the early Empire. Special attention to the development of different forms of writing, including drama, history, oratory, and lyric poetry and to what the texts tell us about Roman society. Offered fall semester. Prerequisite: completion of LAT 202 or permission of the instructor. Three credits.

LAT 302 Ovid. Introduction to Ovid's poetry through close reading of selections from the erotic poetry, the Metamorphoses, the Fasti, or the exile poetry. Topics include the social and political context of Ovid's poetry, gender roles and relations between the sexes, satire and humor, and Ovid's poetic response to the policies of Augustus. Offered winter semester in even-numbered years. Prerequisite: LAT 301 or permission of the instructor. Three credits.

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 once if content changes. Offered fall semester. Prerequisite: Completion of LAT 202 or permission of the instructor. Three credits.

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: Completion of LAT 301 or permission of the instructor. Three credits.

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: Completion of LAT 301, LAT 351 or permission of instructor. Three credits.

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: Completion of LAT 301 or permission of the instructor. Three credits.

LAT 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

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. One to three credits.

Classics

LAT 401 Roman Poetry. Readings from the works of Roman poets such as Catullus, Lucretius, Virgil, Horace, 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 fall semester. Prerequisite: Completion of LAT 301 or permission of the instructor. Three credits.

Courses in Translation

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. Three credits.

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. Three credits.

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. Prerequisite: fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: fulfillment of the freshman writing requirement. Three credits.

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. Part of Perception theme. Offered fall semester in odd-numbered years. Prerequisite: fulfillment of the freshman writing requirement. Three credits.

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, or permission of the instructor. Three credits.

CLA 380 Special Topics. 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. Three credits.

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: fulfillment of the B.A. cognate requirement in a foreign language or permission of the instructor. Three credits.

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 or permission of the instructor. Three credits.

CLA 479 Classical Theater 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. Prerequisite: GRK or LAT 201, or permission of the instructor. Three credits.

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 or the permission of the instructor. Three credits.

CLA 499 Independent Study and Research. Supervised individual research in an area of interest to the student; culminates in a research paper. Prerequisite: Junior standing and the permission of the instructor supervising the research. One to three credits.

Clinical Laboratory Science (CLS)

Director: Goossen, Ph.D., M.T.(ASCP)

Associate Professor: Goossen, Ph.D., M.T.(ASCP)

Laboratory Coordinator: Stoddard M.H.S., M.T.(ASCP)

Education Coordinator: Tomlinson, M.S., M.T.(ASCP)

Clinical Laboratory Science

Adjunct faculty: Botma M.T.(ASCP); Hall M.T.(ASCP); Scholten, M.T.(ASCP); Sellgren, M.T.(ASCP); VanEnk, Ph.D.

Degree offered: B.S. in Clinical Laboratory Science

Accreditation: The Clinical Laboratory Science program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences; 8410 W. Bryn Mawr Avenue; Suite 670; Chicago, IL 60631-3415.

Clinical laboratory scientists perform complex analyses in order to develop data on the blood, tissues, and fluids of the human body, which may be used by a physician in determining the presence, extent, and as far as possible, cause of a disease. 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, immunohematology, and urinalysis.

Clinical Laboratory Science students will complete their general education courses and core science courses in the freshman, sophomore, and junior years. During the sophomore year, students will apply for the professional portion of the program. After admission to the program, the second semester of the junior and the senior year will be spent in Grand Valley State University's Center for Health Sciences in Grand Rapids. During the junior and senior year, students will 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, immunoserology, transfusion science, and clinical microbiology, and progress through advanced courses in these areas during the senior year. Senior students will apply the knowledge and technical skills learned in the classroom as they rotate through the laboratories of the hospitals in the cooperative. At the end of the senior year, students will be awarded a Baccalaureate from Grand Valley State University in Clinical Laboratory Science and be able to sit for the national certification exam. Granting of the baccalaureate degree is not contingent on passing the national certification exam.

Career Opportunities

There are many employment opportunities for clinical laboratory scientists in laboratories in hospitals, university centers, governmental agencies, physicians' offices, industry, research, and in sales (openings may vary with geographic locations). 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 1 of the sophomore year. Late applications will be considered assuming requirements are met and space is available in the program. Applicants must meet the following criteria:

1. Academic Achievement. Students must have a minimum overall GPA of 2.8 and a science GPA of 2.8 or above. Completion of BMS 208, BIO 120, CHM 109, and completion of 45 semester hours of credit.
2. Communication and interpersonal skills: On-site interviews are required.

3. 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.
4. Additional activities. Additional educational, professional, leadership, scholarly, and volunteer activities are valued and should be documented.

Major Requirements

Completion of a major in clinical laboratory sciences requires the following:

1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. The Clinical Laboratory Science Core Requirements

BMS 102 Introduction to Clinical Laboratory Sciences
 BMS 208 Human Anatomy
 BMS 212 Introductory Microbiology
 BMS 213 Laboratory in Microbiology
 BMS 290 Human Physiology*
 BMS 291 Laboratory in Human Physiology*
 BMS 301 Introduction to Research in the Biomedical Sciences*
 BMS 410 Immunology
 CLS 495 Issues in Clinical Laboratory Science**

3. Required Science Cognate Courses

27 semester hours of required science cognate courses:

BIO 120 General Biology I
 BIO 355 Human Genetics
 CHM 109 Introductory Chemistry
 CHM 231 Introductory Organic Chemistry
 CHM 232 Biological Chemistry
 PHY 200 Physics for the Life Sciences
 STA 215 Introductory Applied Statistics*

4. Professional Courses

35 additional semester credits in professional courses:

BMS 416 Hematology
 BMS 417 Clinical Hematology Laboratory
 CLS 320 General Laboratory Practice
 CLS 370 Diagnostic Microbiology 1
 CLS 372 Diagnostic Microbiology 2
 CLS 410 Clinical Immunoserology
 CLS 422 Clinical Chemistry
 CLS 450 Clinical Practicum I
 CLS 460 Advanced Clinical Science
 CLS 461 Advanced Clinical Laboratory
 CLS 490 Clinical Practicum II
 HPR 340 Health Care Management

*B.S. degree cognate course sequence: STA 215; BMS 301; BMS 290, 291.

**Capstone course.

Courses of Instruction

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. Two credits.

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. Five credits.

CLS 372 Diagnostic Microbiology 2. A study of structure, function, and diagnostic characteristics of clinically significant bacteria. Laboratory will focus on specimen collection and diagnostic procedures for the identification of pathogenic bacteria. Application and integration of theory and laboratory skills in clinical bacteriology are emphasized. Offered fall semester. Prerequisites: BMS 212/213. Three credits.

CLS 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

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. One to four credits.

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. Prerequisite: CLS 320. Three credits.

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. Prerequisite: CLS 320. Six credits.

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. Prerequisite: CLS 320. Corequisites: CLS 372, CLS 410, CLS 422, BMS 416/417. One credit.

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. Corequisite: CLS 461. Five credits.

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. Corequisite: CLS 460. Two credits.

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. Corequisites: CLS 460/461. Three credits.

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. Prerequisite: Senior standing in the Clinical Laboratory Science Program. Corequisite: CLS 490. Three credits.

College of Health Professions (HPR)

Dean: Toot; Professors: Bottles, Peck, Toot, VanFleet; Associate Professors: Alderink, Bacon-Baguley, Beck, Carlton, Goossen, G. Green, Hoogenboom, Powell, Stevenson, Ward; Assistant Professors: Allaben, Baker, Biese, Boeve, Carlton, DuBose, Grapczynski, M. Green, Kensinger, Libra, Ozga, Sisco, Vaughn; Instructor: Pawloski, Raaymakers, Rios; Affiliate Faculty: Harro, Pleban, Stoddard; Visiting Faculty: Van Ryn; Chair of Student Services: TBD.

The College of Health Professions houses **eight** programs. One program—physical therapy—offers the doctoral degree. Two programs—occupational therapy and physician assistant studies—offer the master's degree. **Five** programs—clinical laboratory science, health professions, radiologic and imaging sciences, occupational safety and health, and therapeutic recreation—offer the baccalaureate degree.

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.

Philosophy

The College of Health Professions as an academic unit of Grand Valley State University supports the university goals of education, research, and public service. The curricula provide educational experiences that encourage intellectual achievement and the development of critical and self-expression while maintaining emphasis on the importance of human values and cultures. The college initiates and maintains relationships with the West Michigan community to share resources and knowledge in approaches to health care. The faculty role is to educate clinical health professionals who will be involved in the diagnosis and treatment of a comprehensive scope of actual or potential health problems.

In response to the changing needs of society, the College of Health Professions faculty subscribes to the following beliefs about humanity, environment, well-being, and clinical professional education.

Humanity

The faculty believe in the innate worth and dignity of individuals. Individuals have a uniqueness that is the result of a dynamic interaction with the environment and is integrated physiologically, psychologically, socially, culturally, and spiritually. The family and community are primary social systems essential for the fulfillment of basic needs and personal goals. Social systems provide the framework for human interaction by defining relationships and establishing rules for behavior and modes of action.

Environment

Life occurs in the context of dynamic interactions with the environment. Individual direction and development are determined by the environment, which develops through circumstances and choice. Environmental factors are evaluated according to the emotional and intellectual balance within the individual.

Well-being

Well-being is the individual's understanding of his or her ability to meet needs within the standards of human capacity. Human capacity is defined within the contexts of life stages and cultural and social roles and is qualified by heredity, behavioral choices, disease, and the environment.

Clinical Professional Education

Clinical professional education is based on the belief that learning is an individualized, life-long process. The aim of clinical professional education is to facilitate the acquisition of knowledge, attitudes, values, and skills and the development of independence, critical thinking, creativity, and leadership, all of which are necessary in the practice of clinical health professionals.

Professional Conduct

Health care professionals accept responsibility for management of care and exhibit a high degree of accountability as they provide care to individuals, families, groups, and communities in a variety of settings. Behavior patterns of all health care professionals grow from an innate belief by each individual in the respect due to every human being. The college believes that there are abilities that are attributes, characteristics, or behaviors that are not explicitly part of the profession's core of knowledge and technical skills but are necessary for success in the profession. These ten abilities have been identified as (1) commitment to learning, (2) interpersonal skills, (3) communication skills, (4) effective use of time and resources, (5) use of constructive feedback, (6) problem-solving, (7) professionalism, (8) responsibility, (9) critical thinking, and (10) stress management. Descriptors can be found on the College of Health Professions Web page. The role of health care professionals includes the components of health care delivery and management, collaboration, leadership, teaching, research utilization, evaluation, and advancement of the profession.

Health care professionals uphold certain obligations that include (1) the obligation to maintain a professional demeanor whenever they may be considered a representative of their profession, (2) the obligation to know and accept a professional "Code of Ethics," and (3) the obligation to maintain an attitude of compassion and "welfare of the patient first."

In interactions with peers, staff, patients, and public audiences, students are expected to demonstrate consistent, courteous behavior.

Academic Requirements

Because the College of Health Professions prepares students to practice in a variety of Health Professions, we assume the responsibility of ensuring the public that our students have met high standards of professional behavior, academic achievement, and consistent evidence of response to consumer needs.

In addition, students may have to undergo a criminal background check prior to clinical placements. It is the responsibility of the student to contact their clinical coordinator for further information.

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.

Program Information

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

Courses of Instruction

HPR 100 Medical Terminology. The construction and translation of common medical terms. Two credits.

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. Three credits.

HPR 180 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

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. Two credits.

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. BMS 280, BMS 281 and STA 215. Three credits.

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. Two credits.

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). Prerequisite: At least junior standing and/or admission to one of the HPR professional programs. Two credits.

HPR 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to three credits.

HPR 408 Professional Roles/Issues in Health Care. Interdisciplinary perspective that introduces the role of health care professionals in a changing health care system. Introduces managed care, documentation, and reimbursement issues. Examines how ethical and legal issues will affect the health care worker. Presents systems theory perspectives and familiarizes students with effective communication techniques. (2-2-0). Prerequisite: Admission to one of the programs in the College of Health Professions. Three credits.

HPR 419 Neuromuscular Development and Control. Emphasis on neurological and musculoskeletal development from conception to adolescence and how this development relates to function. Current theories in motor control, motor learning, and motor development will be introduced. (4-0-2) . Prerequisite: BMS 427 and BMS 428 and admission to one of the programs in the College of Health Professions. Three credits.

HPR 480 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Three credits.

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. Three credits.

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

College of Health Professions

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). HPR 301 and senior standing. Three credits.

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. Prerequisite: One semester of professional curriculum; permission of professional curriculum director. One to three credits.

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. Prerequisite: Good standing in one of the HPR professional programs. One credit.

HPR 580 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Three credits.

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. Prerequisite: HPR 510 and good standing in one of the HPR professional programs. Two credits.

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. Prerequisite: Good standing in one of the HPR professional programs or consent of instructor. Two credits.

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. Prerequisite: Successful completion of all previous didactic and clinical professional work or consent of instructor. Two credits.

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. Prerequisite: Successful completion of all previous didactic and clinical professional work or consent of instructor. Three credits.

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. Prerequisite: Successful completion of all previously required courses in the respective health profession's curriculum. Two credits.

HPR 680 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Three credits.

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. Prerequisite: HPR 610 and good standing in one of the HPR professional programs. One to three credits.

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. Prerequisite: HPR 688 and good standing in one of the HPR professional programs. Three credits.

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. Prerequisite: HPR 610 and good standing in one of the HPR professional programs. One to three credits.

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. Prerequisite: 690 and good standing in one of the HPR professional programs. Three credits.

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. Prerequisite: Good standing after three semesters on one of the HPR professional programs; permission of the professional program director. One to three credits.

School of Communications

Director: Nesterenko. Professors: Ellis, R., Morse, Nesterenko, Perrine, Rathbun; Associate Professors: Anton, Bell, Helgert, Libman, Mayberry, Pednekar-Magal, Philbin, Roberts, Roos, Sheffield, Thompson; Assistant Professors: Beery, Marsolino, Penning, Peterson, Schmit, Swieringa, Veenstra, Weinstock, Wiese, Winegar.

Communications is a multidisciplinary liberal arts and professional field. At Grand Valley a student may choose a major in communication studies or one of seven specialized majors.

Communication Arts includes majors in film and video production, photography, and theatre. In these fields communication is seen primarily as the creation of meaning in both original work and performance. Besides language, these fields emphasize communication by means of images, movement, and dramatic action.

Studio programs in this area are accredited by the National Association of Schools of Art and Design.

Mass Communications includes majors in advertising and public relations, broadcasting, and journalism. These fields deal with the communication of information to mass audiences. Studies emphasize verbal and nonverbal messages and the constantly developing technology used in these specialties.

The Health Communication major was developed in direct response to a growing need for professional communicators in the health care fields. Health communication majors are educated across a wide range of content in advertising, public relations, writing, marketing, and the health sciences.

Communications

Communication Studies draws on the resources of both communication arts and mass communications. To these it adds the rhetorical tradition that emphasizes discourse—both person to person and to audiences, by public address, argumentation, persuasion, and dialogue.

In all major fields students will be expected to acquire the theoretic insights and practical skills appropriate to related professions.

In order to create a common experience for students in the School of Communications, a common core of coursework is required of all majors. By integrating diverse disciplines and traditions, these courses help students understand the nature of human communication.

Internships

The School of Communications faculty believe 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

School of Communications 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 \$1,000 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.

The School of Communications Core Requirement

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

COM 295 Theories of Communication

And one of the following:

COM 201 Speech

COM 215 Story Making

Students also complete the requirements for one of the eight majors in The School of Communications.

Capstone requirement: COM 495 Issues In Communication. 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.

B.S. Cognate

The B.S. degree requires a three-semester sequence of courses that emphasize research methodologies.

For advertising and public relations, general communications, and journalism

The B.S. cognate is

COM 375 Communication Research

SS 300 Research Methods in the Social Sciences

STA 215 Introductory Applied Statistics

For the film and video production, photography, and theatre programs

The B.S. cognate is

CS 150 Introduction to Computing

or PHI 103 Logic (for the photography program)

SS 300 Research Methods in the Social Sciences

STA 215 Introductory Applied Statistics

For the broadcasting and health communication programs

The B.S. cognate is

COM 375 Communication Research

MKT 352 Marketing Research

STA 215 Introductory Applied Statistics

Advertising and Public Relations

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.

Advertising Sequence

1. School of Communications Core Credits: 9

2. Advertising Core Credits: 33

CAP 105 Technology in PR & Advertising

CAP 115 Research Basics for Advertising and PR

CAP 210 Fundamentals of Advertising

Communications

CAP 220 Fundamentals of Public Relations
CAP 310 Advertising Management and Cases
CAP 315 Advertising Copywriting
CAP 400 Advertising/Public Relations Campaign
CAP 413 Media Planning
CAP 490 Internship in Advertising/Public Relations Credits: 1 to 6
CJR 256 News Reporting I
PHI 325 Ethics in Professional Life

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.

4. Capstone

COM 495 Issues in Communication(capstone)

Public Relations Sequence

1. School of Communications Core Credits: 9

2. Public Relations Core Credits: 33

CAP 105 Technology in PR and Advertising
CAP 115 Research Basics for Advertising and Public Relations
CAP 210 Fundamentals of Advertising
CAP 220 Fundamentals of Public Relations
CAP 320 Public Relations Management and Cases
CAP 321 Media Relations Writing
CAP 400 Advertising/Public Relations Campaign
CAP 423 Writing Corporate Communications
CAP 490 Internship in Advertising/Public Relations Credits: 1 to 6
CJR 256 News Reporting I
PHI 325 Ethics in Professional Life

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.

4. Capstone

COM 495 Issues in Communication(capstone)

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, the following courses are required:

CAP 105 Technology in PR and Advertising
CAP 115 Research Basics for Advertising and Public Relations
CAP 210 Fundamentals of Advertising
CAP 220 Fundamentals of Public Relations

CAP 310 Advertising Management and Cases
 or CAP 320 Public Relations Management and Cases
 And two electives.

Broadcasting

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.

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.

Broadcasting majors are offered internship opportunities with television, radio, and cable stations in West Michigan.

1. School of Communications Core Credits: 9

2. Broadcasting Requirements Credits: 18

All majors take the following core courses

CBR 220 Beginning TV Studio Production
 CBR 240 Survey of Electronic Media
 CBR 340 Life on Television
 CBR 350 Broadcast Operations
 CBR 411 Broadcast Seminar
 CFV 125 Media Production I

3. Select one of the following sequences:

Broadcast Production Credits: 13

CBR 281 Audio Production I
 CBR 320 Advanced TV Studio Production
 CBR 382 Audio Production II
 CFV 261 Scriptwriting I

Broadcast News

CBR 368 Broadcast News I
 CBR 468 Broadcast News II
 CBR 484 TV News Workshop
 CJR 256 News Reporting I

4. Electives

After consulting with a Communications advisor choose at least six credits from any School of Communications discipline at the 200 level or above.

Communications

5. Capstone

COM 495 Issues in Communication (capstone)

Communication Studies

Because our lives—publicly, privately, and professionally—vitaly 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 major areas in the School of Communications. The aim is for students to become adaptable, resourceful, and generally educated communicators who can draw upon all the ways of looking at communication embodied in the programs of the school to solve practical problems of communication.

The communication studies major requires that at least two of a student's elective courses from outside the School of Communications form a coherent set that will help each student obtain subject matter about which to be a more knowledgeable communicator, or provide a critical perspective upon communication from a larger context.

1. School of Communications Core Credits: 9

2. Communication Studies Core

(at least 19 credits)

COM 201 Speech

COM 202 Critical Interpretation

or COM 203 Argument and Analysis

COM 320 Vision and Culture

or COM 371 Media and Society

COM 380 Special Topics

COM 498 Senior Thesis/Project

(1–6 credit. At least junior standing or permission of instructor required.) [This requirement can be fulfilled by production of an essay demonstrating mastery of 10 major readings selected from a list of 50 proposed by the School of Communications.]

And Either

COM 210 Nonverbal Communication

or COM 301 Interpersonal Communication

3. Either 3a. and 3b.

3a. Mass Communication

Minimum of 6 credits in one Mass Communication Area—i, ii, or iii.

i. Advertising and Public Relations:

CAP 210 Fundamentals of Advertising

or CAP 220 Fundamentals of Public Relations

CAP 310 Advertising Management and Cases
 or CAP 320 Public Relations Management and Cases

And Either

CAP 315 Advertising Copywriting
 or CAP 321 Media Relations Writing

ii. Journalism:

CJR 256 News Reporting I
 CJR 290 Journalism History
 And Either
 CJR 270 News Reporting II
 or CJR 316 Editing

iii. Broadcasting:

CBR 240 Survey of Electronic Media
 CBR 281 Audio Production I
 or CBR 368 Broadcast News I
 COM 371 Media and Society

3b. Communication Arts

Minimum of 6 credits in one Communication Arts area — iv, v, vi

iv. Film/Video:

CFV 123 Survey of Media Production Modes
 or CFV 225 Film Culture
 CFV 125 Media Production I
 CFV 370 Film and Television Interpretation
 or COM 348 Film Theories

v. Photography:

CPH 171 Photography I
 CPH 172 Photography II
 CPH 266 History of Photography I
 CPH 278 Color-Positive Photography

vi. Theatre:

CTH 151 Acting I: Improvisation
 CTH 161 Theatre Production
 CTH 371 Theatre History
 CTH 380 Special Topics

4. Outside Electives

(at least 6 credits)

The School of Communications requires students to support their work in communication studies by choosing at least six credits of their electives to form a coherent set of courses from outside the school, either from the list of those proposed by the school, or created by the student in consultation with the advisor. The purpose of the electives is to provide more depth in a single topic, issue, or subject, or in theory, criticism, or policy. Such a set may include courses from more than one discipline. These courses must be at the 200 level or above and cannot have been counted for distribution credit elsewhere. Minors, as exceptions, can be applied to satisfy the outside electives requirements.

5. Capstone

COM 495 Issues in Communication (capstone)

Or, 3c, Communication Applications:

Instead of satisfying 3a and 3b, the student may take a minimum of 12 credits (in i, ii, iii) in either 3a or 3b.

Film and Video Production

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.

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.

Digital video facilities include nonlinear editing suites, a full complement of field gear, television studio classroom, and a digital audio studio. The 16mm film facilities include editing flatbeds, and single and double system camera packages. Students work with a variety of software in *Macintosh* computer laboratories. Students intern at regional and national professional production facilities.

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 Web site 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.

Pre-admission courses:

The following required pre-admission courses can be taken in any order.

CFV 123 Survey of Media Production Modes

CFV 124 Image and Sound

CFV 125 Media Production I

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.

1. School of Communications Core Credits: 9

2. Film/Video Production Foundation

Take the following plus one additional CFV History/Theory/Criticism course.

CBR 281 Audio Production I

CFV 123 Survey of Media Production Modes

CFV 124 Image and Sound

CFV 125 Media Production I

CFV 226 Media Production II

CFV 261 Scriptwriting I

CFV 370 Film and Television Interpretation

3. 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

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

COM 348 Film Theories. Credits: 3

Communications

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

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.

4. Internship or Thesis Credits: 1–6

CFV 490 Internship. Credits: 1 to 6

CFV 498 Senior Thesis/Project. Credits: 1 to 6

5. Capstone

COM 495 Issues in Communication (capstone)

Intermediate Production:

CBR 382 Audio Production II

CFV 321 16mm Film Production I

CFV 322 Documentary Production I

CFV 323 Media Technologies

CFV 324 3D Computer Animation

CFV 325 Animation I

CFV 326 Computer Image Making

CFV 327 Film and Video Art

CFV 328 Intermediate Film Practicum

CFV 330 Digital Post Production

CFV 362 Scriptwriting II

CFV 368 Lighting for Film and Video Productions

CFV 380 Special Topics

Advanced Production:

CBR 485 Audio Production III

CFV 422 Documentary Production II

CFV 424 16mm Film Production II

CFV 425 Animation II

CFV 426 Cinematic Multimedia

CFV 428 Advanced Film Practicum

CFV 429 Post Production Practicum

CFV 470 Nonfiction Film/Video Practicum

CFV 482 Sound Design for Film and Video

History/Theory/Criticism:

CFV 370 Film and Television Interpretation

CFV 375 World Cinema

COM 348 Film Theories

COM 371 Media and Society

COM 372 Global Communications

COM 373 Women and Minorities in Film and Television

Health Communication

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.

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 (1 below).

1. School of Communications Core Credits: 9

2. Biomedical Sciences Core Credits: 19*

BIO 103 The Biology of People
BMS 202 Anatomy and Physiology
BMS 223 Public Health Concepts
CHM 109 Introductory Chemistry
HPR 340 Health Care Management

3. Health Communication Core Credits: 27

CAP 210 Fundamentals of Advertising
CAP 220 Fundamentals of Public Relations
CAP 321 Media Relations Writing
CJR 256 News Reporting I
CJR 390 Technical Writing
COM 209 Health Communication Systems
COM 410 Senior Seminar in Health Communication

*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.

COM 490 Internship Credits: 1 to 6
MKT 350 Marketing Management

4. Elective Group

(select two of four courses for 6 to 8 credits)

CFV 125 Media Production I
CFV 226 Media Production II
CPH 171 Photography I
CPH 172 Photography II

5. Capstone

COM 495 Issues in Communication (capstone)

Journalism

The journalism program offers majors a broadly based education in which the study of journalism is grounded in the liberal arts. Students are encouraged to develop a thorough background in writing skills of different kinds and in literature. They are further encouraged to develop depth outside of journalism in an area common to the news science, business, foreign language studies, and sociology, among others.

Journalism studies at Grand Valley include a combination of theory and skills courses, as well as internships and other experiences, in print and electronic media. Students are strongly encouraged to publish articles in newspapers and magazines while still in school. Internship opportunities include the student-run weekly newspaper, *The Lanthorn*, daily and weekly newspapers, minority publications, trade and popular magazines, and commercial and public broadcasting stations.

1. School of Communications Core Credits: 9

2. Journalism Core Credits: 24

CJR 236 News in Society
CJR 256 News Reporting I
CJR 270 News Reporting II
CJR 290 Journalism History
CJR 316 Editing
CJR 454 Community Reporting
CJR 465 Issues in Journalism
COM 203 Argument and Analysis

3. Emphasis Area

select one, either A or B

A. Print Journalism Credits: 9

CJR 364 Article Writing
CJR 365 Advanced Editing
CJR 481 Investigative Reporting

B. Electronic Journalism Credits: 14

CFV 125 Media Production I
CFV 226 Media Production II
CFV 368 Lighting for Film and Video Productions
CFV 482 Sound Design for Film and Video

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

COM 495 Issues in Communication (capstone)

Photography

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.

Photography majors prepare for positions as visual communicators in fields that vary from purely "photographic industry" to areas in which an understanding of photography is but one of several elements comprising a communications activity. Some graduates move directly into such areas as freelance, medical, scientific, industrial, journalistic, editorial, and portrait or commercial photography. Others combine photography with additional media skills for entry into areas as diverse as advertising, audio-visual production, graphic arts, television and motion picture production, printing, and publishing. Some graduates find employment in the photographic processing and finishing industry that serves the needs of the millions of people who employ cameras in the course of their activities. Finally, a large number of graduates pursue photography as a fine art and many continue their education in graduate programs.

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.

1. School of Communications Core Credits: 9

2. Photography Core

(eight courses, for a minimum of 30 credits)

ART 150 Foundations: 2-D Design

CPH 171 Photography I

CPH 172 Photography II

CPH 266 History of Photography I

CPH 273 Classic 4 x 5 Photography

CPH 278 Color-Positive Photography Credits: 4 or CPH 279 Color Printing
 CPH 366 History of Photography II
 CPH 372 Computer Photo I
 CPH 498 Senior Thesis/Project Credits: 1 to 6

3. Electives Credits: Minimum of 9

CPH 371 Experimental Black and White Photography
 CPH 373 Computer Photo II
 CPH 374 Color Photography
 CPH 375 Studio Photography
 CPH 377 The Social Eye
 CPH 380 Advanced Problems in Photography
 CPH 399 Independent Study Credits: 1 to 6
 CPH 490 Internship Credits: 1 to 6

4. Capstone

COM 495 Issues in Communication (capstone)

Theatre

The major in theatre prepares students for careers that require skills in communications, creativity, and problem-solving, or for careers in the entertainment industry. It provides 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 productions sponsored by the School of Communications; academic credit is given for all such involvement. Also, students may pursue internships with professional theatres, locally, regionally or nationally, as managers, publicists, technicians, and production assistants.

Versatility in a number of areas is the single most important factor in obtaining work. 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. 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. A complete list of placement and careers of recent theatre graduates is available upon request.

Note: The theatre program requires COM 201 in the School of Communications core. Theatre majors are encouraged to take ENG 212 in general education.

1. School of Communications Core Credits: 9

2. Theatre Core Credits: 35

CTH 151 Acting I: Improvisation
 CTH 161 Theatre Production
 CTH 162 Play Analysis
 CTH 252 Acting II: Characterization
 CTH 261 Stagecraft I
 CTH 262 Costume Construction
 CTH 365 Directing I

Communications

CTH 371 Theatre History
CTH 372 The Modern Theatre

Two of the following

These two courses cannot also count for electives below.

CTH 367 Scenography
CTH 368 Lighting Design
CTH 369 Costume Design
CTH 465 Directing II
CTH 490 Internship Credits: 1 to 6

3. Electives Credits: 9

CTH 198 Rehearsal and Performance
CTH 250 Stage Management
CTH 263 Makeup
CTH 300 Storytelling
CTH 356 Acting III
CTH 366 Drama in Education
CTH 367 Scenography
CTH 368 Lighting Design
CTH 369 Costume Design
CTH 373 Global Arts Performance
CTH 380 Special Topics
CTH 454 Acting IV
CTH 465 Directing II
CTH 479 Classical Theatre Workshop
MUS 357 Opera Theatre

4. Capstone

COM 495 Issues in Communication (capstone)

Sample Curriculum for B.S. or B.A. Program

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
COM 295 Theories of Communication
CTH 151 Acting I: Improvisation

Theatre majors should enroll in the “majors only” section of this beginning acting course.

CTH 161 Theatre Production
CTH 162 Play Analysis
CTH 262 Costume Construction
MTH 110 Algebra
WRT 150 Strategies in Writing

Sophomore Year

General Education Foundations* — Math Sciences and Physical Sciences
COM 201 Speech

*Theatre majors should not enroll in courses in the General Education Foundations Arts category.

CTH 250 Stage Management
 CTH 252 Acting II: Characterization
 CTH 261 Stagecraft I
 CTH 371 Theatre History
 CTH 372 The Modern Theatre
 And BA/BS Cognate

Junior Year

General Education Foundations* — Life Sciences and Social Sciences, General Education World Perspectives and U.S. Diversity, General Education Themes

CTH 300 Storytelling

or CTH 373 Global Arts Performance

Either CTH 300 or CTH 373 can “double-count” as a CTH elective and as a General Education theme offering in the “Creativity” or “Global Integration” Theme groups.

CTH 365 Directing I

CTH 367 Scenography

CTH 368 Lighting Design

CTH 369 Costume Design

CTH 465 Directing II

CTH 490 Internship. Credits: 1 to 6

Theatre majors should register for CTH 490 Internship during their senior year. And BA/BS Cognate

Senior Year

Theatre majors should register for either COM 498 Senior Project or CTH 490 Internship during their senior year.

COM 495 Issues in Communication (capstone)

Finish the program with CTH elective courses.

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.

Master of Science in Communication

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

*Theatre majors should not enroll in courses in the General Education Foundations Arts category.

Communications

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.

Required Courses

The following courses (27 credits) are required of all students.

COM 600 Systems Theory and Communication
COM 610 Secondary Information and Analysis
COM 620 Empirical Methods in Communication
COM 634 Ethics in Professional Communication
COM 641 Emerging Telecommunication Technologies
COM 642 Communication Law
COM 660 Communication Management and Cases
COM 695 Master's Thesis/Project

And Either

BUS 631 Leadership and Organizational Dynamics
or
PA 520 Foundations of Public Management

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
COM 680 Special Topics
COM 699 Independent Study

Prerequisites and Entrance Requirements

Students must graduate with a minimum GPA of 3.0. Two grades of C or lower will result in dismissal from the 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.

Sample Curriculum

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

Winter

COM 610 Secondary Information and Analysis

Spring/Summer

- Elective Course

Second Year**Fall**

COM 620 Empirical Methods in Communication

Winter

PA 520 Foundations of Public Management

or BUS 631 Leadership and Organizational Dynamics

COM 634 Ethics in Professional Communication

Spring/Summer

- Elective Course

Third Year**Fall**

- Elective Course

COM 641 Emerging Telecommunication Technologies

Winter

COM 642 Communication Law

COM 660 Communication Management and Cases

Spring/Summer

COM 695 Master's Thesis/Project

Courses of Instruction**Advertising/Public Relations**

CAP 105 Technology in PR 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. Three credits.

CAP 115 Research Basics for Advertising and PR. 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. Three credits.

CAP 210 Fundamentals of Advertising. Basic principles of advertising, including its socio-economic 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. Prerequisite: CAP 115 and completion of composition requirement (WRT 150) with grade of C (not C-) or better. Three credits.

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

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and implementing public relations campaigns, the identification of publics and the strategies for influencing them. Offered every semester. Prerequisite: CAP 115 and completion of composition requirement (WRT 150) with grade of C (not C-) or better. Three credits.

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. Prerequisite: Junior standing. Three credits.

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. Three credits.

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. Prerequisite: CAP 210 or permission of instructor. Three credits.

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. Prerequisite: CJR 256 or permission of instructor. Three credits.

CAP 320 Public Relations Management and Cases. The public relations function viewed from the management, consultant, and employee positions through use of text material and case studies. Offered fall and winter semesters. Prerequisite: CAP 220. Three credits.

CAP 321 Media Relations Writing. This course prepares public relations students with both knowledge and practice of writing skills used in the public relations profession, with special emphasis on media relations. Students will learn how the news media work in different settings, and how media relations fits into the broader public relations program. Offered fall and winter semesters. Prerequisite: CJR 256. Three credits.

CAP 380 Special Topics. A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. May be repeated for credit when content varies. Offered on sufficient demand. Prerequisite: Sophomore standing. Three credits.

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. One to six credits.

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. Three credits.

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. Three credits.

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. Prerequisite: CAP 321. Three credits.

CAP 425 International Advertising and Public Relations. Addresses the key issues that advertising and public relations practitioners must keep in mind to create effective communication programs for foreign markets: cultural norms and values, political environments, economic policies, legal considerations, and social contexts. Offered winter semester of odd-numbered years. Prerequisite: CAP 310 or CAP 320. Three credits.

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. One to six credits.

Broadcasting

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. Three credits.

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. Three credits.

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. Three credits.

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 WGVU. Offered winter semester. Prerequisite: CBR 220. Three credits.

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. Three credits.

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. Prerequisite: CBR 240. Three credits.

CBR 368 Broadcast News I. News writing for radio and television. Projects include writing and producing newscasts and interviews. Offered winter semester. Prerequisite: CJR 256. Three credits.

CBR 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to six credits.

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. Three credits.

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. One to six credits.

Communications

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. Three credits.

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. Three credits.

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. One credit.

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. Prerequisite: CBR 468. Three credits.

CBR 485 Audio Production III. Microphone use, mixing, and editing. Final project is an eight-track mix-down. The class uses the facilities of a professional recording studio. Offered fall semester. Prerequisite: CBR 382. Three credits.

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. One to six credits.

CBR 498 Senior Thesis/Project. The senior thesis/project demonstrates depth and sophistication in the major. Offered fall and winter semesters. One to six credits.

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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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: Sophomore standing. Three credits.

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. Three credits.

COM 215 Story Making. How to create a story, scene, or image in your mind and render it in a variety of modes: oral story, written story, one-shot image told verbally, short script, previsualization for media, previsualization for dance, etc. Course includes discussion of the nature of narrative. Offered fall and winter semesters. Prerequisite: Fulfillment of composition requirement. Three credits.

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. Three credits.

COM 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. Three credits.

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. Prerequisite: COM 101. Three credits.

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. Three credits.

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. Three credits.

COM 303 Debate. Instruction in techniques of argumentation and debate. Research methodology, logical analysis and argumentation, rhetorical strategies, technique of public presentation. Intercollegiate competition will not be a part of this class. Offered on sufficient demand. Prerequisite: COM 201. Three credits.

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. Three credits.

COM 348 Film Theories. Examines a selection of major theories concerning sources of meaning and power in film and television. Offered every semester. Prerequisite: Junior standing. Three credits.

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. Three credits.

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. Three credits.

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

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industry has been restricted both in front of and behind the camera. Offered every other year. Three credits.

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: SS 300 or MKT 352. Three credits.

COM 380 Special Topics. A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. May be repeated for credit when content varies. Offered on sufficient demand. Prerequisite: Sophomore standing. One to six credits.

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. One to six credits.

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. Three credits.

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. Three credits.

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. One to six credits.

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. Three credits.

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. One to six credits.

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. Three credits.

COM 610 Secondary Information and Analysis. Examines available sources of information, how they are accessed, and how to interpret and analyze findings. Attention is also given to data retrieval, storage and analysis, creating files analysis of trends, and aggregating and collapsing information. Prerequisite: COM 600. Three credits.

COM 620 Empirical Methods in Communication. The primary approaches to communication research with special emphasis on content analysis, survey research, focus groups, discourse

analysis, projective techniques, sampling techniques, and proposal and report writing. Prerequisite: COM 600. Three credits.

COM 634 Ethics in Professional Communication. An examination of ethical issues and problems in professional communication. Special attention is given to understanding the connections between the communication industry and society, government, economics, and the law. Prerequisite: COM 600. Three credits.

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. Prerequisite: Admission to a Grand Valley master's program. Three credits.

COM 642 Communication Law. An examination of the law as it relates to communication. An appraisal of current thinking in communication law and future trends. Prerequisite: Admission to a Grand Valley master's program. Three credits.

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. Prerequisite: COM 600, BUS 631. Three credits.

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. Three credits.

COM 680 Special Topics. A study of special topics not regularly covered in the curriculum. Prerequisite: COM 600. Three credits.

COM 695 Master's Thesis/Project. Master's thesis or project completed in consultation with the student's advisor and committee. Prerequisite: COM 660. Three credits.

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. One to four credits.

Film and Video Production

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. Three credits.

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. Three credits.

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. Four credits.

Communications

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. Prerequisite: Admission to major. Four credits.

CFV 261 Scriptwriting I. Writing for film, video, radio, and mixed media. Writing exercises in dramatic, informational, documentary, public service announcements, and commercial formats. Offered fall and winter semesters. Prerequisite: Admission to major. Three credits.

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. Prerequisite: Admission to major. Three credits.

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. Prerequisite: Admission to major and CFV 226. Three credits.

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. Prerequisite: CFV 226 or CBR 281; Physics 226 or 229 recommended. Three credits.

CFV 324 3D Computer Animation. Introduction to 3D modeling and animation using computers. Students will demonstrate proficiency at basic modeling skills, surfacing, lighting, and animation. There will be consideration of how color, shape, lighting, and texture influence meaning. Work in critical analysis provides a context for the animation process. Offered winter semester. Prerequisite: Admission to the major. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: Admission to major and CFV 226. Three credits.

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. Prerequisite: Permission of instructor. Three or six credits.

CFV 330 Digital Post Production. Explores conceptual issues in editing images and sound in a digital production environment. Offered fall and winter semesters. Prerequisite: Admission to major and CFV 226. Three credits.

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. Prerequisite: Admission to the major and CFV 261. Three credits.

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. Prerequisite: Admission to major and CFV 226. Three credits.

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: Admission to major. Three credits.

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. Prerequisite: Admission to major or permission of instructor. Three credits.

CFV 380 Special Topics. A study of special topics not regularly covered in the curriculum. Expectations of the student in this course approximate those in other 300-level courses. May be repeated for credit when content varies. Prerequisite: Admission to major. Three credits.

CFV 399 Independent Study. An experience of an essentially scholarly and/or creative nature undertaken by a student under the supervision of one or more faculty members. Initiated by the student who has a special interest in a subject that is not available in the current curriculum. The student and the faculty sponsor agree on the scope of the study, its components, and methods of evaluation. Prerequisite: Admission to major. One to six credits.

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. Prerequisite: Admission to the major and CFV 322. Three credits.

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. Prerequisite: Admission to major and CFV 321. Three credits.

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. Prerequisite: Admission to major and CFV 325. Three credits.

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. Prerequisite: Admission to major and CFV 326. Three credits.

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. Prerequisite: Admission to major and CFV 424. Three or six credits.

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. Prerequisite: CFV 261 and either CFV 330 or CBR 281. Three credits.

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. Prerequisite: Admission to major and one intermediate video production course (CFV 320 or higher). Three credits.

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

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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. Prerequisite: Admission to major and CBR 281. Three credits.

CFV 490 Internship. A supervised work experience in an area of a student's potential career interest. Initiated by the student, who plans the work experience with the advisor, the faculty sponsor chosen to supervise the internship, and the supervisor at the worksite. Credit is awarded only when the student, the faculty sponsor, and the work supervisor have completed evaluations of the internship. Offered every semester. Prerequisite: Admission to the major. One to six credits.

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. Prerequisite: Admission to the major. One to six credits.

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. Permission of instructor. One to five credits.

Journalism

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. Prerequisite: CJR 256 or permission of instructor. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Three credits.

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 winter semester. Three credits.

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. Prerequisite: CJR 256 or permission of instructor. Three credits.

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. Prerequisite: CJR 256 or permission of instructor. Three credits.

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 consid-

erations; and generating infographics to accompany stories. Offered winter semester. Prerequisite: CJR 316 or permission of instructor. Three credits.

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. Ability to write competently and experience or coursework in one or more of the arts. Prerequisite: CJR 256 or permission of instructor. Three credits.

CJR 380 Special Topics. 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. Prerequisite: Sophomore standing. May be repeated for credit when content varies. Three credits.

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. Prerequisite: CJR 270 or permission of instructor. Three credits.

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. One to six credits.

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. Prerequisite: CJR 270. Three credits.

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. Prerequisite: Junior standing. Three credits.

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. Three credits.

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. Three credits.

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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. One to six credits.

Photography

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. Four credits.

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. Four credits.

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. Three credits.

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. Prerequisite: None. Three credits.

CPH 273 Classic 4 x 5 Photography. Emphasis upon the use and application of the large format camera, the zone system of previsualization and exposure/development control, and the production of the classic black-and-white print. Subject areas represent the classic themes drawn from the history of photography. Offered fall and winter semesters. Prerequisite: CPH 172 or permission of instructor. Three credits.

CPH 278 Color-Positive Photography. Introduction to color theory as it applies to light, exposure and processing of color transparency films, and printing on Cibachrome materials. Offered winter semester. Prerequisite: CPH 172 or permission of instructor. Four credits.

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. Four credits.

CPH 280 Special Topics. A study of topics not regularly covered in the curriculum. May be repeated for credit when topic varies. Prerequisite: Sophomore standing or permission of instructor. One to three credits.

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. Three credits.

CPH 371 Experimental Black and White Photography. An advanced production course that investigates experimental and nontraditional applications of black-and-white imaging materials and processes. Historical and contemporary experimental work will be examined. Emphasis is on the expressive and visual significance of experimentally generated imagery. Offered winter semester. Prerequisite: CPH 273. Three credits.

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 and software

used to access, manipulate, and output photographs for use in display, print, and the digital environment. Offered every semester. Prerequisites: ART 150 and CPH 175, or CPH 278, CPH 279, CFV 226, or permission of instructor. Three credits.

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. Prerequisite: CPH 372 or permission of instructor. Three credits.

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. Prerequisite: CPH 279. Three credits.

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. Prerequisite: CPH 273. Three credits.

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. Prerequisite: CPH 273. Four credits.

CPH 380 Advanced Problems in Photography. An intensive investigation and a sustained image-making activity in one area of photographic practice. Examines both historical and contemporary approaches, as well as aesthetic and cultural attitudes that have informed them. Students will produce various solutions within the course theme. Offered fall semester. Prerequisite: CPH 273. Three credits.

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. One to six credits.

CPH 480 Special Topics. A study of advanced topics not regularly covered in the curriculum. May be repeated for credit when topic varies. Prerequisite: Senior standing or permission of instructor. One to three credits.

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. One to six credits.

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. Prerequisite: CPH 266 with a grade of C or better. One to six credits.

Theatre

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. Three credits.

CTH 151 Acting I: Improvisation. An introduction to the process of acting through improvisation, freeing the natural performer by means of physical, intellectual, emotional, and

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intuitive exercises and games. Extensive experiential work and subsequent evaluation. Offered fall semester. Three credits.

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. Offered fall semester. Three credits.

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. Three credits.

CTH 198 Rehearsal and Performance. Participation as a performer (acting, dance) in the college's production program. Offered every semester. Prerequisite: Permission of instructor. May be repeated for credit. One to three credits.

CTH 250 Stage Management. An introduction to the field of stage management and live performances. Class lectures and discussions are augmented by work on projects and actual performance. Offered winter, even-numbered years. Two credits.

CTH 252 Acting II: 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 winter semester. Prerequisite: CTH 151. Three credits.

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. Prerequisite: CTH 161 or permission of instructor. Three credits.

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. Three credits.

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. Two credits.

CTH 298 Applied Theatre Practice. Participation in a technical or design capacity (scenery, lighting, costumes, stage-management, etc.) in the college's production program. Offered every semester. Prerequisite: Permission of instructor. May be repeated for credit. One to three credits.

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. Prerequisite: Junior Standing. Three credits.

CTH 356 Acting III. 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 on sufficient demand. Prerequisite: Two courses in acting. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: CTH 161 and CTH 261 or permission of instructor. Three credits.

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. Prerequisite: CTH 161. Three credits.

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. Prerequisite: CTH 161 and CTH 262 or permission of instructor. Three credits.

CTH 371 Theatre History. An examination of the place of theatre in the societies of major historical periods between 600 B.C. and 1800 A.D. Emphasis will be on Western culture, but course material will also include non-European drama. Study of representative play scripts augmented by film and video presentations and by readings in anthropology, cultural history, and criticism. Offered fall, odd-numbered years. Prerequisite: fulfillment of the Freshman Writing Requirement. Three credits.

CTH 372 The Modern Theatre. An examination of dramatic literature and theatrical performance since 1880. Emphasis on the various stylistic approaches to production in Europe and America, including those of Stanislavski, expressionism, epic theatre, absurdism, the new stagecraft, and others. Offered fall, even-numbered years. Prerequisite: fulfillment of the Freshman Writing Requirement. Three credits.

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. Prerequisite: Permission of instructor and two courses in any arts area. Three credits.

CTH 380 Special Topics. 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. One to three credits.

CTH 399 Independent Reading. Directed readings or research work in theatre literature or theatrical practice. Offered every semester. Prerequisite: Junior or senior standing and permission of the instructor. One to three credits.

CTH 400 Touring Theatre Production. Intensive study, rehearsal, performance and production of a touring play. Students audition for roles prior to course. Students gain a broad understanding of the theatrical touring process through participation in an ensemble touring play presented to outreach audiences. Permissions of instructor by audition only. Three credits.

CTH 454 Acting IV. Scene and monologue work with emphasis on auditioning. Practice with prepared and unprepared material. Training in selecting, editing, rehearsing, resume writing,

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performing. Offered winter semester. Two of the following: CTH 151, CTH 252, or CTH 356 or equivalent. Three credits.

CTH 455 Acting V. 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. Journals, written assignments, and 42 hours of lab work in public performance. Permission of instructor by audition only. Three credits.

CTH 465 Directing II. Includes study of directing for proscenium, thrust, and the round. Special attention paid to directing plays from other periods, children's plays, musicals, and placing plays in a transferred period. Students will direct a one-act play for public performance. Offered on sufficient demand. Prerequisite: CTH 365 or by permission of instructor. Three credits.

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. Prerequisites: GRK or LAT 201 or by permission of instructor. Three credits.

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. Prerequisite: Senior standing, selected coursework in background to the specific area of the internship, and permission of theatre chairman. One to six credits.

CTH 499 Independent Research. Scholarly library project and critical essay in some area of theatre. Seniors majoring in theatre and dance. Offered every semester. One to three credits.

School of Computing and Information Systems (CIS)

Director: Leidig. Professors: Jorgensen, Leidig, Tao; Associate Professors: Adams, Alsabbagh, Ferguson, Grissom, Johnson, Kotman, Nandigam, Nezelek, Reynolds, Trefftz, Tusch, Wolffe; Assistant Professors: Dulimarta, El-Said, Kurmas, Levin, McGuire; Instructors: Hornik, Lange, Peterman, Scripps; Affiliate: Posada; Computer Lab Supervisor: Strebel.

Degrees offered: B.S., B.A. in Computer Science, with a 7–12 Secondary Teacher Certification option; B.S., B.A. in Information Systems; M.S. in Computer Information Systems; M.S. in Medical and BioInformatics. Minors offered: Computer Science, Computer Science (7–12 Secondary Teacher Certification), Information Systems, Information Technology, Computer Engineering, and Health Care Information Systems.

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, including accounting and business management services and research and development. In short, the employment prospects for college graduates with majors or minors in computer science are very bright.

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.

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 CS 162 and 163; MTH 225; STA 215 or 312; COM 201 or WRT 350 or COM 201. Completing the core courses requires programming, analytical reasoning, and communication skills. These skills are important to excel in the computing field.

Requirements for a Computer Science Major

Students who wish to major in Computer Science must complete the following:

1. University Degree Requirements

As identified in the General Academic Regulations section of the Grand Valley State University Graduate and Undergraduate Catalog.

2. Computer Science Major

All computer science majors not seeking teacher certification must complete the following 40–43 credits of required computer science classes and nine hours of computer science electives with a minimum 2.0 GPA.

Required Computer Science Courses:

CS 162 Computer Science I
 CS 163 Computer Science II
 CS 251 Computer Organization
 CS 263 Data Structures and Algorithms
 CS 343 Structure of Programming Languages
 CS 350 Introduction to Software Engineering
 CS 353 Database
 CS 451 Computer Architecture
 CS 452 Operating Systems Concepts
 CS 457 Data Communications
 CS 467 Computer Science Project*
 CS 490 Internship

*Capstone course.

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Computer Science Elective Courses

All computer science majors must select three electives (minimum of nine hours) from the following:

- CS 361 System Programming
- CS 365 Artificial Intelligence
- CS 367 Computer Graphics
- CS 368 Usability Design & Evaluation
- CS 380 Special Topics
- CS 458 System Security
- CS 461 Compiler Design and Construction
- CS 465 Automata and Theory of Computation
- CS 480 Special Topics

3. Cognate Courses

All computer science majors not seeking teacher certification must complete the following 36–37 credits of cognate courses:

- COM 201 Speech
- MTH 201 Calculus I*
- MTH 202 Calculus II*
- MTH 225 Discrete Structures: Computer Science
- MTH 325 Discrete Structures: Computer Science 2
- STA 215 Introductory Applied Statistics*
or STA 312 Probability and Statistics*
- WRT 350 Business Communication

12 hours of science

Select one of the following 3-course sequences:

- BIO 120 General Biology I
- BIO 121 General Biology II
- and a general education physical science course
- Or
- CHM 115 Principles of Chemistry I
- CHM 116 Principles of Chemistry II
- and a general education life science course
- Or
- PHY 220 General Physics I
- PHY 221 General Physics II
- and a general education life science course
- Or
- PHY 230 Principles of Physics I
- PHY 231 Principles of Physics II
- and a general education life science course

Computer Science Sample Curriculum

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 math-

*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.

ematics background for the entering student. If mathematics deficiencies exist, completing the mathematics prerequisites should be the student's top priority.

Suggested pattern of coursework:

First Year

Fall

Take General Education courses and the following:

CS 162 Computer Science I
 MTH 122 College Algebra***
 STA 215 Introductory Applied Statistics**
 WRT 150 Strategies in Writing

Winter

Take General Education courses and the following:

COM 201 Speech
 CS 163 Computer Science II
 MTH 123 Trigonometry***
 MTH 225 Discrete Structures: Computer Science

Second Year

Fall

Take General Education courses and the following:

CS 251 Computer Organization
 MTH 201 Calculus I*
 MTH 325 Discrete Structures: Computer Science 2

Winter

Take General Education courses and the following:

CS 263 Data Structures and Algorithms
 CS 353 Database
 MTH 202 Calculus II*

Third Year

Fall

Take Science Lab I, General Education courses and the following:

CS 350 Introduction to Software Engineering
 CS 457 Data Communications

Winter

Take Science Lab II, General Education courses and the following:

CS 343 Structure of Programming Languages
 CS 451 Computer Architecture
 WRT 305 Writing in the Disciplines
 (To test out: Contact ARC at 200 STU)

Fourth Year

Fall

Take Computer Science Electives, General Education courses, and the following:

CS 452 Operating Systems Concepts
 WRT 350 Business Communication

Winter

Take Computer Science Electives, General Education courses, and the following:

CS 467 Computer Science Project
 CS 490 Internship Credits: 2 to 5

4. Computer Science Major (7–12 Secondary Teacher Certification)

Computer science majors seeking teacher certification must complete the following 35 credits of computer science classes and 12 credits of cognate courses. Students are required to assist in a computer laboratory at Grand Valley as partial fulfillment of their field experience requirement. A minimum GPA of 2.8 in the computer science courses is required for recommendation for teacher certification.

*Capstone course.

**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.

***To test out: Contact ARC at 200 STU

Computing and Information Systems

Required Computer Science Courses:

- CS 162 Computer Science I
- CS 163 Computer Science II
- CS 231 Problem Solving Using Spreadsheets
- CS 237 Introduction to Network Management
- CS 251 Computer Organization
- CS 263 Data Structures and Algorithms
- CS 307 Computer Science Teacher Assisting Seminar
- CS 309 Teaching Computer Science
- CS 350 Introduction to Software Engineering
- CS 353 Database
- CS 467 Computer Science Project*

Computer Science Secondary Certification Sample Curriculum

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, completing the mathematics prerequisites should be the student's top priority.

First Year

Fall

Take a General Education course and the following:

- CS 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

Winter

Take a General Education course, a minor course and the following:

- COM 201 Speech. Credits: 3
- or WRT 350 Business Communication. Credits: 3
- CS 163 Computer Science II. Credits: 4
- MTH 225 Discrete Structures: Computer Science. Credits: 3

Second Year

Fall

Take a General Education course, a minor course and the following:

- CS 231 Problem Solving Using Spreadsheets. Credits: 3
- CS 251 Computer Organization. Credits: 3
- MTH 325 Discrete Structures: Computer Science 2. Credits: 3
- PSY 101 Introductory Psychology. Credits: 3

Winter

Take a General Education course and the following:

- CS 237 Introduction to Network Management. Credits: 3
- CS 263 Data Structures and Algorithms. Credits: 3
- CS 353 Database. Credits: 3
- PSY 301 Child Development. Credits: 1 to 3

*This course may be satisfied by an Advanced Math Placement Test.

Third Year

Fall

Take General Education courses, minor courses and the following:

CS 350 Introduction to Software Engineering. Credits: 3

ED 200 Introduction to Education. Credits: 3

Winter

Take General Education courses, minor courses and the following:

ED 205 Computers in Education. Credits: 3

WRT 305 Writing in the Disciplines. Credits: 3

(To test out: Contact A.R.C. @ 200 STU)

Fourth Year

Fall

Take General Education courses, an SWS course and the following:

CS 307 Computer Science Teacher Assisting Seminar. Credits: 3

ED 225 Diversity in Education. Credits: 3

PSY 325 Educational Psychology. Credits: 3

APPLY TO THE SCHOOL OF ED

Winter

Take General Education courses, minor courses and the following:

CS 309 Teaching Computer Science. Credits: 3

(Satisfied by ED 331 Methods and Strategies of Secondary Teaching. Credits: 6)

CS 467 Computer Science Project. Credits: 3

5. Cognate Courses:

All computer science majors seeking teacher certification must complete the following 12 credits of cognate courses:

MTH 225 Discrete Structures: Computer Science

MTH 325 Discrete Structures: Computer Science 2

STA 215 Introductory Applied Statistics**

or STA 312 Probability and Statistics**

And Either

WRT 350 Business Communication

or COM 201 Speech

Information Systems

Students who wish to major in information systems must complete the following:

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 48–51 semester credit hours of computer science courses with a minimum 2.0 GPA:

*Capstone course.

**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.

***To test out: Contact ARC at 200 STU

Computing and Information Systems

CS 150 Introduction to Computing
CS 162 Computer Science I
CS 163 Computer Science II
CS 230 Hardware and Software
CS 238 Internet Media and Programming
CS 253 COBOL
or CS 260 Application Development in Visual Basic
CS 330 Systems Analysis and Design
CS 333 Database Management and Implementation
CS 337 Network Systems Management
CS 450 IS Project Management
CS 460 Management of Information Systems
CS 463 Information Systems Project (Capstone)
CS 490 Internship

Information Systems Tracks

All information systems majors must select one of the 2-course following tracks:

Software Development:

(Select whichever course was not previously chosen in the core requirements)

CS 253 COBOL
or CS 260 Application Development in Visual Basic
CS 443 Software Development Tools

Networking:

CS 338 Wide Area Network Engineering
CS 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
ACC 213 Principles of Managerial Accounting
BUS 201 Legal Environment for Business
COM 201 Speech
ECO 210 Introductory Macroeconomics
or ECO 211 Introductory Microeconomics
FIN 320 Managerial Finance
MGT 268 Introduction to Management Information Systems
MGT 331 Concepts of Management
MKT 350 Marketing Management
MTH 225 Discrete Structures: Computer Science
or MTH 227 Linear Algebra I
STA 215 Introductory Applied Statistics
or STA 312 Probability and Statistics
STA 216 Intermediate Applied Statistics
or STA 318 Statistical Computing
WRT 350 Business Communication

Information Systems Sample Curriculum

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, completing the mathematics prerequisites should be the student's top priority.

Suggested pattern of coursework:

First Year

Fall

Take a General Education course and the following:

CS 150 Introduction to Computing
 CS 162 Computer Science I
 MTH 122 College Algebra*
 WRT 150 Strategies in Writing

Winter

Take a General Education course and the following:

COM 201 Speech
 CS 163 Computer Science II
 MTH 225 Discrete Structures: Computer Science
 STA 215 Introductory Applied Statistics

Second Year

Fall

Take a General Education course and the following:

ACC 212 Principles of Financial Accounting
 CS 230 Hardware and Software
 CS 238 Internet Media and Programming
 STA 216 Intermediate Applied Statistics
 or STA 318 Statistical Computing

Winter

Take a General Education course and the following:

ACC 213 Principles of Managerial Accounting
 BUS 201 Legal Environment for Business
 CS 253 COBOL
 or CS 260 Application Development in Visual Basic
 MGT 268 Introduction to Management Information Systems

Third Year

Fall

Take a General Education course and the following:

CS 337 Network Systems Management
 MGT 331 Concepts of Management
 MKT 350 Marketing Management
 WRT 350 Business Communication

Winter

Take a General Education course and the following:

CS 330 Systems Analysis and Design
 CS 333 Database Management and Implementation
 ECO 210 Introductory Macroeconomics
 or ECO 211 Introductory Macroeconomics
 WRT 305 Writing in the Disciplines*
 (To test out: Contact ARC at 200 STU)

Fourth Year

Fall

Take a General Education course, a CS elective course and the following:

CS 450 IS Project Management
 CS 460 Management of Information Systems
 CS 490 Internship

Winter

Take a General Education course, a CS elective course and the following:

CS 463 Information Systems Project
 FIN 320 Managerial Finance

*This course may be satisfied by an Advanced Math Placement Test.

Requirements for a Minor in Computer Science

The following minor requires a minimum GPA of 2.0 to be approved.

CS 162 Computer Science I
CS 163 Computer Science II
CS 251 Computer Organization
CS 263 Data Structures and Algorithms
CS 350 Introduction to Software Engineering

Select one of the following:

CS 353 Database
or CS 361 System Programming
or CS 457 Data Communications
MTH 225 Discrete Structures: Computer Science
MTH 325 Discrete Structures: Computer Science 2

Requirements for a Minor in Computer Science (7–12 Secondary Teacher Certification)

A minimum GPA of 2.8 in this minor is required to be recommended for teacher certification.

CS 162 Computer Science I. Credits: 4
CS 162 Computer Science II. Credits: 4
CS 231 Problem Solving Using Spreadsheets. Credits: 3
CS 233 Concepts of Database Systems. Credits: 3
CS 237 Introduction to Network Management. Credits: 3
CS 251 Computer Organization. Credits: 3
CS 309 Teaching Computer Science. Credits: 3
MTH 225 Discrete Structures: Computer Science. Credits: 3

Requirements for a Minor in Information Systems

The following minor requires a minimum GPA of 2.0 to be approved.

CS 150 Introduction to Computing
CS 162 Computer Science I
CS 230 Hardware and Software

Select one of the following:

CS 238 Internet Media and Programming
or CS 253 COBOL
or CS 260 Application Development in Visual Basic
CS 330 Systems Analysis and Design
CS 333 Database Management and Implementation
CS 337 Network Systems Management
MGT 268 Introduction to Management Information Systems

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)

CS 150 Introduction to Computing
CS 160 Programming with Visual Basic
CS 230 Hardware and Software

CS 233 Concepts of Database Systems
CS 237 Introduction to Network Management
CS 339 IT Project Management

Two electives selected from the following (Hours: 6)

CS 231 Problem Solving Using Spreadsheets
CS 238 Internet Media and Programming
CS 260 Application Development in Visual Basic
CS 331 Advanced Spreadsheet Development
CS 338 Wide Area Network Engineering

Master of Science in Computer Information Systems

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 and information systems.

Admission

In addition to the requirements listed in the Graduate Admission section, candidates must satisfy all of the following:

1. Grade point average of 3.0 (B) from all undergraduate course work or a satisfactory score on the GRE or the GMAT test.
2. Candidates must have a base of underlying knowledge relevant to graduate study in the computer 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 CS 162, 163, 230 or 251, 330 or 350 and 333 or 353. In addition, the material covered in CS 500 forms a foundation for study in the program. A student not having this knowledge will be required to take this course also.
3. Submit acceptable recommendations from at least two individuals attesting to the likelihood of the candidate's successful completion of the program.
4. Submit a resume detailing work experiences and accomplishments.
5. Submit a personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.

Certificate Program Requirements

Each of the content areas in the master of science degree program constitutes a certificate program. A certificate in each of the areas of Software Engineering, Object-oriented Technology, Information Systems Management, Distributed Systems, or Database Management 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.

Computing and Information Systems

Degree Requirements

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
- three elective courses
- capstone course, project course, or thesis course

CS 500 Fundamentals of Computer Science

Students not required to take this course must take an additional elective.

Content Areas

Five content areas are designed to provide sustained coverage of topics essential to the regional computing community. Each content area consists of three courses that are taken sequentially.

Software Engineering

CS 611 Introduction to Software Engineering

CS 612 Requirements Specification

CS 613 Software Testing

Object-oriented Technology

CS 621 Object-Oriented Programming

CS 622 Software Design Methodologies

CS 623 Graphical User Interface Design

Information Systems Management

CS 641 Management of Software Development

CS 642 Software Project Management

CS 643 Information Systems Policy

Distributed Computing

CS 654 Computer Networking

CS 656 Operating Systems

CS 658 Distributed Computing

Database Management

CS 673 Principles of Database Design

CS 676 Database Management Systems

CS 679 Advances in Database Management Systems

Additional Elective Courses

- Courses in the three content areas not selected by the student.

CS 635 Knowledge Discovery and Data Mining

CS 661 Introduction to Medical and Bioinformatics

CS 665 Clinical Information Systems

CS 671 Information Visualization

CS 672 Computer Systems Architecture

CS 674 Modeling and Decision Systems

CS 675 Compiler Construction

CS 680 Seminar in Computer Information Systems

CS 699 Directed Readings in Computer Science

All master's candidates must complete one of the following options

This option must 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.

CS 692 Master's Capstone

Project

Contact the department for detailed information one semester before beginning the project course.

CS 693 Master's Project

Thesis

The thesis option includes writing, presenting, and defending a master's thesis. Contact the department 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.

CS 690 Master's Thesis Research

CS 695 Master's Thesis

Master of Science in Medical and Bioinformatics

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 is a newly developing type of graduate program: a terminal degree rather than a pathway to a Ph.D., interdisciplinary or cross-disciplinary in nature, 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.

Internships

A minimum of 4 credits of internship(s) is a required component of the Medical and Bioinformatics program.

Admission

In addition to the requirements listed in the Graduate Admission section, candidates must satisfy all the following:

1. Grade point average of 3.0 (B) from all undergraduate coursework or a satisfactory score on the GRE or GMAT test.
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.

Degree Requirements

Overall requirements for the M.S. in Medical and Bioinformatics consist of 36 credits, with a cumulative GPA of 3.0. Consistent with Grand Valley policy, all courses must be completed within 8 consecutive years from entry into the first graduate course. The specific course requirements include:

Four Common Core Courses (Credits: 12)

CMB 610 Foundations of Biotechnology
CS 661 Introduction to Medical & Bioinformatics
PSM 650 Ethics and Professionalism in Applied Science

- Courses in the three content areas not selected by the student.
- Introduction to Biostatistics (select one of the following)

STA 610 Applied Statistics for Health Professions
or
STA 622 Statistical Methods for Biologists

Two Common Seminar Courses (Credits: 2)

PSM 661 Seminar in Professional Science Practice I
PSM 662 Seminar in Professional Science Practice II

Five Directed Courses (Credits: 15)

CS 635 Knowledge Discovery and Data Mining

CS 671 Principles of Database Design

CS 673 Principles of Database Design

Choose either Group 1 or Group 2: (Two-Course Sequence)

Group 1

CS 677 High-performance Computing

CS 678 Machine Learning

Group 2

CS 665 Clinical Information Systems

And select one of the following:

PA 630 Health Administration and Service

or

PA 635 Hospital Organization and Management

Internship (Credits: 4)

PSM 691 Internship

Capstone Course (Credits: 3)

Courses of Instruction

CS 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. Three credits.

CS 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. Corequisite: MTH 110. Three credits.

CS 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. Prerequisite: MTH 110. Four credits.

CS 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: CS 162. Corequisite: MTH 225 or EGR 226. Four credits.

CS 180 Special Topics. Readings, lectures, discussions, or labs (or any combination) in specific computer science topics at an introductory or elementary level. Offered on demand. Prerequisite: Permission of the instructor. One to four credits.

CS 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. Prerequisite: CS 150. Three credits.

CS 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: CS 150, CS 160, or CS 162; and MTH 110 or MTH 115. Three credits.

Computing and Information Systems

CS 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. Prerequisite: CS 150, CS 160, or CS 162. Three credits.

CS 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: CS 150, CS 160, or CS 162. Three credits.

CS 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. Prerequisite: CS 160 or CS 162. Three credits.

CS 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. Prerequisites: CS 163 . Three credits.

CS 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: CS 162. Four credits.

CS 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. Prerequisite: CS 162. Four credits.

CS 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. Prerequisites: MTH 110; Co-requisites: MTH 122 and MTH 123. Three credits.

CS 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: CS 163, MTH 225 or EGR 226, and CIS or EGR major standing. Three credits.

CS 280 Special Topics. Readings, lectures, discussions, or labs (or any combination) in specific computer science topics. Permission of instructor required. Offered on demand. One to three credits.

CS 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: CS 163 and PSY 301. Three credits.

CS 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: CS 163 and ED 205. Three credits.

CS 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: CS 162, MGT 268 and CIS major standing. Three credits.

CS 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: CS 231 and either CS 160 or CS 162. Three credits.

CS 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: CS 162 or CS 160, MGT 268 and CIS major standing. Three credits.

CS 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: CS 162 and CIS major standing. Three credits.

CS 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: CS 237, CS 337 or CS 457 and CIS major standing. Three credits.

CS 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: CS 231 and CS 233. Three credits.

CS 340 Health Care Information Systems. Introduces principles of health care information systems. This 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: CS 233, CS 237, and HPR 340. Four credits.

CS 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. Prerequisites: CS 263 and CIS major standing. Three credits.

CS 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: CS 163 and CIS or EGR major standing. Three credits.

Computing and Information Systems

CS 353 Database. History and functions of database management systems. Relational, object-oriented, network, and hierarchical models. Logical and physical database design. Query languages, application generators, data dictionaries, and client-server processing. Project experience in database design and development. (3-0-0) Offered fall and winter semesters. Prerequisites: CS 163 and CIS major standing. Three credits.

CS 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, 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: CS 163 and CIS or EGR major standing. Three credits.

CS 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. Prerequisites: CS 163, and either STA 215 or STA 312, and CIS major standing. Three credits.

CS 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: CS 343, and CIS major standing. Three credits.

CS 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. Prerequisites: CS 163 and CIS major standing. Three credits.

CS 380 Special Topics. 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. One to four credits.

CS 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. One to four credits.

CS 437 Distributed Computing. Foundations of distributed computing: modern operating systems and computer networks. Comparative discussions of commercially important OSs. Network programming paradigms, network applications, and client/server development. Laboratory exercises in network and client/server programming. (3-0-2) Offered fall and winter semesters. Prerequisites: CS 163, CS 337, CS 353, and CIS major standing. Four credits.

CS 443 Software Development Tools. Online programming using CICS and COBOL. Fourth-generation tools in application development. Use of a specific, representative fourth-generation environment. (3-0-0) Offered winter semester. Prerequisites: CS 253, CS 350, CS 353, and CIS major standing. Three credits.

CS 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: CS 330, CS 333, and CIS major standing. Three credits.

CS 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: CS 251 or EGR 326 and CIS or EGR major standing. Four credits.

CS 452 Operating Systems Concepts. Fundamental operating system concepts: processes, coordination and synchronization, scheduling, deadlock; memory management; input/output; file systems; distributed systems. Examples and lab exercises from modern operating systems such as UNIX and Mach. (3-0-2) Offered fall and winter semesters. Prerequisites: CS 251 and CS 343 or EGR 326, and CIS or EGR major standing. Four credits.

CS 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: CS 251 or EGR 326 and CIS or EGR major standing. Four credits.

CS 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: CS 337 or CS 457 and CIS major standing. Three credits.

CS 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, CS 350, CS 452 and CS 457. Three credits.

CS 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: CS 330, MGT 331, and CIS major standing. Three credits.

CS 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: CS 251, CS 263 and CIS major standing. Three credits.

CS 463 Information Systems Project. Formal evaluation of a software/hardware package or of a proposed or existing system, or the analysis, design, and implementation of an application system. Formal reports and presentations required. (3-0-0) Offered fall and winter semesters. Prerequisites: CS 450 and CIS major standing. Three credits.

CS 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, CS 162, and CIS major standing. Three credits.

CS 467 Computer Science Project. Individual or group projects using the department's laboratory facilities. (3-0-0) Offered winter semester. Prerequisites: CS 263, CS 350 and CIS major standing. Three credits.

CS 480 Special Topics. 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. One to four credits.

CS 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: Junior status, 2.0 overall GPA, 2.0 GPA in major. See departmental application form for further information. Graded credit/no credit. Two to five credits.

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CS 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. One to four credits.

CS 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. Prerequisites: CS 162 or knowledge of a high-level programming language. Three credits.

CS 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: CS 500. Three credits.

CS 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. Prerequisite: CS 611. Three credits.

CS 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. Prerequisite: CS 612. Three credits.

CS 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: CS 500. Three credits.

CS 622 Software Design Methodologies. Focuses on concepts, notations, and guiding principles for object-oriented design. Other design methods (such as structured design and data-oriented design) are discussed and compared to object-oriented design. (3-0-0) Offered winter semester. Prerequisite: CS 621. Three credits.

CS 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: CS 622. Three credits.

CS 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), select data mining software, and working with biological databases. Offered winter semester. Prerequisites: CS 500 or equivalent. Three credits.

CS 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: CS 500. Three credits.

CS 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. Prerequisite: CS 641. Three credits.

CS 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. Prerequisite: CS 642. Three credits.

CS 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: CS 500. Three credits.

CS 656 Operating Systems. Fundamental operating system concepts: process, thread, synchronization, scheduling, memory management. Advanced topics in distributed systems, such as DCE, distributed file systems, naming, and administration. Continuation of client/server programming, including RPC and distributed object-oriented programming. (3-0-0) Offered fall semester. Prerequisite: CS 654. Three credits.

CS 658 Distributed Computing. A project in distributed computing which builds upon the concepts and technology covered in CS 654 and 656. Students will specify, analyze, design, and implement a complete system. Lectures on advanced and current topics in distributed computing. (3-0-0) Offered winter semester. Prerequisite: CS 656. Three credits.

CS 661 Introduction to Medical & BioInformatics. A survey of fundamental concepts of medical and bioinformatics methods and techniques involved in the integration of computer systems in medical centers and life science industries. Introduction to biomedical information systems; data representation, modeling, management and mining; systems evaluation; project management practices for biomedical decision making. Legal and ethical considerations. (3-0-0) Offered fall semester. Three credits.

CS 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. Prerequisites: CS 661. Three Credits.

CS 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. Prerequisites: CS 500 or equivalent. Three credits.

CS 672 Computer Systems Architecture. Provides a general understanding of computer architecture and the logical organization of modern digital computers. CPU organization and input/output subsystem organizations are emphasized. The relationship between the computer architecture and the operating system is studied. (3-0-0) Offered on demand. Prerequisite: CS 500. Three credits.

CS 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: CS 500 or equivalent. Three credits.

CS 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. Prerequisite: CS 500. Three credits.

CS 675 Compiler Construction. A study of language translation and interpretation. Existing tools such as lexical analyzer generators and parser generators to facilitate compilation are introduced. A substantial programming project is required that consists of writing a small compiler. (3-0-0) Offered on demand. Prerequisite: CS 500. Three credits.

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CS 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. Prerequisite: CS 673. Three credits.

CS 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. Prerequisites: CS 500 or equivalent. Three Credits.

CS 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. Prerequisites: CS 500 or equivalent. Three credits.

CS 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. Prerequisite: CS 676. Three credits.

CS 680 Seminar in Computer Information Systems. Discussion of current advances in computer information systems theory, methodologies, and support systems. (3-0-0) Offered on demand. Three credits.

CS 685 Computing Practicum. Field-based experience designed to provide professional experience for graduate students (especially fulltime international students). Each practicum must be with approval by the graduate program chair, or the Director of the School of Computing and Information Systems. One credit.

CS 690 Master's Thesis Research. Faculty-supervised study and research on a suitable topic in Computer Information Systems. Offered fall and winter semesters. Prerequisite: Consent of Thesis Advisor. Three credits.

CS 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 discussion and presenting a paper on a current topic. Offered fall semester. Prerequisites: Completion of Directed Courses in Medical and Bioinformatics. Three Credits.

CS 692 Master's Capstone. An integrative capstone course that promotes synthesis of topics in at least two content areas. Seminar for students having completed all courses in two content areas. Students will demonstrate ability to apply concepts to a practical situation by leading a critical discussion and presenting a paper on a current topic. Offered fall and winter semesters. Prerequisite: Completion of two content areas. Three credits.

CS 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. Three credits.

CS 695 Master's Thesis. Continuation of faculty-supervised study and research on topic identified in CS 690. Offered fall and winter semesters. Prerequisite: Consent of Thesis Committee. Three credits.

CS 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: CS 500. One to three credits.

School of Criminal Justice (CJ)

Director: Crawley. Professors: Bailey, Hewitt, Houston, Johnson, Mullendore, White; Associate Professors: Crawley, Hughes, McKenzie, Ziembo-Vogel; Assistant Professors: Kierkus, Kingshott, Ross, Steffel, Yalda; Instructor: Hilinski; Director of Criminal Justice Training: Wallace; Affiliate Professor: Bolger, Burlingame, Fisk.

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.

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 to apply. Application packets are available in the School of Criminal Justice office 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.

Major Program Requirements

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

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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.

B.A. or a B.S. degree

Students majoring in criminal justice or in legal studies may earn either a B.A. or a B.S. degree.

The B.A. degree requires third-semester proficiency in a foreign language

The B.S. degree requires the completion of the following:

CJ 300 Research Methods in Criminal Justice
CJ 400 Qualitative Methods
STA 215 Introductory Applied Statistics

Bachelor's in Criminal Justice

A minimum of 39 credits is required.

All majors must take the following nine courses Credit Hours: 27

CJ 101 Justice and Society
CJ 201 Criminology
CJ 305 Constitutional Rights and Civil Liberties
CJ 312 Police Process
CJ 330 Correctional Process
CJ 350 Juvenile Justice Process
CJ 470 Crime Control and Justice Policy
CJ 495 Issues in Criminal Justice (capstone)
SOC 382 Race and Ethnicity

Additional Courses

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).

Students planning to enroll in the Grand Valley Police Academy

Are required to take:

CJ 411 Community Policing
CJ 461 Police Management and Legal Issues
CJ 490 Criminal Justice Internship Credits: 1 to 6

And the Academy Courses,

CJ 415 Law Enforcement Physical Education, Defensive Tactics and Firearms
CJ 416 Special Operations and Training
CJ 417 Criminal Investigations II
CJ 418 Patrol and Traffic Administration and Procedure
CJ 419 Michigan Criminal Law

Requirements for a Minor in Criminal Justice

Minors are required to complete 12 hours of electives from criminal justice courses and at least 21 credit hours, including

CJ 101 Justice and Society

CJ 201 Criminology

CJ 305 Constitutional Rights and Civil Liberties

Courses of Instruction

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 Sciences Foundation. Offered fall and winter semesters. Three credits.

CJ 201 Criminology. An analysis of crime, criminal behavior, punishment, and the theories of deviancy from historical perspectives. Offered fall and winter semesters. Three credits.

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 major and junior standing. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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: 201, and Junior standing. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

CJ 330 Correctional Process. An examination and discussion of the American correctional process with emphasis on correctional institutions, inmate social system, institutional, and community programs and procedures, probation, parole, and contemporary issues. Offered fall and winter semesters. Prerequisite: CJ 201. Three credits.

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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. Three credits.

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. Three credits.

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. One to three credits.

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. One to three credits.

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. Prerequisite: Junior or senior status. Three credits.

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 Making War and Peace theme Offered fall and winter semesters. Three credits.

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: CJ 101. Three credits.

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. Prerequisites: Junior standing and CJ 201 and CJ 312 (while CJ 312 may be taken concurrently it is highly recommended that it is taken before CJ 411). Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisites: CJ 101. Three credits.

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. Prerequisites: CJ 201. Three credits.

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. Three credits.

CJ 461 Police Management and Legal Issues. An in-depth analysis of critical issues in police leadership, management, and operations with an emphasis on related legal issues. Offered fall and winter semesters. Prerequisites: CJ 201 and CJ 305. Three credits.

CJ 463 Corrections Administration and Legal Issues. The study of modern correctional organizations and administrative strategies. Special emphasis is placed on current legal issues involving both staff and client/offenders. Offered winter semester. Prerequisites: CJ 201 and CJ 305 (CJ 305 may be taken concurrently). Three credits.

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: CJ 305 (may be taken concurrently). Three credits.

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. Three credits.

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: Senior status, permission of instructor. Graded credit/no credit. One to six credits.

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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, CJ 305, and senior status and permission of department. Three credits.

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. One to three credits.

Masters of Science in Criminal Justice

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.

Admission

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 \$30 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 G.P.A. of 3.0 or higher 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.

Those with less than a 3.0 grade point average may be fully or conditionally admitted after a thorough review by the Graduate Committee. The Graduate Committee reserves the right to require additional information.

Most students will be admitted into the program as regular degree-seeking students. However, some students may be admitted “conditionally” as determined on a case-by-case basis.

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 Graduate Coordinator. Approved courses in undergraduate research methods, statistics, and introduction to criminal justice courses are highly recommended.

Students may take up to 6 credit hours of graduate credit while in a conditional status: it is the student’s responsibility to notify the Coordinator of the Graduate Program once the conditions for regular degree status have been met.

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 Criminal Justice 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, obtain a permit from the Graduate Director and instructor, and fill out the Grand Valley “Dual Credit Request Form.” 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.

Criminal Justice Master Degree Requirements

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.

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 instructor (completion of core curriculum may be concurrent).

Core

Core of required courses consists of 18 credit hours as follows:

- CJ 601 Criminal Justice Leadership
- CJ 602 Legal and Ethical Issues
- CJ 604 Criminal Justice Policy
- CJ 605 Program Evaluation
- CJ 606 Research Methodology and Data Analysis
- CJ 607 Criminology

Emphasis Area

Choice of one of the following courses:

- CJ 620 Advanced Police Systems
- CJ 621 Advanced Corrections Systems
- CJ 622 Advanced Juvenile Justice Systems
- CJ 623 Advanced Private Security Systems

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Electives

Choice of 6 credits if completing CJ 693 from the following courses:

- CJ 600 Qualitative Methodology
- CJ 603 Community and Media Relationships
- CJ 611 Community Policing
- CJ 640 Graduate Internship
- CJ 642 Victimology
- CJ 644 Forensic Behavior and Law
- CJ 680 Special Topics
- CJ 685 Criminal Justice Workshops
- CJ 699 Directed Readings

Outside Elective

Choose 3 credits outside of the criminal justice curricula. These credits must be pre-approved by the Graduate Director and/or student's advisor.

Project or Thesis

- CJ 693 Criminal Justice Project
or CJ 695 Criminal Justice Thesis

Courses of Instruction

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 CJ graduate program or permission of instructor. Three credits.

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 CJ graduate program or permission of instructor. Required of all students. Three credits.

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 CJ graduate program or permission of instructor and CJ 601 (may be taken concurrently). Required of all students. Three credits.

CJ 603 Community and Media Relationships. Exemplary community crime prevention, policing, adult corrections, juvenile justice, and private security projects will be studied as a way to focus on building effective community and media relationships. Offered winter semester of odd numbered years. Prerequisites: Admission to CJ graduate program or permission of Graduate Director. Three credits.

CJ 604 Criminal Justice Policy. Policy formulation models and strategies will be studied and applied to crime control and other criminal justice agency missions. Multi-agency or cooperative policy formulation will be emphasized. Offered winter semester of odd numbered years. Prerequisites: Admission to CJ graduate program or permission of Graduate Director. Required of all students. Three credits.

CJ 605 Program Evaluation. Survey of disciplinary relevant program evaluation research methods. Well-known criminal justice program evaluation studies will be critiqued and students will design evaluation research projects. Offered winter semester of even-numbered years. Prerequisites: Admission to CJ graduate program or Graduate Director. Required of all students. Three credits.

CJ 606 Research Methodology and Data Analysis. Applied research methodologies utilized in criminal justice setting complimented by the use of computerized statistical software programs. This course develops student's research capacity regarding the methods of collecting, analyzing and disseminating criminal justice research. Offered fall semester. Prerequisites: Admission to CJ graduate program, 18 graduate credits completed or permission of Graduate Director. Three credits.

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 winter semester of even-numbered years. Prerequisites: Admission to CJ graduate program or permission of instructor. Three credits.

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 fall and winter semesters. Prerequisites: Admission to CJ graduate program or permission of instructor. Three credits.

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 CJ graduate program. Three credits.

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 CJ graduate program. Three credits.

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 CJ graduate program or permission of instructor. Three credits.

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 CJ graduate program. Three credits.

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. Three credits.

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 CJ graduate program or permission of instructor. Three credits.

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 fall semester of odd-numbered years. Prerequisites: Admission to CJ graduate program or permission of instructor. Three credits.

CJ 680 Special Topics. 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

Dance

sufficient demand. Admission to CJ graduate program or permission of Graduate Director. One to four credits.

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. One credit.

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. 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). Three credits.

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). One to six credits.

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: Admittance to the Criminal Justice graduate program and permission of instructor. One to three credits.

Dance (DAN)

Director: Associate Professor: Jefferson Baum. Assistant Professor: Lisa Catrett-Belrose; Assistant Director of Music: TBA. Visiting Professor: Sherrie Barr, Calin Radulescu.

In addition to the full-time faculty, four distinguished dance educators, all with extensive professional experience, teach classes on a part-time basis.

The Dance Program (housed administratively in the Department of Music) offers a major in the Bachelor of Arts degree. Our program combines intensive high-level ballet training, modern and jazz components, and the strong academic training of a liberal arts university. Dance faculty members take particular pride in nurturing and addressing the needs of each individual student; class sizes are small, enabling personalized attention. Students are regularly exposed to guest master teachers, choreographers, and directors of international stature.

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.

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.

Requirements for the B.A.

Students in the dance major must complete a minimum of 47 credit hours in dance:

CTH 261 Stagecraft I
 DAN 150 Dance Practicum
 DAN 179 Dance Ensemble
 DAN 241 Ballet Technique
 DAN 251 Modern Dance
 DAN 279 Music as Dance Accompaniment
 DAN 281 Jazz Technique
 DAN 311 Improvisation and Choreography
 DAN 345 Dance History
 DAN 451 Advanced Modern Technique
 DAN 495 Senior Project

Dance Minor

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
 DAN 251 Modern Dance
 DAN 281 Jazz Technique
 DAN 345 Dance History
 DAN 441 Advanced Ballet Technique
 DAN 451 Advanced Modern Technique

Courses of Instruction

DAN 150 Dance Practicum. Rehearsal and performance of student choreographed projects approved by the dance program. May be repeated for credit (no limit). Prerequisite: permission of the instructor. One credit. Offered fall, winter semesters.

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. One credit hour. Offered fall, winter semesters.

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. Prerequisite: audition and permission of the instructor. One credit. Offered fall, winter semesters.

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. Three credits. Offered fall, winter semester.

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. Prerequisite: permission of the instructor. One credit. Offered fall semesters.

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.

Dance

May be repeated for credit, up to a maximum of 10 credit hours. Prerequisite: permission of the instructor. Two credits. Offered fall, winter semesters.

DAN 251 Modern Dance. Sequential training in a traditional and postmodern dance techniques. May include Limon, Cunningham, Graham, or other styles. May be repeated for credit, up to a maximum of 10 credits. Prerequisite: permission of the instructor. Two credits. Offered fall, winter semesters.

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. Prerequisite: audition and permission of the instructor. One credit. Offered fall, winter semesters.

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. Prerequisite: permission of the instructor. One credit. Offered fall, winter semesters.

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. Prerequisite: permission of the instructor. Two credits. Offered fall semester of odd years.

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. Prerequisite: permission of the instructor. Two credits. Offered fall, winter semesters.

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. Prerequisite: permission of the instructor. Three credits. Offered winter semester.

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. Prerequisite: permission of the instructor. Three credits. Offered fall semester, even years.

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. Prerequisite: Permission of instructor. One to four credits. Offered on sufficient demand.

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 ten credit hours. Prerequisite: four semesters of DAN 241, or permission of the instructor. Two credits. Offered fall, winter semesters.

DAN 451 Advanced Modern Technique. Sequential training in nontraditional and post-modern 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. Prerequisite: four semesters of DAN 251, or permission of the instructor. Two credits. Offered fall, winter semesters.

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 ten credits. Prerequisite: at least four semesters of DAN 281, or permission of the instructor. Two credits. Offered fall, winter semesters.

DAN 495 Senior Project. Preparation, presentation and/or performance of a dance concert in the student's senior year. Prerequisite: permission of the instructor. Three credits. Offered on demand.

East Asian Studies Minor (EAS)

Coordinator: Ni. Professors: Ni; Associate Professors: Helgert, Ihrman, Lai, C. Smith, Wu, Y. Yu; Assistant Professors: Benjamin, DeWilde, Gasahl, Mahoney, Shan, Shang, Sun, Wangdi.

East Asian Studies at Grand Valley 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.

China, with five thousand years of civilization, more than a billion people, and a fast growing economy, and Japan, with its unparalleled economic success, demands attention from the world. The East Asian Studies program balances a liberal arts and professional approach to understanding the economic potential, rich cultural resources, and the basic need for inter-cultural relationships with these two countries.

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 as instrumental for their effectiveness in an increasingly international community. 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- or four-year institutions, and study abroad participants may also choose to minor in East Asian Studies.

Students who minor in East Asian Studies can participate in the study abroad program at East China Normal University in Shanghai, 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 coordinator of the East Asian Studies Program for more information.

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.

Students seeking a minor in East Asian Studies are required to complete 21 to 22 credit hours. Normally this includes nine credits of core courses, four credits of language 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.

Requirements in a Minor in East Asian Studies

All minors will be required to complete three core courses:

EAS 201 East Asia in the Contemporary World

EAS 301 Masterpieces of East Asian Literature

PHI 210 Eastern Philosophy

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

CHI 322 Classical Chinese Culture

CHI 380 Special Topics in Chinese

EAS 180 Special Topics in East Asian Studies

EAS 280 Special Topics in East Asian Studies

EAS 380 Special Topics in East Asian Studies

EAS 399 Independent Studies

EAS 480 Special Topics in East Asian Studies

ENG 204 World Mythology

GPY 354 Geography of Asia

HST 210 Empire, Culture, and Conflict

HST 333 Survey of Modern Chinese History

HST 340 A History of East Asia to 1800

HST 341 A History of East Asia since 1800

HST 342 History of East Asian Religions

PHI 306 Eastern Great Philosophers

PLS 283 Chinese Politics and US-China Relations

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 coordinator of the East Asia studies program for a current list of acceptable courses.

ANT 204 Introduction to Cultural Anthropology

ECO 365 Comparative Economic Systems

HST 345 The Ancient Mediterranean and Orient

SS 351 Family & Gender in the Developing World — Cross-listed as WGS 351

Transfer Credits

Credits transferred from an East Asian study abroad program 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.

Courses of Instruction

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. One to four credits.

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. Three credits.

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. One to four credits.

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. Prerequisite: EAS 201 or junior standing. Three credits.

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. One to four credits.

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. One to three credits.

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. One to four credits.

Economics (ECO)

Chair: Singh. Professors: Reifel, Singh; Associate Professors: Dalmia, Isely, Sicilian, Simons; Assistant Professors: Giedeman, Lowen, Orgura, Sun.

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.

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.

Economics

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 MYH 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.

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.

Social studies group majors who choose an emphasis area in economics should make their economics course selections with the advice of the economics department.

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
ECO 313 Business Cycles and Growth
and
ECO 349 Emerging Markets Issues
or ECO 369 International Economic Issues

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
HST 206 American History since 1877
PLS 102 American Government and Politics

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.

Career Opportunities

Competence in economic analysis is good preparation for work in private enterprise, non-profit firms, and government. It is recognized as an excellent preparation for M.B.A. and law programs.

Courses of Instruction

ECO 100 Current Economic Issues
 ECO 200 Business Economics
 ECO 210 Introductory Macroeconomics
 ECO 211 Introductory Microeconomics
 ECO 312 Applied Microeconomics
 ECO 313 Business Cycles and Growth
 ECO 330 Sports Economics
 ECO 341 Economics of Business Strategy
 ECO 342 Strategic Games
 ECO 345 Environmental and Resource Economics
 ECO 349 Emerging Markets Issues
 ECO 350 Gender and Economics
 ECO 355 Business, Antitrust, and Regulation
 ECO 360 Employment, Wages, and Productivity
 ECO 365 Comparative Economic Systems
 ECO 369 International Economic Issues
 ECO 380 Special Topics in Economics
 ECO 414 Money and Banking
 ECO 435 Urban Economics
 ECO 436 Real Estate Economics
 ECO 440 Public Finance
 ECO 480 Econometrics and Forecasting
 ECO 490 Economics Internship
 ECO 495 Senior Economic Project (Capstone)
 ECO 499 Independent Study and Research
 ECO 542 Economic Reasoning
 ECO 613 Business and Economic Forecasting
 ECO 641 Business Economics and Strategy
 ECO 642 Corporate Strategy for Business Cycles
 ECO 645 International Economic Issues
 ECO 646 Employment, Wages, and Productivity
 ECO 680 Selected Topics in Economics

For a description of these courses, please see the business section of this catalog.

College of Education (ED)

Dean: Collins. Budget/Grants Administrative Coordinator: Gilfillan-Bierlein. **Curriculum and Instruction:** Unit Head: McCrea; Professors: Armstrong, King, Mack, Pottorff; Associate Professors: Chlebo, Reinken; Assistant Professors: Busman, Gu, Hakim, Hipp, Patterson, Schiller, Storey. **Foundations and Technology:** Unit Head: Carson; Professors: Chattulani, Cross, Konecki; Associate Professors: Abramson, D. Bair, S. Lancaster, Mader, Pryor, Topper, Westerhof-Shultz, Wilson; Assistant Professors: M. Bair, Choi, O. Williams, S. Williams. **Leadership and Human Services:** Unit Head: Shinsky; Professor: Grant; Associate Professors: Alston, Barnes, Fisher, Lancaster, Lubic, Margulus, Miller, Sowa-Wojciakowski; Assistant Professors: Clark, Cooper, Geisel. **Administrative Services:** Director:

Education

Fournier; Associate Director: Eikenberry. **Community Outreach:** Director: Sowa-Wojciakowski; Associate Directors: Pelon. **Student Information and Services Center:** Director: Busman; Associate Directors: Dausman, VandeVelde; Assistant Director: Blythe; Coordinators: Kruithoff, Owens, Reese.

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).

The College of Education offers programs leading to initial certification (Michigan Provisional Certification). Certification is available in elementary general education, secondary general education, or elementary education with special education endorsements. Programs are available at both undergraduate and graduate levels.

Graduate level programs offer the Master of Education degree (M.Ed.), Michigan Provisional and Professional Certification, School Counseling license and endorsement, certification renewal, and programs leading to approvals, endorsements, and professional development.

Scholarships and Graduate Assistantships

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.

Scholarships

- Greta and Arthur DeLong Scholarship for Teacher Education
- Faculty Teaching and Learning Center Scholarship for Minority Students in Education
- Dr. Faite R-P Mack and Dr. Thomas Jackson African American Teacher Education 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

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.

Undergraduate Teacher Education

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 subject area concentrations teach courses and seminars in educational philosophy and psychology, methods and materials, and school organization and management.

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 and psychology to permit application to the College of Education. Students will have two advisors: a major advisor in the student's teaching major and an education advisor who will be assigned upon attendance at a group advising session during the semester that ED 200 is taken. 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.

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.

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 re-apply. Students should apply during the semester before they expect to do their first field placement (Education 330/350, 331), except for the following:

1. Students seeking elementary certification with special education endorsements must apply during the winter semester (February 1) for fall admission.
2. Secondary world language majors must apply during winter semester.
3. Elementary physical education and music majors must also attend the accompanying Education 330 subject area seminar.

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 Undergraduate and Graduate Catalog at the time of application to the unit. Unless otherwise noted, all requirements must be complete at the time of application.

1. Academic Achievement.
 - A. An established 2.7 Grand Valley GPA overall and in the major, minor, and professional program. 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.
 - Most major requirements completed.
 - Most minor requirements completed.
 - Minor prerequisite courses completed.
 - Two meetings completed with assigned education advisor.
 - All remaining requirements met.
 - B. Secondary Review Process: An established 2.699–2.50 Grand Valley GPA overall **and** in the major, minor and professional program.
 - All general education requirements completed (one course could be outstanding).
 - All requirements in the major completed except capstone or other course only if required with teacher assisting or student teaching.

Education

- 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 major and minor tests. Elementary candidates take the elementary test and major test. Special Education candidates take the elementary test only.
 - Three meetings completed with assigned education advisor required, including a signed Secondary Review Process form submitted with application.
 - All remaining application requirements met.
2. Michigan Basic Skills Test. Acceptable test scores of 220 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.
 3. 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 five courses, with no grade lower than C. a.) ED 200 Introduction to Education b.) ED 205 Computers in Education c.) ED 225 Diversity in Education d.) PSY 301 Child Development e.) PSY 325 Educational Psychology Additional required prerequisites for elementary and special education candidates: a.) ENG 308 Teaching Reading: The Necessary Skills b.) MTH 221 or 222 or 223 Mathematics for Elementary Teachers I or II or III.
 4. Advisor Recommendations. One from the major advisor/department (Elementary and Secondary General Education only) and another from a College of Education advisor.
 5. Positive Recommendation. One from an individual who can address the candidate's ability as a prospective teacher.
 6. 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 *Volunteer! GVSU*.
 7. Academic Progress. Completion of at least 90 semester credits and substantial progress in major and minor coursework.
 8. University Basic Skills. Completion of university course requirements or test equivalents in Writing 150 and Mathematics 110.
 9. Negative TB Test Report. Current at the time of application.
 10. 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.
 11. Copies of degree analysis and current course listings of classes being taken at another college or university.
 12. 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 330/350, 331, 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 430/480, 431, 471, 472)

1. Submission of completed application packet by September 15 for winter placement, February 1 for fall placement.
2. Completion of Teacher Assisting with a grade of B– or better and positive recommendations.
3. Completion of ED 310, and ED 320 or ED 321, with a B– or better.
4. Continued 2.7 GPA overall and in the major, minor, and professional sequence.
5. Interview and acceptance by school administrator.

Students must inform the Associate Director for Placement if they must withdraw from a field placement course. Notification must be immediate and in writing. Failure to do so will result in removal from the program.

Exit Requirements

Recommendation for the Michigan Provisional Certificate requires the following:

1. Completion of degree requirements and major, minor, and professional program requirements.
2. GPA of 2.7 overall and in the major, minor, and professional program.
3. Grades of B– or better and positive recommendations in professional fieldwork courses, ED 310, and ED 320 or ED 321.
4. 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 major and minor.

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; any subject in kindergarten through eighth in self-contained classrooms. Music and physical education majors are endorsed K-12 in their major. In addition to degree requirements, candidates must complete the following:

1. Teaching Major—Elementary Certification

The 9 areas approved by the State of Michigan at Grand Valley State University are listed below. Specific requirements for each are outlined in this catalog and must be planned with the major advisor.

Humanities: English/Language Arts (Group Major), French, Spanish, Music, K-12.

Science and Mathematics: Integrated Science, Mathematics, Physical Education, K-12.

Social Sciences: History, Social Studies (Group Major).

A teaching minor may also be earned in mathematics.

2. Elementary Teaching Minor—Elementary Certification

The 21–25 credit elementary teaching minor develops competencies across the entire elementary curriculum.

- a. English

ENG 308 Teaching Reading: The Necessary Skills Credits: 4

Education

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

Also select one from each of the following except the major area:

c. Fine Arts:

ART 230 Art for the Classroom Teacher Credits: 4

or

MUS 350 Music for Classroom Teachers Credits: 3

d. Language Arts:

Select the following or any foreign language.

ENG 307 Teaching Writing: Elementary Credits: 3

ENG 309 Teaching Literature to Children Credits: 3

WRT 219 Introduction to Creative Writing Credits: 3

e. Physical Education/Theater:

CTH 366 Drama in Education Credits: 3

or

PED 305 Movement Education Credits: 3

f. Laboratory Science:

Fulfillment of at least one of the Natural Science requirements as outlined in the General Education curriculum. This course must also fulfill the laboratory component. Especially suitable for elementary teachers are:

BIO 107 Great Lakes and Other Water Resources Credits: 4

CHM 201 Introduction to Chemical Sciences Credits: 4

GEO 201 The Geosphere for K-8 Pre-Service Teachers Credits: 4

PHY 201 Inquiry: The Mechanical and Thermal World Credits: 4

SCI 225 Integrated Life Science for K-8 Teachers Credits: 4

g. Social Science:

ECO 210 Introductory Macroeconomics Credits: 3

ECO 211 Introductory Microeconomics 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

POL 102 Elementary Polish II Credits: 4

SOC 280 Social Problems Credits: 3

3. Professional Program — Elementary Certification

Candidates must complete the following 39-credit program. At least one field semester must be done in a multicultural setting.

Prior to admission to Undergraduate Teacher Education:

ED 200 Introduction to Education Credits: 3

ED 205 Computers in Education Credits: 3

ED 225 Diversity in Education Credits: 3

PSY 301 Child Development Credits: 1 to 3

PSY 325 Educational Psychology Credits: 3

First semester of admission to Undergraduate Teacher Education:

ED 310 Organizing and Managing Classroom Environments Credits: 3

ED 320 Reading: Assessment and Instruction Credits: 3

ED 330 Methods and Strategies of Elementary Teaching Credits: 5

ED 350 Current Practices in Elementary Education Credits: 1

Music and physical education majors also attend the ED 330 seminar in the major.

Second semester of admission to Undergraduate Teacher Education:

ED 430 Student Teaching, Elementary Credits: 10

ED 480 Professional Development in Teacher Education Credits: 2

Secondary Teacher Certification (General Education)

Michigan Secondary Provisional Certification allows the holder to teach subject area majors and minors in the seventh 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 following areas:

1. Teaching Major — Secondary Certification

The 16 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 major advisor.

Humanities: Visual Arts, K-12, English, French, German, Latin, Spanish, Music, K-12.**Science and Mathematics:** Biology, Chemistry, Computer Science (Certification changing — see advisor), Earth/Space Science, Mathematics, Physical Education, K-12, Physics.**Social Sciences:** History, Social Studies.

2. Teaching Minor — Secondary Certification

The 19 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, Sociology.

Note: 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. Refer to the Science section of the Grand Valley State University Graduate and Undergraduate Catalog for details.

3. Professional Program — Secondary Certification

Candidates must complete the following 39-credit program. At least one field semester must be done in a multicultural setting.

Prior to admission to Undergraduate Teacher Education:

ED 200 Introduction to Education Credits: 3

ED 205 Computers in Education Credits: 3

ED 225 Diversity in Education Credits: 3

Education

PSY 301 Child Development Credits: 1 to 3

PSY 325 Educational Psychology Credits: 3

First semester of admission to Undergraduate Teacher Education:

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: 6

Second semester of admission to Undergraduate Teacher Education:

ED 431 Student Teaching, Secondary Credits: 12

Elementary Teacher Certification (Special Education Endorsement)

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.

Because of the complexity of the program, students must meet with their College of Education and psychology advisors early and consult with advisors regularly. In addition to degree requirements, special education candidates must complete the following major, minor, professional program, and endorsement requirements. Students must complete at least one field placement in a multicultural setting.

Students are expected to complete all the required courses in general education, elementary education (except ED 320 and ED 360), and psychology by the time they begin coursework in the College of Education.

1. Psychology/Special Education Major

The 33–36-credit psychology/special education major is outlined in the psychology section of this catalog and must also be planned with the student's psychology advisor.

PSY 301 Child Development Credits: 1 to 3

PSY 302 Psychology of Adjustment Credits: 3

PSY 304 The Psychology and Education of the Exceptional Child Credits: 3

PSY 324 Developmental Psychopathology Credits: 3

PSY 325 Educational Psychology Credits: 3

Choice of one:

ED 332 Methods and Strategies of Special Education Teaching Credits: 6

ED 361 Principles, Processes, and Methods in Special Education Credits: 3

ED 495 Diagnostic and Interpretive Procedures Credits: 3

PSY 331 Adolescent Development Credits: 3

PSY 357 Psychology of Language Credits: 3

PSY 365 Cognition Credits: 3

PSY 368 Psychology of Physical Disabilities Credits: 3

PSY 431 Introduction to Neuropsychology Credits: 3

PSY 452 Counseling: Theories and Applications Credits: 3

PSY 490 Practicum Credits: 1 to 6

Choice of one:

ED 497 Educational Interventions: Cognitive Impairment Credits: 3

ED 498 Educational Interventions: Emotional Impairment Credits: 3

2. Elementary Teaching Minor

The 28–30-credit elementary teaching minor develops teaching competencies across the curriculum. It consists of the following courses:

- ART 331 Art in Special Education Credits: 4
- ED 200 Introduction to Education Credits: 3
- ED 205 Computers in Education Credits: 3
- ED 320 Reading: Assessment and Instruction Credits: 3
- ED 360 Language and Reading Development Credits: 3
- ENG 308 Teaching Reading: The Necessary Skills Credits: 4
- 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
- SOC 280 Social Problems Credits: 3

3. Professional Program: Special Education Endorsements

The professional program includes student teaching in general elementary education and completion of two of the following special education endorsement areas:

- Cognitive Impairment (CI)
- ZA (Early Childhood)/Early Childhood Developmental Delay (ECDD)
- Emotional Impairment (EI)
- Learning Disabilities (LD)

The following combinations are possible:

CICI/EI, CI/ZA/ECDD, CI/LD, EI/ZA/ECDD, EI/LD.

Special Education Courses

Students planning to obtain learning disabilities or early childhood/early childhood developmental delay endorsements are encouraged to speak with their special education advisor regarding specific program requirements.

- ED 225 Diversity in Education Credits: 3
- ED 310 Organizing and Managing Classroom Environments Credits: 3
- ED 430 Student Teaching, Elementary Credits: 10
- ED 480 Professional Development in Teacher Education Credits: 2

Cognitive Impairment (CI):

- ED 441 Curriculum for CI Credits: 3
- ED 463 Educational Practices and Procedures: Cognitive Impairment Credits: (ED 463 taken only by students who elect CI as primary endorsement)
- 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):

- ED 442 Curriculum for EI Credits: 3
- ED 464 Educational Practices and Procedures: Emotional Impairment Credits: 3 (ED 464 taken only by students who elect EI as primary endorsement)
- 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:

Education

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

4. Early Childhood Developmental Delay

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.

ED 653 School Learning 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 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. The graduate program offers the M.Ed. degree in four major areas: general education, reading, school counseling, and special education.

Admission to Graduate Study

Graduate admission requires:

1. All students seeking degree, endorsement, approval, license or certificate change at the graduate level must be formally admitted to graduate study.
2. A maximum of six graduate credits earned prior to graduate admission may apply to degree requirements.

In addition to the requirements listed in the Admissions section 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 3.00 GPA within 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 at 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 and 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, reading, school counseling or special education).

Emphasis areas for the **M.Ed. in General Education** include Adult and Higher Education, Advanced Content Specialization, Early Childhood Education, Educational Leadership, Educational Technology, Elementary Education, Educational Differentiation, Middle Level Education, Secondary Level Education, and Teaching English to Speakers of Other Languages. Advanced Content Specialization also offers subject matter concentrations in Biology, Chemistry, English, History, Mathematics, Music, or Physics. Adult and Higher Education offers the above subject matter concentrations (excluding Chemistry and Music) and also a concentration in College Student Affairs Leadership.

Emphasis area for the **M.Ed. in Reading** is Reading/Language Arts.

Emphasis area for the **M.Ed. in School Counseling.**

Emphasis areas for the **M.Ed. in Special Education** include Early Childhood Developmental Delay, Emotional Impairment, Learning Disabilities, and Special Education Administration.

Certification, Endorsement, Approval, and Emphasis Programs. Programs are also available in the following areas:

1. Michigan Provisional Certification
2. Michigan Professional Certification
3. Early Childhood, Elementary, Middle Level, and Secondary Endorsement
4. Reading Endorsement: Elementary K–8, Secondary 7–12, Reading Specialist K–12
5. English as a Second Language: Elementary K–8, Secondary 7–12, and K–12
6. Library Media Endorsement: K–12

Education

7. Special Education Endorsement K–12: Learning Disabilities, Emotional Impairment, and Cognitive Impairment
8. School Counseling: License and endorsement
9. Subject area majors and minors, usually at the undergraduate level
10. Special Education Approval: Directors and Supervisors

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

1. 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.
2. Possession or 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.
3. Successful completion of Michigan Basic Skills Test.
4. Successful completion of Michigan Subject Area Test in teachable major.
5. Documentation of 25 hours age-appropriate experience with children or youth.
6. Current TB test report.
7. Signed statement regarding criminal activity.
8. Completion of EDG 619 (Classroom Uses for the Microcomputer) or portfolio prior to fall semester of program.
9. Admission to graduate studies.
10. Completion of application materials for graduate teacher certification program.

Candidates will be eligible for Michigan Provisional Certification after they successfully complete coursework, maintain a 3.0 GPA, and complete certain additional state requirements. These requirements include the Michigan Elementary Test for elementary candidates, or the completion of a teachable minor and the Michigan Subject Area Test in the minor for secondary candidates.

M.Ed. — The Foundations Program

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).

M.Ed. — General Education

The general education programs leading to the M.Ed. degree are designed to help experienced educators increase their professional and academic knowledge and skills and prepare for special types of education service.

Adult and Higher Education

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. Students are required to complete a minimum of 33 semester hours. Degree requirements, in addition to foundation courses, include two courses selected from EDG 648, 649, or 650; three courses selected

from ED 630, 631, 633, 635, EDG 618, 651, 652, 685L, or EDR 629; nine hours of approved electives; and either ED 693 or ED 695. Biology, English, History, Mathematics, or Physics concentrations within the Adult and Higher Education emphasis require, in addition to foundation courses, three courses from ED 630, EDG 648, 649, 650, and either EDG 93 or ED 695, and 15 semester hours in the selected subject area approved by subject area and education advisors. (See course listings under biology, English, history, mathematics, and physics.) College Student Affairs Leadership concentration requires, in addition to foundation courses, EDG 648, 649, and 695I; and EDG 647, 651, 652, 653, 654, 655 and either ED 693 or ED 693; and six semester hours of electives.

Advanced Content Specialization

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 within this emphasis program. In addition to foundation courses, requirements for the M.Ed. include the core courses ED 630, EDG 637, 638; and either ED 693 or ED 695; and at least 15 approved credits in the subject matter. (See course listings under Biology, Chemistry, English, History, Mathematics, Music, and Physics).

Early Childhood Education

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.

Students are required to complete a minimum of 33 semester hours. M.Ed. requirements, in addition to the foundation courses, include EDG 610, 611, 612, 613, and EDS 646; one course from either EDS 647 or ED 634; two elective courses; and either ED 693 or ED 695. Students desiring only the ZA or Early Childhood Endorsement, must complete the following program requirements, for a total of 24 semester hours: EDG 610, 611, 612, 613, EDS 646, 647 or ED 634, EDG 685D; have elementary certification, pass the Michigan Subject Area Test, and maintain a 3.0 GPA.

Educational Differentiation

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. Students are required to complete a minimum of 33 semester hours. M.Ed. requirements include, in addition to the foundation courses, ED 630, ED 652, EDG 637, EDG 638, EDG 640, EDG 641, EDS 625; one elective/workshop; and either ED 693 or ED 695.

Educational Specialist in Leadership

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. M.Ed. requirements, in addition to the foundation courses, are EDG 665, 666, 668, 670 and 677. Participants select one course from the following: EDG 667 or 671. Additionally, participants must take EDG 685, EDG 687 and either ED 693 or ED 695.

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Educational Technology Integration

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. Degree requirements include, in addition to the foundation courses, EDG 619, 620, 621, 626, 628 or 629, 634, six credits of advisor approved electives, and either ED 693 or ED 695.

Elementary Education

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. Students are required to complete a minimum of 33 semester hours. In addition to the foundation courses, requirements for the M.Ed. include: the core courses ED 630, EDG 637, EDG 638; the emphasis courses EDG 630, EDG 631, EDG 633, EDR 622; one elective, or approved substitutions and either ED 693 or ED 695. **Students already certified and seeking an additional Michigan Elementary Endorsement must:** have Michigan secondary certification; take the Elementary emphasis courses, EDG 630, 631, 633, EDR 622; EDG 618 or 619, 632, EDR 627; either EDR 624, 628 or ENG/EDR 631, and EDG 685A, receive positive recommendation; maintain a 3.0 GPA; and pass the Michigan Elementary Test. **Initial Elementary Certification candidates must** first be admitted to Graduate Teacher Certification; then complete ED 652, EDG 610, EDG 630, EDG 631, EDG 632, EDG 633, EDG 638, EDG 685A, EDR 622, EDR 627, 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: two foundations courses, ED 630, EDG 637, and either ED 693 or ED 695.

Middle Level Education

This program is designed for teachers who wish to develop their skills and competencies in teaching middle school students. Students are required to complete a minimum of 33 semester hours. In addition to foundation courses, requirements for the M.Ed. include: the core courses ED 630, EDG 637, EDG 638; the Middle Level emphasis courses ED 632, EDG 635, EDG 636, EDR 623, 625; one elective, or approved substitutions; and either ED 693 or ED 695. **Students already certified and seeking an additional Middle Level Endorsement must:** have Michigan elementary or secondary certification; complete EDG 635 first, followed by ED 630, ED 632, EDG 636, EDG 685E, EDR 623; have or complete two subject area teachable endorsements; obtain positive recommendations; maintain a 3.0 GPA; and pass the appropriate Michigan Tests for Teacher Certification.

School Library Media Services

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. Students may choose an M.Ed. concentration or an endorsement. Degree requirements for the M.Ed. emphasis on School Library Media Services with Library

Media Endorsement, include, in addition to the foundations courses, ED 630, EDG 617, 621, 629, EDR 624 or EDR 625, EDG 622, 623, 624, 625, 685J, an elective, and either ED 693 or 695. Students seeking the endorsement only complete ED 630, EDG 617, 621, 629, EDR 624 or 625, EDG 622, 623, 624, 625, and 685J. All candidates must also pass the Michigan Test for Teacher Certification and maintain a 3.0 GPA.

Secondary Level Education

This program is designed for teachers who wish to develop their skills and competencies in teaching secondary school students. Students are required to complete a minimum of 33 semester hours. In addition to foundation courses, requirements for the M.Ed. include: the core courses ED 630, EDG 637, EDG 638; the Secondary Level emphasis courses EDR 623 or EDR 625, EDG 635, EDG 636; two electives, or approved substitutions and either ED 693 or EDG 695. **Students already certified and seeking an additional Secondary Level Endorsement must:** have Michigan elementary certification; have or complete a secondary teachable major or minor, complete ED 630, EDG 618 or EDG 619, EDG 635, EDG 636, EDG 685B, and EDR 623; obtain positive recommendations; maintain a 3.0 GPA; and pass appropriate Michigan Subject Area Tests if adding new subject areas. **Initial Secondary Certification candidates must** first be admitted to Graduate Teacher Certification, then complete 24 credits from ED 652, EDG 635, EDG 636, EDG 638, EDR 623, and EDG 685B. 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.

Teaching English to Speakers of Other Languages (TESOL)

This program leads to the M.Ed. degree with emphasis in TESOL, Teaching English to Speakers of Other Languages (minimum requirement 33 semester hours) and an Endorsement in ESL, English as a Second Language, K–8 or 7-12 (minimum requirement 21 semester hours). 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. In addition to the COE foundation courses, the M.Ed requirements include the following courses in the COE: ED 631, ED 633, EDG 685K, and either ED 693 or ED 695, one approved elective, and 695G. The following courses from the English department include: ENG 660 (prerequisite course for other English courses), ENG 664, 665, and 668. Candidates can also receive K–12 ESL endorsement by completing the 33 hour TESOL Master's program, pass the Michigan Subject Area Test, and maintain a 3.0 GPA. 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.

M.Ed. — Reading/Language Arts

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 classroom teachers who want to expand their skills in dealing with students in language arts programs as well as for other professionals who deal with problems of reading adjustment. Students are required to complete a minimum of 33 semester hours. Program requirements include: One social

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foundation course (ED 671 or 672) and one research and evaluation course (ED 660). Six emphasis area courses: EDR 621; EDR 622 or EDR 623; EDR 624 or EDR 625; EDR 626, EDR 628; ENG/EDR 631. Two supplemental courses selected from: ED 631, ED 633, ED 634; EDG 641; EDR 627, EDR 685; EDS 625, [EDS 627 secondary certification only], and one elective. One research foundation course selected from ED 693 or ED 695. Graduate candidates will maintain a portfolio and submit it to their adviser periodically throughout their program.

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, 622, 624, 628, ENG/EDR 631, EDR 626, 627, and 685. 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.

Secondary Reading Teacher Endorsement, 7–12

The Secondary Reading Teacher Endorsement is a 24-semester hour program leading to state certification in reading at the secondary school level (6–12). It is designed for classroom teachers who wish to develop expertise in the teaching of reading. The secondary reading teacher endorsement may be added only to a secondary teaching certificate. Requirements include the following courses: EDR 621, 623, 625, 628, ENG/EDR 631, EDR 626, 685, and ED 631, EDS 625 or 627. 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.

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 masters degree in reading for this endorsement. In addition to foundation courses, the M.Ed. in Reading/Language Arts includes: EDR 621; EDR 622; EDR 623 or EDR 627; EDR 624 or EDR 625; EDR 626; EDR 628; ENG/EDR 631; EDR 685; EDR 687; EDR 695, and EDR 696. 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.

M.Ed. — School Counseling

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.

Program Requirements

No endorsement or school counseling license will be approved without completion of the Master of Education in School Counseling degree.

Students are required to complete a minimum of 36 credit hours. In addition to foundation courses, the M.Ed. requirements include:

ED 651 Counseling and Guidance for the Classroom Teacher
 ED 661 Educational Testing and Measurement
 EDC 621 The Profession of School Counseling
 EDC 623 Personal/Social Development of Children in Schools
 EDC 625 Academic Counseling and Classroom Guidance
 EDC 685 Practicum/Internship in School Counseling
 EDC 695 Research Applications in School Counseling
 EDG 649 Career Guidance
 SW 600 Cultural Competency for Social Work or its equivalent

Take ED 693 (for students pursuing a Master's Project) or ED 695 (for students pursuing a Master's Thesis).

M.Ed. — Special Education

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.

Applicants who wish to be admitted to the graduate special education program must possess a valid Michigan teaching certificate. All degree-seeking students are required to take a minimum of 33 semester hours, including foundation and emphasis courses. 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.

Emotional Impairment

In addition to foundation courses, M.Ed. requirements include: ED 650; EDS 609, 610, 611, 627, 629, 636, 638, and either ED 693 or ED 695. Students seeking only the Emotional Impairment Endorsement (K–12) complete ED 650, 660 or 661; EDS 609, 610, 611, 627, 629, 636, 638, and 685C. Candidates adding a new endorsement must pass the Michigan Subject Area Tests and maintain a 3.0 GPA.

Learning Disabilities

In addition to foundation courses, M.Ed. requirements include: EDS 625; EDS 627, EDS 629, EDS 636, EDS 637, EDS 638, EDS 640, EDS 695A, and three semester hours of elective coursework. Students seeking only the Learning Disabilities Endorsement (K–12) complete EDS 625, EDS 627, EDS 629, EDS 636, EDS 637, EDS 638, EDS 640 and 685H (six credits), and three semester hours of elective coursework. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 GPA.

Special Education Dual Endorsement Options (For Certified General Education Teachers)

For those students who do not already have an endorsement in one area of special education, we offer dual endorsement sequences leading to special education endorsement in

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two areas of special education. These sequences do not lead to a master's degree. Endorsement will not be granted in only one area.

Students must select two endorsement areas and have a planned program prepared by an advisor. Students are advised to take ED 652 first. To be admitted to the following dual sequences, the applicant must possess a valid Michigan teaching certificate.

Students in this program must apply and be accepted no later than the completion of six semester hours.

Early Childhood Developmental Delay Program (ZA/ECDD)

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. Students are required to complete a minimum of 33 semester hours. In addition to the foundation courses, M.Ed. requirements include EDG 610, 611, 612, 613; EDS 646, 647; two elective courses; and either ED 693 or ED 695. In addition, program prerequisites include one endorsement in special education. Students seeking recommendation for the **ZA/ECDD Endorsement or Approval** must complete the following program requirements for a total of 24 semester hours: EDG 610, 611, 612, 613, EDS 646, 647, 685J; have one additional endorsement in special education; and have elementary certification. Candidates adding a new endorsement must pass the Michigan Subject Area Test and maintain a 3.0 GPA.

Special Education Administration

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. Students are required to complete a minimum of 38 semester hours. M.Ed. requirements, in addition to the foundation courses, include ED 670, EDG 668, EDS 665, EDS 666, EDS 667, EDS 669, EDS 672, EDS 685A, and either ED 693 or ED 695, and EDS 668, EDS 670, EDS 671, EDS 673 and EDS 678.

Special Education Single Endorsement Options:

Special Education Single Endorsement Options

Teachers who already hold one endorsement in special education may elect to add an endorsement in the area of Cognitive Impairment. (For Learning Disabilities, Emotional Impairment, and Early Childhood Developmental Delay approval programs, see sections above.)

Cognitive Impairment (K–12)

Students seeking endorsement in cognitive impairments complete the following required courses: EDS 618, 619, 620, 621, 622, 623, 629, 685E (6 credits) and one elective (EDS 611, 627, or 647 are recommended). Candidates adding new endorsements must pass the Michigan Subject Area Tests and maintain a 3.0 GPA.

Special Education Dual Endorsement Options (For Certified General Education Teachers)

For those students who do not already have an endorsement in one area of special education, we offer dual endorsement sequences leading to special education endorsement in two areas of special education. These sequences do not lead to a master's degree. Endorsement will not be granted in only one area.

Students must select two endorsement areas and have a planned program prepared by an advisor. Students are advised to take ED 652, ED 653 if required, first. To be admitted to the following dual sequences, the applicant must possess a valid Michigan teaching certificate. Students in this program must apply and be accepted no later than the completion of six semester hours.

Learning Disabilities and Cognitive Impairment (K–12)

Endorsement courses include EDS 550 (6 credits); ED 652, EDS 618, EDS 619, EDS 620, EDS 621, EDS 622, EDS 623, EDS 625, EDS 627, EDS 629, EDS 636, EDS 637, EDS 638, EDS 640, EDS 685E (6 credits), and 685H (6 credits). Candidates adding new endorsements must pass Michigan Subject Area Tests and maintain a 3.0 GPA.

Learning Disabilities and Emotional Impairment (K–12)

Endorsement courses include EDS 550 (six credits); ED 652, ED 660 or ED 661; EDS 609, EDS 610, EDS 611, DS 625, EDS 627, EDS 629, EDS 636, EDS 637, EDS 638, EDS 640, EDS 685C (six credits), and EDS 685H (six credits). Candidates adding new endorsements must pass Michigan Subject Area Tests and maintain a 3.0 GPA.

Cognitive Impairment and Emotional Impairment (K–12)

Endorsement prerequisites include ED 650, 652 and EDS 550 (6 credits), 609, 610, 611, 618, 619, 620, 621, 622, 623, 627, 629, 636, 638, 685C (6 credits), and 685E (6 credits). Candidates adding new endorsements must pass Michigan Subject Area Tests and maintain a 3.0 GPA.

Learning Disabilities (K–12) and Early Childhood Developmental Delay

Endorsement and approval prerequisites include elementary certification. Courses include ED 652; EDG 610, EDG 611, EDG 612, EDG 613; EDS 550 (six credits) EDS 627, EDS 629, EDS 636, EDS 637, EDS 638, EDS 640, EDS 646, EDS 647, 685E (six credits), and 685J (six credits). Candidates adding new endorsements must pass Michigan Subject Area Tests and maintain a 3.0 GPA.

Cognitive Impairment (K–12) and Early Childhood Developmental Delay

Endorsement and approval prerequisites include elementary certification, ED 652 and EDS 550 (6 credits). Courses include EDG 610, 611, 612, 613; EDS 618, 619, 620, 621, 622, 623, 629, 646, 647, 685J (6 credits), and 685E (6 credits). Candidates adding new endorsements must pass Michigan Subject Area Tests and maintain a 3.0 GPA.

Emotional Impairment (K–12) and Early Childhood Developmental Delay

Endorsement and approval prerequisites include elementary certification and EDS 637 or equivalent. Courses include ED 650, 652, 653, 660 or 661; EDG 610, 611, 612, 613; EDS 550 (six credits), 609, 610, 611, 627, 629, 636, 638, 646, 647, 685C (six credits), and 685J (six credits). Candidates adding new endorsements must pass Michigan Subject Area Tests and maintain a 3.0 GPA.

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, EDG 668, EDS 665, 666, 667, 668, 669, 670, 671, 672, 673, EDS 673, and EDS 685A, passing of the supervisor's proficiency capstone EDS 678, and a minimum 3.0 GPA. The **Special Education Director** approval program includes all courses in the special education supervisor's

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program, credits of EDS 685B, passing of the director's proficiency capstone EDS 679, and a minimum 3.0 GPA.

Internships

Students graduating from the Grand Valley State University undergraduate special education program may apply for a full-year paid teaching internship in special education. In addition to completing the required coursework, students must pass the Michigan Subject Area Test, and maintain a 3.0 GPA to receive the K–12 endorsement in learning disabilities. Interns may apply the credit hours generated from this internship to the learning disabilities master's degree program.

Because it is necessary to limit the 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.

Michigan Professional Certification

Candidates for Michigan Professional Certification must fulfill the following requirements:

1. Hold a Michigan Provisional Certificate.
2. Teach successfully for three years after the issuance of the provisional certificate and according to its validity.
3. Show evidence of coursework in reading methods: six semester credits for elementary, three for secondary.
4. Earn 18 semester credits after the issuance of the provisional certificate in a planned course of study. (Applicants with an earned master's degree or higher are not required to complete the 18-credit planned program.)

If necessary, the Provisional Certificate may be renewed for a three-year period upon completion of ten 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 Web site: www.Michigan.gov/mde

Applying for Certification and Endorsements

Candidates should make application with the Grand Valley Records Office 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 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 signed by an appropriate degree advisor. The planned program requirements will be met by following coursework prescribed for the M.Ed. No further documentation is necessary.

Option 2. Additional Major or Minor

The applicant may earn additional endorsements consisting of at least 18 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.

- a. Early Childhood Endorsement.
- b. Elementary Endorsement.
- c. Middle Level Endorsement.
- d. 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.

Reading Requirement

All candidates for provisional or professional certification must show evidence of coursework in reading methods, six credits for elementary, three for secondary. 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.

Courses of Instruction

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. Prerequisite: Freshman year, second semester. Three credits.

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. Recommended prerequisite: ED 200. Three credits.

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

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gender. Emphasizes diversity in educational environments, student learning styles, and instructional strategies. Classroom observations required. Offered fall and winter semesters. Prerequisites: ED 200, or may be taken concurrently. Fulfills U.S. Diversity requirement. Three credits.

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.). Three credits.

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. Prerequisite: admission to the College of Education. Three credits.

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. Prerequisite: admission to the College of Education. Co-requisites: ED 310 and ED 331. Three credits.

ED 330 Methods and Strategies of Elementary Teaching. Half-day field experiences as a teacher assistant in an elementary classroom for a minimum of 12 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 and winter semesters. Prerequisites: admittance to College of Education. Co-requisites: ED 310, ED 320, ED 350. Five credits.

ED 331 Methods and Strategies of Secondary Teaching. Half-day field experiences as teacher assistant in a secondary classroom for a minimum of 13 weeks; additional weeks provided for professional development and training to total 15 weeks. Includes two two-hour weekly seminars covering content area methodology (with major field advisor) and instructional strategies (with Education field advisor). Offered fall and winter semesters. Prerequisites: admittance to the College of Education. Co-requisites: ED 310, ED 321. Six credits.

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. Six credits.

ED 350 Current Practices in Elementary Education. Introductory workshops and presentations that provide experiences covering the breadth and depth of content knowledge, theoretical and practical foundations, and current trends in the education profession. Offered fall and winter semesters. Prerequisites: admission to the College of Education. Co-requisites: ED 310, ED 320, ED 330. One credit.

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. Prerequisite: admission to the College of Education. (Program outlines specify co-requisites.). Three credits.

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.). Three credits.

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. One to three credits.

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. Ten credits.

ED 431 Student Teaching, Secondary. Full-time student teaching with a two-hour seminar each week. One to two weeks of professional development will also be included. Offered fall and winter semesters. Prerequisites: Advancement to student teaching, and positive recommendations from prior fieldwork. Twelve credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Nine credits.

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. Nine credits.

ED 480 Professional Development in Teacher 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. Two credits.

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.). Three credits.

ED 497 Educational Interventions: Cognitive Impairment. Study of the educational interventions appropriate for students with cognitive impairments. Offered winter semester. (Program outline specify corequisites.). Three credits.

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ED 498 Educational Interventions: Emotional Impairment. Study of the educational interventions appropriate for students with emotional impairments. Offered winter semester. (Program outline specify corequisites.). Three credits.

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. One to three credits.

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. One to four credits.

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. One to three credits.

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. One to three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

ED 635 Survey of Urban Education. Study of the historical, sociological, and educational bases of urban education. Three credits.

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. Three credits.

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. Prerequisite: teaching experience or PSY 452. Three credits.

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. Three credits.

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. Three credits.

ED 660 Educational Inquiry and Evaluation. Introduces educational inquiry, in varied forms, and explores the impact it can have on educational institutions in a variety of settings. Investigates educational evaluation and prepares students for thesis class—ED 695. Offered every semester. Prerequisites: 24 credits toward master's degree. Three credits.

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. Three credits.

ED 670 Critical Issues in Special Education. Examination of current crucial issues in the administration of special education. Offered at least once a year. Three credits.

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. Three credits.

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. Three credits.

ED 680 Special Topics in Education. Study of selected topics in education. Offered upon sufficient demand. One to three credits.

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. Three credits.

School Counseling

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. Three credits.

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. Three credits.

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. Three credits.

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. Three to six credits.

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EDC 695 Research Applications in School Counseling. Students are required to demonstrate their mastery of the subject matter through an applied research project. Students in this class are expected to identify a problem in school counseling, read the literature pertaining to the problem, offer solutions to the problem, test those solutions and evaluate the outcome. Offered each semester. Prerequisites: Completion of ED 660 and a minimum of 27 credit hours with an approved school counseling planned program. Three credits.

General Education

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. One to four credits.

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. One to three credits.

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. One to three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

EDG 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. Three credits.

EDG 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. Three credits.

EDG 620 Evaluating and Applying Instructional Media. This course focuses on the evaluation, selection, and use of instructional media and online instructional resources in classroom teaching and learning. Exposure to a variety of educational software applications, as well as resources on the Internet, with a focus on the processes and products of design, evaluation, and

implementation of technology-based learning environments. Offered fall semester. Prerequisite: EDG 619 or permission of instructor. Three credits.

EDG 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. Prerequisite: EDG 619 or permission of instructor. Three credits.

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. Three credits.

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. Three credits.

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: EDG 622 or permission of instructor. Three credits.

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. Three credits.

EDG 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. EDG 619. Three credits.

EDG 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. EDG 619. Three credits.

EDG 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. EDG 619. Three credits.

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. Three credits.

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

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inquiry and hands-on activities. Integration of process and content objectives, activities, and assessment will be addressed. Offered at least once a year. Three credits.

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. Three credits.

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. Three credits.

EDG 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. EDG 619. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

EDG 642 Psychology and Counseling of Gifted and Talented Students. Study of the cognitive, affective, and social characteristics of the gifted and talented child. Psychological theories, research, principles and practices, psychological assessment and diagnosis, counseling, attitudes, and adjustment. Offered at least once a year. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite or co-requisite: EDG 651 or permission of instructor. Three credits.

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. Prerequisites: EDG 651, EDG 652. Three credits.

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 or permission of the instructor. Three credits.

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. Prerequisites: EDG 653 or permission of instructor. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: EDG 665. Three credits.

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. Three credits.

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EDG 669 School Finance. The principles and theory underlying finance practice in public schools. Offered at least once a year. Three credits.

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. Three credits.

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. Prerequisite: EDG 665. Three credits.

EDG 672 Policy Development. A series of competency modules dealing with various areas of special education. Offered at least once a year. One credit.

EDG 675 Administrative Behavior. A series of competency modules dealing with various areas of special education. Offered at least once a year. One to six credits.

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. Three credits.

EDG 680 Special Topics in Education. Study of selected topics in education. Offered upon sufficient demand. One to three credits.

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 685G Central Office Administrator, EDG 685H Superintendent, EDG 685I Secondary Principal, EDG 685J School Library Media Services, EDG 685K English as a Second Language, and 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. Three or six credits.

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. 21 credit hours (3 in Foundations and 18 in Emphasis Area) and EDG 685. Three credits.

EDG 695 Research Applications. 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 to apply existing knowledge to specific practical situations. This demonstration may take the form of a research project or thesis. Planned with and directed by a graduate faculty member. 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. EDG 695A Early Childhood Education, EDG 695B Educational Technology, EDG 695C Elementary Education, EDG 695D Educational Differentiation, EDG 695F Educational Leadership, EDG 695G Teaching English to Speakers of Other Language, EDG 695H Middle and High School Education, EDG 695I Adult and Higher Edu-

cation, and EDG 695J School Libraries. Offered at least once a year. Prerequisite: permission of advisor, completion of ED 660 and at least 27 semester hours. Three credits.

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. Prerequisite: Permission of the advisor and completion of at least 27 semester credits. Three credits.

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 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. EDL 700 and EDL 705. Three credits.

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. EDG 710. Three credits.

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. EDG 710. Three credits.

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. EDG 710. Three credits.

EDG 780 Special Topics: Curriculum and Instruction. 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. Three credits.

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. Admission to Educational Specialist in Leadership degree. One to three credits.

Educational Leadership

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. Acceptance to the Educational Specialist program or master's degree and permission of the instructor. Three credits.

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

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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. Acceptance to the Educational Specialist program or master's degree and permission of the instructor. Three credits.

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. EDL 700 and EDL 705. Three credits.

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. EDL 700 and EDL 705. Three credits.

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. EDL 700 and EDL 705. Three credits.

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. Completion of a master's degree. Three credits.

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. Prerequisites: completion of a Master's degree. Three Credits.

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. EDL 710. Three credits.

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. Completion of Educational Specialist in Leadership core courses. Three credits.

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. Three credits.

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. Three credits.

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. Admission to Educational Specialist in Leadership degree. One to three credits.

Reading

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. One to four credits.

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. One to three credits.

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. One to three credits.

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 once. Offered Fall/Winter. Prerequisites: A K–8 teaching certificate is required to take this course. Three credits.

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. Three credits.

EDR 621 Current Issues and Trends in Literacy. Current Issues and Trends in Literacy is an advanced study of research in language acquisition and cognitive development. The course explores theoretical constructs underlying an interactive, intertextual view of literacy. Historical and multicultural trends regarding beliefs about the reader, the text, and contexts for instruction will be explored. Offered at least once a year. Prerequisite: Teaching experience or acceptance into a graduate certification program. Three credits.

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: Teaching experience or acceptance into a graduate certification program. Three credits.

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: Teaching experience or acceptance into a graduate certification program. Three credits.

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. Three credits.

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. Three credits.

EDR 626 Literacy Assessment and Instruction. Field based literacy course that examines research and theories, differentiated instruction, and assessment practices appropriate for meeting

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struggling K–12 student literacy needs. 20 hours of tutoring required. This course meets K–12 teacher certification renewal requirements. Separate application to College of Education required, see application for due dates. Offered fall and winter semesters. Prerequisites: EDR 621; EDR 622 or EDR 623; permit required. Three credits.

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 623. Three credits.

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. Prerequisites: none. Three credits.

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. Three credits.

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. Three credits.

EDR 680 Special Topics in Education. Study of selected topics in education. Offered upon sufficient demand. One to three credits.

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 fall and winter semesters. Prerequisites: Not to be used for initial certification. Completion of emphasis area. Permit required. Three credits.

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. Prerequisites: Not to be used for initial certification. Completion of emphasis area. Permit required. Three credits.

EDR 695 Research Applications: Reading. 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 to apply existing knowledge to specific practical situations. This demonstration may take the form of a research project or thesis. Planned with and directed by a graduate faculty member. Offered at least once a year. Prerequisite: Admission to a graduate program, completion of ED 660, 27 semester hours, and permission of advisor. Three credits.

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. Three credits.

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. Prerequisite: Permission of the advisor and completion of at least 27 semester credits. Three credits.

Special Education

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. Six credits.

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. One to four credits.

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. One to three credits.

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. One to three credits.

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. Prerequisite: ED 650. Three credits.

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. Three credits.

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. Prerequisites: None. Three credits.

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. Three credits.

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. Three credits.

EDS 620 Programs for Severe Cognitive Impairment. Advanced study in special education. Offered in odd-numbered years. Three credits.

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. Three credits.

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. Three credits.

EDS 623 Collaboration in Special Education. This course will provide theory, principles, and procedures for fostering collaborative partnerships among families and professionals that

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lead to mutual empowerment and positive outcomes for individuals with cognitive impairments. Offered winter semester of odd-numbered years. Three credits.

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. Three credits.

EDS 626 Individual Testing. Study of the history, theory, and implications of using individual tests for educational placements and instructional prescriptions. Students will design educational strategies based on the scores obtained from several individual assessment instruments. Offered at least once a year. Three credits.

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. Prerequisite: EDS 636. Three credits.

EDS 628 Neurological Bases of Learning Disorders. Basic neuroanatomy and neurophysiology designed for teachers. Special attention to the learning-disordered individual with organic/neurological impairment. Basic types of impairment associated neurological features and educational, psychological, and special aspects of children with learning problems. Offered at least once a year. Three credits.

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. Three credits.

EDS 636 Diagnostic and Interpretative Procedures. Review of evaluative instruments used for identification and programming for exceptional persons. Offered at least twice a year. Three credits.

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. Prerequisite: EDS 627. Three credits.

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. Prerequisite: EDS 637. Three credits.

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. Prerequisite: EDS 638. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

EDS 668 Budget and Accounting. A series of competency modules dealing with various areas of special education. Offered at least once a year. One credit.

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. One to three credits.

EDS 670 Computers in Instruction. A series of competency modules dealing with various areas of special education. Offered at least once a year. One credit.

EDS 671 Computers in Management. A series of competency modules dealing with various areas of special education. Offered at least once a year. One credit.

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. One to three credits.

EDS 673 School and Community Relations. A series of competency modules dealing with various areas of special education. Offered at least once a year. One to three credits.

EDS 674 In-Service Education. A series of competency modules dealing with various areas of special education. Offered at least once a year. One credit.

EDS 675 Facilities Planning. A series of competency modules dealing with various areas of special education. Offered at least once a year. Three credits.

EDS 676 School Board Relations. A series of competency modules dealing with various areas of special education. Teacher certification; admitted to the College of Education or permit. One credit.

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. One credit.

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. One credit.

EDS 680 Special Topics in Education. Study of selected topics in education. Offered upon sufficient demand. One to three credits.

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

Engineering

685H Learning Disabilities, EDS 685J Early Childhood Developmental Delay, and EDS 685K Autism Offered at least once a year. Three or six credits.

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. Nine credits.

EDS 695 Research Applications. 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 to apply existing knowledge to specific practical situations. This demonstration may take the form of a research project or thesis. Planned with and directed by a graduate faculty member. Offered at least once a year. Prerequisite: permission of advisor, completion of ED 660 and at least 27 semester hours. Three credits.

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. Prior approval of advisor and unit head and demonstrated ability to pursue special study; admitted to the College of Education or permit. Three credits.

Padnos College of Engineering and Computing

Director: Ray. Professors: Fleischmann, Garrett, Jack, Johnson, Larson, Plotkowski, Ray, Standridge; Associate Professors: Anyalebechi, Farris, Sozen, Sterian, Waldron; Assistant Professors: Adamczyk, Barakat, Blauch, Chaphalkar, Choudhuri, Dunne, Jiao, Maiteh, Mohammadzadeh, Pawlosi, Pung, Rahman.

Degrees offered: Bachelor of Science in Engineering (B.S.E.) that includes cooperative engineering education with emphases in computer, electrical, interdisciplinary, mechanical, and product design and manufacturing engineering; Master of Science in Engineering (M.S.E.) with emphases in electrical and computer engineering, manufacturing engineering, manufacturing operations, and mechanical engineering; articulated program for the B.S.E./M.S.E. Minors offered: computer engineering and engineering science.

Accreditation: The B.S.E. programs are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET); the electrical, mechanical, and manufacturing engineering emphases in the B.S.E. program have separate programmatic accreditation by ABET.

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 fastest-growing technical, manufacturing, and industrial regions of the state, and engineering opportunities in this region are good and are expected to improve during the next decade.

Mission and Values Statements for B.S.E. Degree Programs

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 a 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.

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 emphases in computer, electrical, interdisciplinary, mechanical, or product design and manufacturing engineering. During the first two years students take courses fundamental to engineering in preparation for admission to their emphasis area standing 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 in preparation for careers in emerging fields. 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 program 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 traditional engineering disciplines: computer, electrical, product design and manufacturing or mechanical engineering; or they may pursue an interdisciplinary emphasis tailored to their specific educational needs.

The program objectives for attaining this goal 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 program has 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 program is 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 program is 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 with an advisor can be arranged by con-

tacting 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. In addition, it is recommended that the student develop keyboarding skills, mechanical CAD skills, and a familiarity with mechanical tools. Students having little or no experience with hand and shop tools are encouraged to complete EGR 105 Product Design and Prototyping.

Properly prepared students can complete the B.S.E. program in four calendar years. Students who are not prepared to begin the B.S.E. program 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.

Each year the School of Engineering admits a select few 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 they will need to apply to the School of Engineering following 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 is competitive and 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.

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. program, 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.

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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 from the School of Engineering office. Notification letters are issued no later than the second week of the winter semester.

Cooperative Education

Cooperative engineering education in industry typically begins during the spring/summer semester following admission to major standing in the B.S.E. program. 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. program. Such students do have numerous other options to complete a bachelor's degree in one of Grand Valley's other programs.

Requirements for the Bachelor of Science in Engineering (B.S.E.)

To complete the requirements for graduation with a B.S.E. degree, the following course requirements, for a minimum of 141 credit hours, must be met: general education and basic skills; engineering foundations courses; cooperative engineering education, engineering design capstone; and engineering emphasis. The emphasis requirements are listed with the information on the individual emphasis. 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 103 The Biology of People

or BIO 105 Environmental Science

or BIO 120 General Biology I

or BMS 202 Anatomy and Physiology (Life Sciences)

And

ECO 210 Introductory Macroeconomics (Social Sciences)

or ECO 211 Introductory Microeconomics

or EGR 304 Creativity and Innovation (Creativity theme)

and

PHI 102 Ethics (Philosophy and Literature)
or One 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

EGR 101 Computer Aided Design and Manufacturing

EGR 103 Engineering Measurement and Analysis

EGR 209 Statics and Solid Mechanics (Electrical, Mechanical or Product Design, and Manufacturing Engineering Emphasis)

or CS 162 (Computer Engineering Emphasis)

EGR 214 Circuit Analysis I

EGR 226 Introduction to Digital Systems

EGR 250 Materials Science and Engineering (Mechanical or Product Design and Manufacturing Engineering Emphasis)

or

EGR 255 Materials for the Electrical Sciences (Electrical Engineering Emphasis)

or CS 163 Computer Science II (Computer Engineering Emphasis)

EGR 261 Structured Programming in C

or CS 261 Structured Programming in C

MTH 201 Calculus I

MTH 202 Calculus II

MTH 203 Calculus III

MTH 302 Linear Algebra and Differential Equations

PHY 230 Principles of Physics I

PHY 231 Principles of Physics II

PHY 234 Engineering Physics

STA 313 Probability and Stochastic Processes (Computer or Electrical Engineering Emphasis)

or STA 314 Statistical Quality Methods (Product Design & Manufacturing or Mechanical Engineering Emphasis)

WRT 150 Strategies in Writing

Admission to Major Standing

Admission to major standing in the B.S.E. program is competitive and requires a secondary application. Applicants must meet at least the following:

- a GPA of 2.7 or above in the engineering foundation courses
- completion of each course in the engineering foundation with a grade of C (2.0) or above with not more than one repeat, 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

Completion of the following required cooperative engineering education courses:

EGR 289 Engineering Co-op Preparation

EGR 290 Engineering Co-op 1

EGR 390 Engineering Co-op 2

EGR 490 Engineering Co-op 3

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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)

EGR 486 Senior Engineering Project II (Capstone)

Engineering Emphasis

In addition to the required courses, a student must select engineering electives in their chosen emphasis 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 emphasis is presented in the section addressing that emphasis.

Sample Curriculum for first two years of the B.S.E. Degree

The following course sequence assumes an appropriate mathematics background for the entering student.

First Semester: Fall

CHM 115 Principles of Chemistry I

EGR 101 Computer Aided Design and
Manufacturing

MTH 201 Calculus I

WRT 150 Strategies in Writing

Second Semester: Winter

EGR 103 Engineering Measurement and
Analysis

EGR 261 Structured Programming in C
or CS 261 Structured Programming

MTH 202 Calculus II

PHY 230 Principles of Physics I

Third Semester: Fall

CS 162 Computer Science I

or EGR 209 Statics and Solid Mechanics

EGR 226 Introduction to Digital Systems

EGR 289 Engineering Co-op Preparation

MTH 203 Calculus III

PHY 234 Engineering Physics

Fourth Semester: Winter

(Admission to major standing in the B.S.E.
program at this time.)

EGR 214 Circuit Analysis I

MTH 302 Linear Algebra and Differential
Equations

PHI 102 Ethics (Philosophy and Literature)

STA 313 Probability and Stochastic Processes
or STA 314 Statistical Quality Methods

And Either

CS 163 Computer Science II

or EGR 250 Materials Science and
Engineering

or EGR 255 Materials for the Electrical
Sciences

Computer Engineering

Students who elect the computer engineering emphasis 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 emphasis build upon the foundation courses to provide greater depth in engineering science, engineering design, and the

emphasis 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/productibility of the designs, laboratory and product safety, and product reliability.

Accreditation

The Computer Engineering Emphasis and the Interdisciplinary Engineering Emphasis are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) as two options within the B.S.E. degree program under the ABET General Criteria.

Professional Educational Objectives

1. 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
 - Computer systems architecture
 - Electronic circuits
 - Embedded systems and control
 - Software engineering
2. 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).
3. The graduate will have the ability to apply engineering knowledge and be able to create physical realizations of their theoretical concepts and models.
4. The graduate will have the demonstrated ability to engage in engineering design.
5. The graduate will have an awareness of the need for continued professional growth.
6. 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:

- a. an ability to apply knowledge of mathematics, science, and engineering,
- b. an ability to design and conduct experiments, as well as to analyze and interpret data,
- c. an ability to design a system, component, or process to meet desired needs,
- d. an ability to function on multidisciplinary teams,
- e. an ability to identify, formulate, and solve engineering problems,
- f. an understanding of professional and ethical responsibility,
- g. an ability to communicate effectively,
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context,
- i. a recognition of the need for, and an ability to engage in life-long learning,

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- j. a knowledge of contemporary issues, and
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

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:

CS 263 Data Structures and Algorithms
CS 350 Introduction to Software Engineering
CS 452 Operating Systems Concepts
EGR 209 Statics and Solid Mechanics
EGR 314 Circuit Analysis II
EGR 315 Electronic Circuits I
EGR 326 Embedded System Design

Elective Courses — Three courses selected from the following:

CS 451 Computer Architecture
CS 457 Data Communications
CS 459 Embedded Computer Systems
EGR 323 Signals and Systems Analysis
EGR 423 Digital Signal Processing Systems
EGR 424 Design of Microcontroller Applications
EGR 426 Integrated Circuit Systems Design
EGR 474 Systems Integration

Sample Curriculum for the Junior and Senior years of the Computer Engineering Emphasis

First Co-op Semester: Spring/Summer

- General Education (World Perspectives)
- EGR 290 Engineering Co-op 1

Fifth Academic Semester: Fall

EGR 314 Circuit Analysis II
EGR 315 Electronic Circuits I
EGR 326 Embedded System Design
SOC 280 Social Problems

Second Co-op Semester: Winter

- General Education (Theme)
- EGR 390 Engineering Co-op 2

Sixth Academic Semester:

Spring/Summer

- Computer elective
 - General Education (Arts)
- CS 350 Introduction to Software Engineering
ECO 211 Introductory Microeconomics
EGR 209 Statics and Solid Mechanics

Third Co-op Semester: Fall

- General Education (Theme)
- EGR 490 Engineering Co-op 3

Seventh Academic Semester: Winter

- Computer elective
- CS 263 Data Structures and Algorithms
CS 452 Operating Systems Concepts
EGR 485 Senior Engineering Project I
(Capstone)

Eighth Academic Semester:

Spring/Summer

- Computer elective
 - General Education (Historical Perspectives)
- BIO 105 Environmental Science
EGR 486 Senior Engineering Project II
(Capstone)

Electrical Engineering

Students who elect electrical engineering emphasis 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 emphasis 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 electrical engineering emphasis is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) as an electrical engineering degree program.

Professional Educational Objectives

1. The graduate will have the technical knowledge and capabilities expected of a practicing engineer appropriate to electrical engineering. Specifically in the areas of:
 - Digital and embedded systems
 - Electrical and electronic circuits
 - Electromagnetics
 - Power systems
 - Systems science
2. 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).
3. 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.
4. The graduate will have the demonstrated ability to engage in engineering design.
5. The graduate will have an awareness of the need for continued professional growth.
6. 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:

- a. an ability to apply knowledge of mathematics, science, and engineering,
- b. an ability to design and conduct experiments, as well as to analyze and interpret data,
- c. an ability to design a system, component, or process to meet desired needs,
- d. an ability to function on multidisciplinary teams,

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- e. an ability to identify, formulate, and solve engineering problems,
- f. an understanding of professional and ethical responsibility,
- g. an ability to communicate effectively,
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context,
- i. a recognition of the need for, and an ability to engage in life-long learning,
- j. a knowledge of contemporary issues, and
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Degree Requirements

Electrical engineering students must complete all requirements for the B.S.E. degree including the general education and basic skills requirements, the foundations of engineering courses, cooperative education, the engineering design capstone and the following electrical engineering courses:

Required Courses:

EGR 314 Circuit Analysis II
EGR 315 Electronic Circuits I
EGR 323 Signals and Systems Analysis
EGR 326 Embedded System Design
EGR 330 Power Systems Analysis
EGR 340 Electromagnetic Fields

Elective Courses — 16 credits (four courses) selected from the following:

EGR 360 Thermodynamics
EGR 370 Engineering Acoustics
EGR 415 Communication Systems
EGR 423 Digital Signal Processing Systems
EGR 424 Design of Microcontroller Applications
EGR 426 Integrated Circuit Systems Design
EGR 430 Electromechanics
EGR 436 Analog Circuit Design
EGR 455 Automatic Control
EGR 474 Systems Integration

Sample Curriculum for the Junior and Senior years of the Electrical Engineering Emphasis

First Co-op Semester: Spring/Summer

- General Education (World Perspectives)

EGR 290 Engineering Co-op 1

Fifth Academic Semester: Fall

EGR 314 Circuit Analysis II
EGR 315 Electronic Circuits I
EGR 326 Embedded System Design
SOC 280 Social Problems

Second Co-op Semester: Winter

- General Education (Theme)

EGR 390 Engineering Co-op 2

Third Co-op Semester: Fall

- General Education (Theme)

EGR 490 Engineering Co-op 3

Seventh Academic Semester: Winter

- Electrical Elective
- Electrical Elective
- Electrical Elective

EGR 485 Senior Engineering Project I
(Capstone)

Sixth Academic Semester:**Spring/Summer**

- General Education (Arts)
- ECO 211 Introductory Microeconomics
 EGR 323 Signals and Systems Analysis
 EGR 330 Power Systems Analysis
 EGR 340 Electromagnetic Fields

Eighth Academic Semester:**Spring/Summer**

- Electrical Elective
 - General Education (Historical Perspectives)
- BIO 105 Environmental Science
 EGR 486 Senior Engineering Project II
 (Capstone)

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/productibility of the designs, laboratory and product safety, and product reliability.

The interdisciplinary engineering emphasis allows the student to focus their studies in a disciplinary area that may not match cleanly with our traditional emphases. These are often in areas of emerging technologies. Plans of study for such students often include coursework outside of engineering.

The interdisciplinary emphasis 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

Planning for the interdisciplinary emphasis is conducted differently than for students in the traditional engineering programs. A student wishing to design an interdisciplinary emphasis must meet with the program chair. Together, the student and program chair develop a proposed plan of study utilizing the Interdisciplinary Emphasis Proposal Form. If the program plan includes coursework to be taken from outside the School of Engineering, then the chair of the appropriate department is consulted as well.

Faculty from various engineering disciplines are then selected to serve on the student’s committee depending on the subject of the interdisciplinary emphasis. The proposal is then submitted to the Academic Review Committee for the School of Engineering. This interdisciplinary body then makes a recommendation to the director who must endorse the plan of study.

Engineering

Accreditation

The Computer Engineering Emphasis and the Interdisciplinary Engineering Emphasis are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) as two options within the B.S.E. degree program under the ABET General Criteria.

Professional Educational Objectives

1. The graduate will have the technical knowledge and capabilities expected of a practicing engineer appropriate to general engineering, specifically in the areas of:
 - An interdisciplinary field of study defined by the student in consultation with the engineering faculty.
 - Energy
 - Engineering Design
 - Systems and Control
2. 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).
3. 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.
4. The graduate will have the demonstrated ability to engage in engineering design.
5. The graduate will have an awareness of the need for continued professional growth.
6. 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:

- a. an ability to apply knowledge of mathematics, science, and engineering,
- b. an ability to design and conduct experiments, as well as to analyze and interpret data,
- c. an ability to design a system, component, or process to meet desired needs,
- d. an ability to function on multidisciplinary teams,
- e. an ability to identify, formulate, and solve engineering problems,
- f. an understanding of professional and ethical responsibility,
- g. an ability to communicate effectively,
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context,
- i. a recognition of the need for, and an ability to engage in life-long learning,
- j. a knowledge of contemporary issues, and
- k. 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

or EGR 345 Dynamic System Modeling and Control
 EGR 360 Thermodynamics
 EGR 450 Manufacturing Control Systems
 or EGR 455 Automatic Control

Elective Courses — 25–28 credits required (seven courses):

The student and his or her faculty advisor are required to develop a coherent 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 Emphasis

First Co-op Semester: Spring/Summer

- General Education (World Perspectives)
- EGR 290 Engineering Co-op 1

Fifth Academic Semester: Fall

- Interdisciplinary Elective
- ECO 211 Introductory Microeconomics
 EGR 314 Circuit Analysis II
 or EGR 345 Dynamic System Modeling and Control
 EGR 360 Thermodynamics
 SOC 280 Social Problems

Second Co-op Semester: Winter

- General Education (Theme)
- EGR 390 Engineering Co-op 2

Sixth Academic Semester:

Spring/Summer

- Interdisciplinary Elective
 - Interdisciplinary Elective
 - General Education (Arts)
- EGR 450 Manufacturing Control Systems
 Credits: 4 or
 EGR 455 Automatic Control

Third Co-op Semester: Fall

- General Education (Theme)
- EGR 490 Engineering Co-op 3

Seventh Academic Semester: Winter

- Interdisciplinary Elective
 - Interdisciplinary Elective
 - Interdisciplinary Elective
- EGR 485 Senior Engineering Project I
 (Capstone)

Eighth Academic Semester:

Spring/Summer

- Interdisciplinary Elective
 - General Education (Historical Perspectives)
- BIO 105 Environmental Science
 EGR 486 Senior Engineering Project II
 (Capstone)

Mechanical Engineering

Students who elect the mechanical engineering emphasis 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 emphasis areas of mechanical engineering. Students complete seven required courses and three mechanical engineering 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

Engineering

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 mechanical engineering emphasis is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) as a mechanical engineering degree program.

Professional Educational Objectives

1. 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 manufacturing
 - Mechanical systems and control
 - Thermal systems
2. 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).
3. 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.
4. The graduate will have the demonstrated ability to engage in engineering design.
5. The graduate will have an awareness of the need for continued professional growth.
6. 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:

- a. an ability to apply knowledge of mathematics, science, and engineering,
- b. an ability to design and conduct experiments, as well as to analyze and interpret data,
- c. an ability to design a system, component, or process to meet desired needs,
- d. an ability to function on multidisciplinary teams,
- e. an ability to identify, formulate, and solve engineering problems,
- f. an understanding of professional and ethical responsibility,
- g. an ability to communicate effectively,
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context,
- i. a recognition of the need for, and an ability to engage in life-long learning,
- j. a knowledge of contemporary issues, and
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

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 309 Machine Design I
 EGR 312 Dynamics
 EGR 345 Dynamic System Modeling and Control
 EGR 360 Thermodynamics
 EGR 365 Fluid Mechanics
 EGR 409 Machine Design II
 EGR 468 Heat Transfer

Elective Courses — 11–12 credits (three courses) selected from the following:

EGR 301 Analytical Tools for Product Design
 EGR 350 Vibration
 EGR 352 Kinematics and Dynamics of Machinery
 EGR 366 Combustion Applications
 EGR 367 Manufacturing Processes
 EGR 370 Engineering Acoustics
 EGR 450 Manufacturing Control Systems
 EGR 475 Design of HVAC Systems

Sample Curriculum for the Junior and Senior Years of the Mechanical Engineering Emphasis**First Co-op Semester: Spring/Summer**

- General Education (World Perspectives)

EGR 290 Engineering Co-op 1

Fifth Academic Semester: Fall

ECO 211 Introductory Microeconomics
 EGR 312 Dynamics
 EGR 345 Dynamic System Modeling and Control
 EGR 360 Thermodynamics
 SOC 280 Social Problems

Second Co-op Semester: Winter

- General Education (Theme)

EGR 390 Engineering Co-op 2

Sixth Academic Semester:**Spring/Summer**

- Mechanical Elective
- General Education (Arts)

EGR 309 Machine Design I
 EGR 365 Fluid Mechanics

Third Co-op Semester: Fall

- General Education (Theme)

EGR 490 Engineering Co-op 3

Seventh Academic Semester: Winter

- Mechanical Elective

EGR 409 Machine Design II
 EGR 468 Heat Transfer
 EGR 485 Senior Engineering Project I (Capstone)

Eighth Academic Semester:**Spring/Summer**

- Mechanical Elective
- General Education (Historical Perspectives)

BIO 105 Environmental Science
 EGR 486 Senior Engineering Project II (Capstone)

Product Design and Manufacturing Engineering

Students who elect the product design and manufacturing engineering emphasis 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 emphasis build upon the foundation courses to provide greater depth in engineering science,

Engineering

engineering design, and the emphasis areas of product design and manufacturing engineering. Students complete eight required courses and two elective courses distributed in product design materials and manufacturing processes; process, assembly, and product engineering; manufacturing competitiveness and manufacturing systems design.

Integral to all four years of the program is a “design and build” educational philosophy incorporated through extensive laboratory and project activities as preparation for professional practice. Students engage in design at all levels of the curriculum. At each level they must realize their designs and proceed with testing, validation, and redesign. This approach allows students to experience many real world constraints such as project economics, project planning and scheduling, environmental considerations, manufacturability/producibility of the designs, laboratory and product safety, and product reliability.

Accreditation

The product design and manufacturing engineering program is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) as a manufacturing engineering degree program.

Professional Educational Objectives

1. 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
2. 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).
3. 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.
4. The graduate will have the demonstrated ability to engage in engineering design.
5. The graduate will have an awareness of the need for continued professional growth.
6. 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:

- a. an ability to apply knowledge of mathematics, science, and engineering,
- b. an ability to design and conduct experiments, as well as to analyze and interpret data,
- c. an ability to design a system, component, or process to meet desired needs,
- d. an ability to function on multidisciplinary teams
- e. an ability to identify, formulate, and solve engineering problems,
- f. an understanding of professional and ethical responsibility,
- g. an ability to communicate effectively,

- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context,
- i. a recognition of the need for, and an ability to engage in life-long learning,
- j. a knowledge of contemporary issues, and
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Degree Requirements

Product design and manufacturing engineering emphasis 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
 EGR 309 Machine Design I
 EGR 345 Dynamic System Modeling and Control
 EGR 360 Thermodynamics
 EGR 367 Manufacturing Processes
 EGR 401 Advanced Product Design
 EGR 440 Production Models
 EGR 450 Manufacturing Control Systems

Elective Courses — 8 credits (two courses) selected from the following:

EGR 409 Machine Design II
 EGR 473 Strategic Manufacturing Engineering Considerations
 EGR 474 Systems Integration

Sample Curriculum for the Junior and Senior Years

First Co-op Semester: Spring/Summer

- General Education (World Perspectives)
- EGR 290 Engineering Co-op 1

Fifth Academic Semester: Fall

ECO 211 Introductory Microeconomics
 EGR 301 Analytical Tools for Product Design
 EGR 345 Dynamic System Modeling and Control
 EGR 367 Manufacturing Processes
 SOC 280 Social Problems

Second Co-op Semester: Winter

- General Education (Theme)
- EGR 390 Engineering Co-op 2

Sixth Academic Semester:

Spring/Summer

- General Education (Arts)
- EGR 309 Machine Design I
 EGR 440 Production Models
 EGR 450 Manufacturing Control Systems

Third Co-op Semester: Fall

- General Education (Theme)
- EGR 490 Engineering Co-op 3

Seventh Academic Semester: Winter

- Product Design and Manufacturing Elective
- EGR 360 Thermodynamics
 EGR 401 Advanced Product Design
 EGR 485 Senior Engineering Project I (Capstone)

Eighth Academic Semester:

Spring/Summer

- Product Design and Manufacturing Elective
 - General Education (Historical Perspectives)
- BIO 105 Environmental Science
 EGR 486 Senior Engineering Project II (Capstone)

The Articulated Bachelor of Science in Engineering (B.S.E.) and Master of Science in Engineering (M.S.E.) Program

An increasing number of students enter the B.S.E. program with the intent of pursuing a master's degree immediately after completing their undergraduate studies. This program provides a mechanism for high achieving students to efficiently complete both the B.S.E. and M.S.E. degrees in a timely manner.

There are currently three articulated study plans available: (1) B.S.E. with Mechanical Engineering Emphasis articulated with M.S.E. with Manufacturing Engineering Emphasis, (2) B.S.E. with Mechanical Engineering Emphasis articulated with M.S.E. with Mechanical Engineering Emphasis, and (3) B.S.E. with Product Design and Manufacturing Engineering Emphasis articulated with M.S.E. with Manufacturing Operations Emphasis.

These articulated study plans allow the exceptional student to earn both the B.S.E. and the M.S.E. degree concurrently in five calendar years. They require completion of the entire program plan to receive the B.S.E. degree as well as the M.S.E. degree. Some elements included in the B.S.E. degree program serve a common purpose with elements of the M.S.E. program. In the articulated program, two of the B.S.E. emphasis elective courses are waived in the knowledge that the student will successfully complete at least three graduate courses providing greater depth in that same specialty area. The articulated program replaces the separate undergraduate and graduate capstone design experiences with a single, more mature graduate-level capstone experience.

These study plans are very aggressive and academically demanding. To maximize the potential for student success at the scholarship level required for the graduate courses, the criteria for admission into the articulated program are: (1) a GPA of 3.3 or above in the engineering foundations course sequence, (2) completion of each course in the engineering foundations with a grade of B (3.0) or above with no repeats, and (3) completion of EGR 289 in preparation for placement cooperative engineering education. Students pursuing the articulated program are expected to maintain a B average in both their upper-division undergraduate courses and in their graduate courses.

A student who has started the articulated program may stop at the B.S.E. level. The last opportunity to do so without loss of time to normal graduation is by the beginning of the senior year.

Requirements for the Articulated B.S.E./M.S.E.

To complete the requirements for graduation with articulated B.S.E./M.S.E. degrees, the following course requirements for a minimum of 163 credit hours must be met: general education and basic skills, engineering foundations courses, cooperative engineering education, engineering design capstone, and engineering emphasis. The graduate emphasis requirements are listed with the information on the individual emphases. A minimum of 45 credit hours in engineering courses at the 300 level or above must be completed at Grand Valley State University. These courses must include EGR 692 and 693.

General Education and Basic Skills

As identified in the General Academic Regulations section of the catalog, with the exception that the general education program includes the following courses:

BIO 103 The Biology of People
or BIO 105 Environmental Science
or BIO 120 General Biology I
or BMS 202 Anatomy and Physiology

ECO 210 Introductory Macroeconomics
 or ECO 211 Introductory Microeconomics
 or EGR 304 Creativity and Innovation
 PHI 102 Ethics
 or one 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 B (3.0) in each course with no repeats:

CHM 115 Principles of Chemistry I
 EGR 101 Computer Aided Design and Manufacturing
 EGR 103 Engineering Measurement and Analysis
 EGR 209 Statics and Solid Mechanics
 EGR 214 Circuit Analysis I
 EGR 226 Introduction to Digital Systems
 EGR 250 Materials Science and Engineering
 EGR 261 Structured Programming in C
 MTH 201 Calculus I
 MTH 202 Calculus II
 MTH 203 Calculus III
 MTH 302 Linear Algebra and Differential Equations
 PHY 230 Principles of Physics I
 PHY 231 Principles of Physics II
 or PHY 234 Engineering Physics
 STA 314 Statistical Quality Methods
 WRT 150 Strategies in Writing

Admission to Major Standing

Admission to major standing in the B.S.E./M.S.E. program is competitive and requires a secondary application. Applicants must meet at least the following: (1) a GPA of 3.3 or above in the engineering foundation courses, (2) completion of each course in the engineering foundation with a grade of B (3.0) or above with no repeats, and (3) completion of preparation for placement in cooperative engineering education, EGR 289. Transfer students must 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

Completion of the following required cooperative engineering education courses:

EGR 289 Engineering Co-op Preparation
 EGR 290 Engineering Co-op 1
 EGR 390 Engineering Co-op 2
 EGR 490 Engineering Co-op 3
 EGR 685 Graduate Practicum

Masters Engineering Design Capstone

Completion of the required masters design project course sequence with a minimum grade of B (3.0) in each course:

Satisfies capstone course requirements for the B.S.E. and M.S.E. degrees.

EGR 692 Masters Project Planning
 EGR 693 Masters Project (M.S.E. capstone)

Engineering

Articulated Engineering Emphasis Sequence

Completion of the chosen emphasis sequence. In addition to the required courses, a student must select engineering electives in the emphasis sequence to form a coherent plan of study. The approval of the student's academic advisor is required to ensure that the course choices meet the requirements of the program. Students must maintain a B (3.0) average in both their upper-division undergraduate courses and in their graduate courses with no grade of less than C (2.0).

The requirements for each articulated emphasis sequence offered by the School of Engineering are presented below.

B.S.E. Product Design and Manufacturing Engineering Emphasis/ M.S.E. Manufacturing Operations Emphasis:

Required Undergraduate Courses:

EGR 301 Analytical Tools for Product Design
EGR 309 Machine Design I
EGR 345 Dynamic System Modeling and Control
EGR 360 Thermodynamics
EGR 367 Manufacturing Processes
EGR 401 Advanced Product Design
EGR 440 Production Models

Required Graduate Courses:

EGR 610 Engineering Design
EGR 630 Contemporary Manufacturing Controls
EGR 640 Production Operation Models
EGR 642 Materials Handling and Plant Layout
EGR 644 Manufacturing Work Environments

Elective Courses — 6 credits (two courses) selected from the following:

EGR 409 Machine Design II
EGR 611 Computer-Aided Design and Engineering
EGR 620 Material and Process Selection
STA 615 Design of Experiments for Engineers

B.S.E. Mechanical Engineering Emphasis/M.S.E. Mechanical Engineering Emphasis:

Required Undergraduate Courses:

EGR 309 Machine Design I
EGR 312 Dynamics
EGR 345 Dynamic System Modeling and Control
EGR 360 Thermodynamics
EGR 365 Fluid Mechanics
EGR 367 Manufacturing Processes
EGR 409 Machine Design II
EGR 468 Heat Transfer

Required Graduate Courses:

EGR 610 Engineering Design
EGR 611 Computer-Aided Design and Engineering

EGR 615 Applied Finite Element Analysis
 EGR 616 Experimental Stress Analysis
 EGR 630 Contemporary Manufacturing Controls

Elective Courses — 3 credits (one course) selected from the following:

EGR 612 Design for Manufacturability
 EGR 620 Material and Process Selection
 STA 615 Design of Experiments for Engineers

B.S.E. Mechanical Engineering Emphasis/M.S.E. Manufacturing Engineering Emphasis:

Required Undergraduate Courses:

EGR 309 Machine Design I
 EGR 312 Dynamics
 EGR 345 Dynamic System Modeling and Control
 EGR 360 Thermodynamics
 EGR 365 Fluid Mechanics
 EGR 367 Manufacturing Processes
 EGR 409 Machine Design II
 EGR 468 Heat Transfer

Required Graduate Courses:

EGR 610 Engineering Design
 EGR 611 Computer-Aided Design and Engineering
 EGR 630 Contemporary Manufacturing Controls

Elective Courses — 3 credits (one course) selected from the following:

EGR 612 Design for Manufacturability
 EGR 620 Material and Process Selection
 EGR 640 Production Operation Models
 EGR 642 Materials Handling and Plant Layout
 EGR 644 Manufacturing Work Environments
 STA 615 Design of Experiments for Engineers

Minor Programs

Requirements for a Minor in Computer Engineering

The following minor requires a minimum GPA of 2.0 to be approved.

CS 162 Computer Science I
 CS 163 Computer Science II
 CS 251 Computer Organization
 EGR 214 Circuit Analysis I
 EGR 226 Introduction to Digital Systems
 EGR 326 Embedded System Design
 EGR 424 Design of Microcontroller Applications

One elective course selected from the following (Credit Hours: 3-4)

CS 263 Data Structures and Algorithms
 CS 452 Operating Systems Concepts
 CS 457 Data Communications

Engineering

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
EGR 103 Engineering Measurement and Analysis
EGR 209 Statics and Solid Mechanics
EGR 214 Circuit Analysis I
EGR 226 Introduction to Digital Systems

Elective Courses (choose one of the following):

EGR 250 Materials Science and Engineering
EGR 255 Materials for the Electrical Sciences
STA 313 Probability and Stochastic Processes
STA 314 Statistical Quality Methods

Graduate Programs

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. All emphases are open to students having an undergraduate engineering degree, though the manufacturing operations emphasis is intended for students with an undergraduate engineering technology or a related physical science degree.

In addition, the School of Engineering offers post-baccalaureate engineering certificate programs in each emphasis 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.

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.

In addition to the requirements listed in the Graduate Admission section of this catalog, candidates must satisfy all of the following:

Graduation from an accredited undergraduate program in either engineering, engineering technology, or an approved physical science. This program of study should have, as a min-

imum, included: a two-semester course sequence in single variable calculus; a semester course in general chemistry; a two-semester course sequence in physics; a semester course in computer programming; a semester course in engineering graphics and computer-aided-design; a semester course in engineering mechanics; a semester course in dc and ac electric circuits with laboratory work; a semester course in materials science; a semester course in engineering design. Students who have graduated from programs deficient in one or more of these topic areas, must complete the appropriate courses at an accredited undergraduate institution before they can be considered for admission. Specific emphasis areas may have additional requirements.

An undergraduate grade point average of at least 3.0 in all undergraduate coursework or a satisfactory score on the general section of the Graduate Record Examination (GRE).

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.

At least one year of relevant industrial experience in an engineering-related position.

Candidates must have a base of underlying knowledge relevant to graduate study in the chosen emphasis. 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.

Prospective candidates should hear from the School of Engineering concerning admission to the program within one month after their application is complete. Candidates can be admitted to the program in any semester provided their application and transcripts of prior college work are in the Admissions office at least two weeks before the semester begins.

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.

Advising appointments can be scheduled in the evenings for the benefit of candidates who work full time. Candidates should call the School of Engineering for an appointment.

Graduate course registration can be completed by telephone, Internet, or at an on-site registration session. The graduate program chair will assist the candidate in making registration arrangements.

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. Transferred credits may be substituted for professional practice courses or for emphasis courses as determined by the graduate program chair.

Academic Review

A cumulative grade point average of 3.0 or higher is required in all graduate-level courses. Additionally, a cumulative grade point average of 3.0 is required in all 600-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.

A graduate candidate whose grade point average falls below 3.0 after completion of nine hours of graduate-level coursework will be placed on academic probation. Such candidates must achieve at least a 3.0 grade point average overall after the next nine hours of coursework to remain in the program. A grade point average of 2.0 or below after nine hours of graduate-level courses results in automatic dismissal.

Background Studies

Candidates must have, in addition to a general knowledge of engineering, a base of underlying knowledge relevant to the engineering discipline they wish to emphasize in their graduate studies. Many candidates will have completed courses in their undergraduate engineering programs that fulfill some or all of the background studies requirements. To ensure the integrity of background studies, undergraduate courses meeting the background requirements must have been taken in an accredited program, or its equivalent, and have been earned with a minimum grade of C. Candidates not meeting these criteria may be required to complete additional comparable background work. Courses taken to fulfill background studies are not counted as part of the 33-hour requirement for the M.S.E. degree. Questions should be addressed to the graduate program chair.

Computer-based writing skills, presentation skills, mathematical analysis skills, as well as Internet usage skills, are required for all M.S.E. courses.

The relationship between background studies for an emphasis area and the M.S.E. curriculum requires that all background studies be completed by the time the student enrolls in the emphasis courses. The need for background studies is assessed on an individual basis in an interview with the graduate program chair.

For the M.S.E. degree with an electrical and computer engineering emphasis, this specific background must include contemporary computer tools, probability and stochastic processes, electrical circuits, and electronics. Students may have to complete undergraduate courses to address background subjects in which they may be deficient.

For the M.S.E. degree with a manufacturing engineering emphasis, a manufacturing operations emphasis, or a mechanical engineering emphasis, this specific background must include contemporary computer tools, probability and statistics, and traditional manufacturing processes. To address background subjects in which students may be deficient, three accelerated background courses are provided.

Requirements for the Certificate Programs

Completing the requirements for an emphasis 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 emphasis 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 emphasis area in his or her M.S.E. degree program.

Requirements for the Master of Science in Engineering (M.S.E.)

The M.S.E. program requires 33 semester hours of graduate coursework if the EGR 692/693 or EGR 696/697 Capstone is chosen. If the EGR 690 Capstone is chosen, 36 semester hours of graduate work is required. This coursework is distributed as follows:

1. Professional Practice (9 credit hours)

EGR 600 Advanced Engineering Analysis
 EGR 602 Engineering and Society
 EGR 604 Implementation and Measurement

2. Emphasis

The student must pursue an electrical and computer engineering, product design and manufacturing engineering, manufacturing operations, or mechanical engineering emphasis.

A. Electrical and Computer Engineering Emphasis:

- 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.

Communications, Signal Processing and Control Systems

(select three courses)

EGR 415 Communication Systems
 EGR 423 Digital Signal Processing Systems
 EGR 455 Automatic Control
 EGR 653 Digital and Adaptive Systems

Electrical Energy Systems

(select three courses)

EGR 430 Electromechanics
 EGR 655 Power Electronics
 EGR 656 Electrical Drive Systems

Digital and Computer Systems

(select three courses)

CS 459 Embedded Computer Systems
 CS 654 Computer Networking
 EGR 424 Design of Microcontroller Applications
 EGR 426 Integrated Circuit Systems Design

- b. Complete approved graduate elective courses, including independent studies
 - EGR 692/693 or EGR 696/697 Capstone (7 or 8 credit hours)
 - EGR 690 Capstone (13 or 14 credit hours)
- c. Complete the capstone experience (3 or 6 credit hours).
 - or EGR 690 Capstone Design Project
 - or EGR 692 Masters Project Planning
 - and EGR 693 Masters Project (M.S.E. capstone)
 - or EGR 696 Masters Thesis Research
 - and EGR 697 Masters Thesis (M.S.E. capstone)

B. Product Design and Manufacturing Emphasis:

- a. Complete the following content areas (3 courses for 9 credit hours).
EGR 610 Engineering Design
EGR 612 Design for Manufacturability
EGR 620 Material and Process Selection
EGR 630 Contemporary Manufacturing Controls
- b. Complete approved graduate elective courses, including independent studies
 - EGR 692/693 or EGR 696/697 Capstone (9 credit hours)
 - EGR 690 Capstone (15 credit hours)
- c. Complete the capstone experience (3 or 6 credit hours).
EGR 690 Capstone Design Project
or EGR 692 Masters Project Planning
and EGR 693 Masters Project (M.S.E. capstone)
or
EGR 696 Masters Thesis Research
and EGR 697 Masters Thesis (M.S.E. capstone)

C. Manufacturing Operations Emphasis:

- a. Complete the following content area (4 courses for 12 credit hours).
EGR 640 Production Operation Models
EGR 641 Applied Optimization
EGR 642 Materials Handling and Plant Layout
EGR 644 Manufacturing Work Environments
- b. Complete two approved graduate elective courses (6 credit hours).
- c. Complete the capstone experience (6 credit hours).
EGR 692 Masters Project Planning
and EGR 693 Masters Project (M.S.E. capstone)
or
EGR 696 Masters Thesis Research
and EGR 697 Masters Thesis (M.S.E. capstone)

D. Mechanical Engineering Emphasis:

- a. Complete the following content area (three courses for 9 credit hours).
EGR 611 Computer-Aided Design and Engineering
EGR 615 Applied Finite Element Analysis
EGR 616 Experimental Stress Analysis
- b. Complete approved graduate elective courses, including independent studies
EGR 692/693 or EGR 696/697 Capstone (9 credit hours)
EGR 690 Capstone (15 credit hours)
- c. Complete the capstone experience (3 or 6 credit hours).
EGR 690 Capstone Design Project
or
EGR 692 Masters Project Planning
and EGR 693 Masters Project (M.S.E. capstone)
or
EGR 696 Masters Thesis Research
and EGR 697 Masters Thesis (M.S.E. capstone)

Independent Study

Independent study is available for students interested in pursuing relevant special interests in areas where regular courses are not offered. These may consist of problem-solving proj-

ects, design projects, or other appropriate endeavors related to the student's intellectual or career interests. Independent study courses will not be allowed in areas where courses exist and are taught regularly.

Only graduate degree-seeking candidates who have completed the professional practice courses or have special permission from the graduate program chair may take independent study courses.

All independent study topics and the amount of credit to be earned must be approved by the faculty member who agrees to supervise the course. A maximum of six credit hours 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.

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.

Undergraduate Courses of Instruction

Numbers in parentheses at the end of course descriptions indicate (X-Y-Z) the number of lecture, discussion, and laboratory hours per week.

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. One credit.

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. Prerequisite: MTH 122 and MTH 123 or college preparatory algebra and trigonometry. Prerequisite or corequisite: MTH 201. Three credits.

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 or corequisite: EGR 101. One credit.

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. Prerequisite: MTH 201 with a grade of C or better or permission of instructor. Pre- or co-requisite: WRT 150. Three credits.

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.

Engineering

Laboratory. (1-0-2) Offered fall and winter semesters. Pre- or co-requisite: MTH 122 and MTH 123 or college preparatory algebra and trigonometry. Two credits.

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. Admitted ZEGR or permit. One to four credits.

EGR 209 Statics and Solid Mechanics. Topics include vector algebra, particle and rigid body equilibrium, centroids, moments of inertia, internal loads, friction, stress/strain diagrams, stress and strain due to axial and torsional loading, statically indeterminate axially and torsionally loaded members, thermal stresses, stress concentrations, column buckling, shear and bending moment diagrams. Offered fall and spring/summer semesters. Prerequisite: MTH 202 and PHY 230. Admitted ZEGR or permit. Four credits.

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. Prerequisite: Sophomore level course in statics. Admitted ZEGR or permit. One credit.

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. Prerequisite: EGR 103 and MTH 202. Pre- or co-requisite: PHY 230. Admitted ZEGR or EGR or permit. Four credits.

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/CS 261. Admitted ZEGR or EGR or permit. Four credits.

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. Four credits.

EGR 255 Materials for the Electrical Sciences. An introduction to the science of materials with an emphasis on applications in electrical engineering. The electrical, optical, mechanical, and thermal properties of metals, ceramics, and plastics are correlated with their atomic, molecular, and crystalline structures. Offered winter semester. Prerequisites: CHM 115 and PHY 231 or PHY 234. Admitted ZEGR or EGR or permit. Three credits.

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 CS 261. (0-2-2) Offered every semester. Pre- or co-requisites: MTH 122 and MTH 123. Admitted ZEGR or EGR or permit. Three credits.

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. Admitted ZEGR or EGR or permit. One to four credits.

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. Prerequisite: EGR 103. Pre- or co-requisites: EGR 209 and EGR 226. Admitted ZEGR or EGR or permit. One credit.

EGR 290 Engineering Co-op I. 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. Three credits.

EGR 301 Analytical Tools for Product Design. Analytic methods in product design are integrated to produce designs that meet customer needs and can be manufactured competitively. The course includes functional analysis, concept generation, concept selection, material selection, GD&T, tolerance analysis, design for producibility and product design planning. Offered fall semester. Prerequisite: EGR 250; Prerequisite or corequisite: EGR 345. Four credits.

EGR 304 Creativity and Innovation. An exploration of creative processes that foster development of new products and systems including the recognition of conditions and activities found in a creative climate. The balance between divergent thinking and judgment, the benefits and risks of creative behavior, and the nature of innovation and technological advancement are considered. Offered winter semester. Prerequisite: Completion of General Education Foundations Requirements. Three credits.

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. Prerequisite: EGR 209. Admitted EGR or permit. Four credits.

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. Prerequisite: EGR 209. Admitted EGR or permit. Three credits.

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. Four credits.

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. Prerequisite or corequisite: EGR 314. Admitted to EGR or permit. Four credits.

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. Prerequisite: EGR 314. Admitted to EGR or permit. Three credits.

EGR 326 Embedded System Design. A course in the design and implementation of embedded electronic systems. Topics include digital logic building blocks, programmable logic, micro-controllers, analog interface and support components, timing margin analysis, serial interfacing, signal integrity, heat sinks, and thermal resistance. A significant term project is required. Labo-

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ratory. (3-0-3) Offered fall semester. Prerequisite: EGR 214, EGR 226. Admitted to EGR or permit. Four credits.

EGR 330 Power Systems Analysis. An introductory course on single-phase and poly-phase power systems. Topics include single-phase and poly-phase circuits, balanced and unbalanced systems, DC and AC power transmission and distribution systems, fault analysis, and contemporary safety, social and environmental issues. (3-0-3) Laboratory. Offered spring/summer semester. Prerequisite: EGR 314. Four credits.

EGR 340 Electromagnetic Fields. An intermediate-level study of electricity and magnetism for students of engineering. Vector analysis, static electric and steady magnetic fields and forces. Maxwell's equations for time independent and dependent fields. Computer applications are included. Offered spring/summer semester. Prerequisites: PHY 234 or PHY 231 and MTH 302. Admitted to EGR or permit. Four credits.

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. Four credits.

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. Prerequisite: EGR 345. Admitted to EGR or permit. Four credits.

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. Four credits.

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 and MTH 302. Admitted to EGR or permit. Four credits.

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. Four credits.

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. Corequisite: EGR 365. Four credits.

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 manu-

factured. Computer Aided Manufacturing and quality control processes. Metrology. Laboratory. (3-0-3) Offered fall and winter semesters. Prerequisite: EGR 250. Admitted to EGR or permit. Four credits.

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. Prerequisite: EGR 314. Admitted to EGR or permit. Four credits.

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 depend on the nature of the topic. Admitted to EGR or permit. One to four credits.

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 B.S.E. degree program, and employability through standard interview process. Must have permission of the co-op director. Three credits.

EGR 399 Readings in Engineering. Independent supervised readings on selected topics. Offered fall, winter, and spring/ summer semesters. Prerequisite: Permission of instructor. Admitted to EGR or permit. One to four credits.

EGR 401 Advanced Product Design. Advanced topics in product design are integrated to prepare students to function effectively on diverse design teams. The course will cover topics such as opportunity assessment, quality function deployment (QFD), rapid prototyping, product architecture, and protection of intellectual property. Course material will be reinforced with design project work. (3-0-3) Offered winter semester. Prerequisite: EGR 301. Four credits.

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. Four credits.

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. Four credits.

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, EGR 326. Admitted to EGR or permit. Four credits.

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. Prerequisite: EGR 326. Admitted to EGR or permit. Four credits.

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. Prerequisite: EGR 326. Admitted to EGR or permit. Four credits.

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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. Prerequisite: EGR 330. Admitted to EGR or permit. Four credits.

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. Prerequisite: EGR 315. Four credits.

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. Three credits.

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. Four credits.

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. Prerequisite: EGR 323. Admitted to EGR or permit. Four credits.

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. Prerequisite: EGR 365. Admitted to EGR or permit. Four credits.

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. Prerequisite: EGR 367. Four credits.

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. Prerequisite: EGR 450 or permission of instructor. Admitted to EGR or permit. Four credits.

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. Prerequisite: EGR 468. Admitted to EGR or permit. Four credits.

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. One to four credits.

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. Senior engineering students in good standing. One credit.

EGR 486 Senior Engineering Project II (Capstone). Continuation of student's work in EGR 485. Both an oral report and a final written technical report are required. (1-0-8) Offered spring/summer semester. Prerequisite: EGR 485. Admitted EGR or permit. Two credits.

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 B.S.E. degree program, and employability through standard interview process. Must have permission of the co-op director. Three credits.

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. One to four credits.

Graduate Courses of Instruction

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: EGR 250 or equivalent and EGR 309 or equivalent. Pre- or corequisite: EGR 501 or equivalent. Two credits.

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. Admission to the Master of Science in Engineering Program or permission of the instructor. Three credits.

EGR 602 Engineering and Society. The societal elements impacting advanced engineering practice will be examined using fundamental principles, particularly engineering ethics. Legal issues, environmental issues, sustainability, globalization, project management, and technological progress will be discussed. Emphasis will be on technical writing. Offered winter semester. Admission to the Master of Science in Engineering Program or permission of the instructor. Three credits.

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. Admission to the Master of Science in Engineering Program or permission of the instructor. Three credits.

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: STA 513 or equivalent. Pre- or corequisite: EGR 520 or equivalent. Three credits.

Engineering

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: An undergraduate CAD course, EGR 601, EGR 610, or permission of instructor. Three credits.

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. Prerequisites: EGR 520 or equivalent, EGR 611. Three credits.

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. Prerequisites: EGR 611. Three credits.

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. Prerequisites: EGR 309 or equivalent. Admitted EGR or permit. Three credits.

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. Prerequisites: EGR 520 or equivalent. Three credits.

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. Admitted EGR or permit. Three credits.

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: STA 513 or equivalent. Admitted EGR or permit. Three credits.

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. Prerequisites: EGR 640 or permission. Three credits.

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. Prerequisites: STA 513 or equivalent, EGR 643 (may be taken concurrently). Three credits.

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: STA 513 or equivalent. Admitted EGR or permit. Three credits.

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 or equivalent and STA 313 or equivalent. Three credits.

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 or equivalent. Admitted EGR or permit. Three credits.

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. Prerequisites: EGR 655 or equivalent. Three credits.

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 depend on the nature of the topic. Admitted EGR or permit. One to four credits.

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. Three credits.

EGR 690 Capstone Design Project. An interdisciplinary team-based investigation of an industrial or entrepreneurial design problem. The application of knowledge and skills acquired in professional practice and emphasis courses is required. The nature and scope of the problem is determined by the student teams in consultation with the instructor. Offered on demand. Prerequisites: Completion of 12 credit hours of 600-level courses. Three credits.

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. Three credits.

EGR 693 Masters Project (M.S.E. 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. Three credits.

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. Three credits.

EGR 697 Masters Thesis (M.S.E. 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. Three credits.

EGR 699 Independent Study in Engineering. Independent supervised study on selected topics. Offered upon demand. Prerequisite: Permission of instructor. One to three credits.

English (ENG)

Chair: VanAntwerp. Professors: Blumreich, Chown, Franciosi, Lockerd, Osborn, Persoon, Smith, Tyson, Wenner, White; Associate Professors: Alvarez, Bloem, Brehm, Brice, Bullock, Hewitt, Ihrman, Jellema, Lai, Miller, Pearson, Remlinger, Schneider, Soljan, Tucker, VanAntwerp, Vander Broek, Webster, Westra, Wu; Assistant Professors: Anderson, Bickersteth, Brice, Bullock, Eicke, Ellis, Masko, McLeod, Rozema, Shannon.

English is one of the strongest preprofessional majors because the skills, knowledge, and understanding acquired are invaluable preparation for careers in education, law, business, medicine, and government service.

Students who major or minor in English find work in a variety of fields ranging from management to computer programming. Careers such as writing, teaching, library science, editing, and publishing are directly related to specific studies in English language and literature. The communications skills developed in the study of English are also important to careers in public relations, business management, and personnel counseling.

Beyond the practical benefits, however, a primary aim of the English program is to contribute directly to the liberal education of our majors by developing an awareness of the importance of language, the value of critical reading and effective writing, and the richness of the literature of the past and present. English majors learn to write clearly and persuasively, showing understanding of critical theory and literature from different historical periods.

Language and Literature Emphasis Objectives

Our language and literature students learn about the history and development of the English language, the periods and movements that make up the history of American and British literature, and the critical vocabulary used by today's literary scholars. English majors in the language and literature track also learn to write comprehensive essays about literary works, authors, periods, and movements, and to explicate the form and content of a literary work.

Teacher Certification Objectives

All of our majors seeking teacher certification learn about historical developments in the teaching of English. Our teaching majors become proficient at generating theoretically sound ways of representing and formulating the subject matter of English studies, including language, literature, and writing. Students seeking certification in secondary English or elementary language arts must have a 3.0 minimum GPA in English and in language arts majors and minors in order to be eligible for entrance into the College of Education for teacher assisting and student teaching.

Language Arts Emphasis Objectives

English majors in the language arts track are taught to organize, present, and explain concepts from the language arts (reading, writing, listening, and speaking) appropriate to the elementary classroom. Our language arts students learn about current theoretical work in the field and practice planning and implementing teaching that is likely to engage students in learning the integrated language arts. Students also demonstrate their knowledge of classic and contemporary literature for children and strategies for enhancing students' responses to such texts. Finally, our students demonstrate mastery of the writing process and strategies for developing in students the content and correctness appropriate to the elementary level.

English Education Emphasis Objectives

English majors in the English education track are taught to organize, present, and explain concepts from the language arts appropriate to the secondary classroom. Our English education students learn about current theoretical work in the field and practice planning and implementing teaching that is likely to engage students in learning the integrated language arts. Students also demonstrate their knowledge of classic and contemporary literature for young adults and strategies for enhancing students' responses to such texts. Finally, our students demonstrate mastery of the writing process and strategies for developing in students the content and correctness appropriate to the secondary level.

Requirements for the English Major

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
 ENG 221 British Literature II
 ENG 225 American Literature I: to 1860
 ENG 226 American Literature II: from 1860
 ENG 261 Study of Modern English

Requirements for the Emphases

All English majors will choose one of the following emphases: Language and Literature, Language Arts, or English Education. Each emphasis requires different options from the following course 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
 CLA 461 Studies in the Classical Tradition
 ENG 303 Studies in World Literature
 ENG 304 International Literature for Children and Young Adults
 ENG 375 Comparative Literature

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 basis: 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
 ENG 321 British Literature: Medieval
 ENG 322 British Literature: Renaissance
 ENG 323 British Literature: 18th-Romantic
 ENG 324 British Literature: Victorian-Present

English

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

ENG 326 Nineteenth-Century American Literature

ENG 327 Modern American Literature

ENG 328 Contemporary American Literature

D. Studies in Reading and Authorship

The courses in this category focus on the pragmatics of literature. World literature will figure significantly in these courses. One course is offered each semester on a rotating basis.

ENG 335 Literature of American Minorities

ENG 436 Women and Literature

ENG 440 Studies in Major Author(s)

ENG 445 Studies in Literary Criticism and Theory

E. Studies in Literary Genres

The courses in this category focus on the conventions, history, and important practitioners of the major genres. World literature will figure significantly in these courses. One course is offered each semester on a rotating basis.

ENG 320 Studies in Poetry

ENG 330 Studies in Fiction

ENG 340 Studies in Drama

ENG 360 Studies in Nonfiction

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

ENG 363 Applied Linguistics

ENG 364 Sociolinguistics

ENG 365 Teaching English as a Second Language

ENG 366 English Grammar and Usage

ENG 461 Language and Gender

ENG 467 Language Disorders and English Literacy

G. Writing

The courses in this category focus on the theory and practice of writing. Close reading of 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

WRT 219 Introduction to Creative Writing

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

ENG 308 Teaching Reading: The Necessary Skills

ENG 309 Teaching Literature to Children

ENG 310 Teaching Writing: Secondary

ENG 311 Teaching Literature to Adolescents

ENG 400 Language Arts for Teaching (must be taken with Teacher Assisting or Student Teaching)

Language and Literature Emphasis Requirements

This emphasis involves intensive analysis of literary works, study of the English language, and explorations of various literary theories. It is designed for students seeking solid academic preparation in a liberal arts field. It is an excellent program for students who plan to apply to graduate school in a variety of fields, including medicine, law, and business. It is also appropriate for those who plan to seek employment immediately after their bachelor's degree, particularly in careers such as business, journalism, freelance writing, government service, and advertising. It is recommended for those planning graduate studies in academic fields such as linguistics, British literature, American literature, and comparative literature. This emphasis is of value because it develops abilities in reading, writing, and analytical thinking, which are beneficial in nearly every profession.

Requirements for the Emphasis

Foundation courses (15 hours)

See above.

Elective requirements (Hours: 21)

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 (Hours: 3)

Total Hours: 39

Teaching Emphases

Language Arts (Elementary) Emphasis Requirements:

Foundation courses (15 hours)

See above.

Track requirements (9 hours)

Students who decided not to pursue teacher certification must substitute an upper literature or linguistics course for ENG 400.

ENG 307 Teaching Writing: Elementary

ENG 309 Teaching Literature to Children

ENG 400 Language Arts for Teaching

Elective requirements (9 hours)

Select 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.

ENG 204 World Mythology

English

Capstone (3 hours)

Total Hours: 36

English — English Education (Secondary) Emphasis

Foundation courses (15 hours)

See above.

Track requirements (9 hours)

ENG 310 Teaching Writing: Secondary
ENG 311 Teaching Literature to Adolescents
ENG 313 British Literature: Shakespeare

Elective requirements (9 hours)

Select one course from Category E, one course from Category G, and one additional ENG course numbered 300 or above.

Capstone (3 hours)

Total Hours: 36

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. The minor is 21 hours; those seeking English as a teachable minor must complete 27 hours.

Requirements for a Minor in English Credits: 21

- One course from category A
- One course from category B, C, D, or E

ENG 220 British Literature I
and ENG 221 British Literature II
or ENG 225 American Literature I: to 1860
and ENG 226 American Literature II: from 1860

ENG 261 Study of Modern English
ENG 313 British Literature: Shakespeare
WRT 200 Introduction to Professional Writing
or WRT 219 Introduction to Creative Writing

For students seeking certification in English Credits: 27

- Basic Minor Credits: 21

ENG 310 Teaching Writing: Secondary
ENG 311 Teaching Literature to Adolescents

Sample Curriculum

The following schedule assumes that students will consult with an advisor to make appropriate choices in General Education courses. For example, some General Education courses will also fulfill Elementary Education Minor requirements.

English Major — Literature and Language Arts Emphasis

First Year

- Foreign Language 101 and/or 102

- Four General Education Foundation Courses

ENG 220 British Literature I

MTH 110 Algebra

WRT 150 Strategies in Writing

Second Year

- Foreign Language 201
- ENG Elective (Category A)
- Four General Education Foundation Courses

ENG 221 British Literature II

ENG 225 American Literature I: to 1860

ENG 226 American Literature II: from 1860

ENG 261 Study of Modern English

Third Year

- ENG Elective (Category B)
 - ENG Elective (Category C)
- ENG 313 British Literature: Shakespeare

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).

English Major — Language Arts (Elementary Education) Emphasis

First Year

- Foreign Language 101 and/or 102
- Four General Education Foundation Courses

ENG 220 British Literature I

ENG 221 British Literature II

ENG 225 American Literature I: to 1860

MTH 110 Algebra

MTH 221 Mathematics for Elementary Teachers I

or MTH 223 Mathematics for Elementary Teachers III

PSY 101 Introductory Psychology

WRT 150 Strategies in Writing

Second Year

- Foreign Language 201
- ENG Elective (ENG 204 or Category A)
- Four General Education Foundation Courses
- Two General Education Cultural Designation Courses (ENG 204 and ED 225 are options)

ED 200 Introduction to Education

ED 205 Computers in Education

ED 225 Diversity in Education

ENG 226 American Literature II: from 1860

ENG 261 Study of Modern English

MTH 222 Mathematics for Elementary Teachers II

English

or MTH 223 Mathematics for Elementary Teachers III

Third Year

- ENG Elective (Category F)
- ENG Elective (One additional ENG course numbered 300 or above)
- Three General Education Theme Courses

ENG 307 Teaching Writing: Elementary

ENG 308 Teaching Reading: The Necessary Skills

ENG 309 Teaching Literature to Children

PSY 301 Child Development

PSY 325 Educational Psychology

Plus

ART 230 Art for the Classroom Teacher

or MUS 350 Music for Classroom Teachers

CTH 366 Drama in Education

or PED 305 Movement Education

Fourth Year

- Teacher Assisting
- Student Teaching

ENG 400 Language Arts for Teaching

ENG 495 Language and Literature (capstone).

English Major—Secondary Education Emphasis

First Year

- Foreign Language 101 and/or 102
- Four General Education Foundation Courses

ED 205 Computers in Education

ENG 220 British Literature I

ENG 221 British Literature II

ENG 225 American Literature I: to 1860

MTH 110 Algebra

PSY 101 Introductory Psychology

WRT 150 Strategies in Writing

Second Year

- Foreign Language 201
- Two courses in teachable minor
- Four General Education Foundation Courses
- One General Education Cultural Designation Course

ED 200 Introduction to Education

ED 225 Diversity in Education

ENG 226 American Literature II: from 1860

ENG 261 Study of Modern English

PSY 301 Child Development

WRT 200 Introduction to Professional Writing

or WRT 219 Introduction to Creative Writing

Third Year

- ENG Elective (Category F)
- ENG Elective (one additional ENG course numbered 300 or above)

- Three courses in teachable minor
- Three General Education Theme Courses

ENG 310 Teaching Writing: Secondary

ENG 311 Teaching Literature to Adolescents

ENG 313 British Literature: Shakespeare

PSY 325 Educational Psychology

Fourth Year

- Two courses in teachable minor
- Teacher Assisting
- Student Teaching
- One General Education Cultural Designation Course

ENG 495 Language and Literature (capstone).

Post Baccalaureate Teacher Certification in English

Students who have earned a baccalaureate degree in English from another institution and who have come to Grand Valley to earn teacher certification must consult with an English advisor before beginning that program. Additional courses may be required based on the following:

1. Length of time since the degree was earned.
2. Grades earned in the major.
3. Apparent coherence of the major.
4. Inclusion of essential professional courses:
 - a. For elementary:
 - COM 201 Speech
 - or CTH 366 Drama in Education
 - ENG 309 Teaching Literature to Children
 - ENG 307 Teaching Writing: Elementary
 - ENG 400 Language Arts for Teaching
 - b. For secondary:
 - ENG 220 British Literature I
 - and ENG 221 British Literature II
 - or ENG 225 American Literature I: to 1860
 - and ENG 226 American Literature II: from 1860
 - ENG 261 Study of Modern English
 - ENG 310 Teaching Writing: Secondary
 - ENG 311 Teaching Literature to Adolescents

Requirements for Master of Arts in 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 course work followed by qualifying examinations, and the other requiring 27 hours of course work 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

English

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”), applicants to the M.A. program are required to submit scores from the Graduate Records Exam (general exam only—advanced exam not required), a writing sample, and a brief statement of purpose. The writing sample should be an original essay that demonstrates your ability 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 your 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 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

ENG 624 Genre Studies

ENG 651 Literary Period Seminar

ENG 661 or 663 Author or Topic Seminar/Shakespeare Seminar

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.

The qualifying examinations are administered as follows:

1. Students may take the Qualifying exams after they have successfully completed 33 credit hours in the program. Students must sit for three exams: one on a major author; one on a literary-historical period; and one on a literary genre, thus connecting the exams with the core courses. After finishing their coursework, students consult with their advisors and choose the particular author, period, and genre on which they will be tested. In consultation with the students and with faculty specializing in the chosen examination topics, their advisors draw up reading lists for the exams.
2. Students will arrange with the Program Coordinator to take the exams, which are offered once each semester, fall and winter. All exams consist of essay questions, and the students have three hours to write each exam.

3. Each of the three exams will be read by a faculty member who specializes in the subject covered by the exam and by the coordinator of the program. The coordinator, in consultation with the first reader, will assign to each exam one of the following grades: High Pass, Pass, Low Pass, Fail.
4. Students who fail any one of the exams or receive a Low Pass on two of the exams must retake all three exams the following semester. Students may retake the exams once.
5. Any students who do not perform in a satisfactory manner after two attempts will not be awarded the degree and will not be eligible to retake the exams again. These students would, however, have the option of changing to Track 2 and writing a thesis in order to complete the degree.

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. 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 may enroll for 1–3 credits per semester and must enroll for at least one credit each semester (including spring/summer) 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 defense may be scheduled in summer, fall, or winter terms and should be at least three weeks before the end of classes for the 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.
8. Each thesis should be formatted according to the guidelines of University Microfilms International. A bound copy of the thesis will be kept in the university library.

Course Offerings

ENG 600 Graduate Literary Studies Seminar
 ENG 603 Seminar in British Literature
 ENG 605 Seminar in American Literature
 ENG 612 Women Writers
 ENG 614 Literature of American Ethnic Minorities
 ENG 616 World Literature in English
 ENG 624 Genre Studies
 ENG 651 Literary Period Seminar
 ENG 655 History of Literary Criticism and Theory
 ENG 661 Author or Topic Seminar
 ENG 663 Shakespeare
 ENG 680 Special Topics
 ENG 695 Master's Thesis
 ENG 699 Independent Study

English

Requirements for an English Concentration in M.Ed.

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 Secondary Instruction.

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 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
ENG 605 Seminar in American Literature
ENG 651 Literary Period Seminar
ENG 661 Author or Topic Seminar
ENG 663 Shakespeare

Literature focusing outside the traditional canon— one course from the following:

ENG 612 Women Writers
ENG 614 Literature of American Ethnic Minorities
ENG 616 World Literature in English

Literary theory or genre— one course from the following:

ENG 621 Literary Theory and the Teaching of Literature
ENG 624 Genre Studies

Writing or language theory— one course from the following:

ENG 631 Teaching Writing
ENG 633 Advanced Writing
ENG 641 History of the English Language

Requirements for a TESOL Concentration in M.Ed. and ESL Endorsement

The English department and the College of Education jointly offer an M.Ed. degree with a TESOL emphasis in General Education as well as a graduate-level ESL endorsement program leading to state ESL endorsement. The M.Ed.—TESOL, which leads to K-12 endorsement, requires 33 semester hours of coursework, 12 of which (four courses) are fulfilled in the English department and the rest in the College of Education. The same 12 hours are also required for completing the 21-hour ESL endorsement program, which leads to K-8 or 7-12 endorsement.

Admission

Students wishing to pursue either the M.Ed.—TESOL or ESL endorsement or both should apply to the College of Education for admission. Applicants should have an under-

graduate major in English, education, linguistics, applied linguistics, or a related field. Current English, ESL, language arts teachers, or other certified elementary or secondary school teachers who wish to be officially endorsed to teach ESL are also welcome to apply. Requests for transfer of credits from another institution will be evaluated on a case-by-case basis. No credits will be accepted if they were earned more than five years ago, at Grand Valley or elsewhere. Contact the College of Education for specific admissions and transfer requirements.

Course Requirements for Both M.Ed. — TESOL and ESL

Endorsement Programs

Students must complete the following 12 semester hours in English as part of their M.Ed. and/or ESL endorsement program. ENG 660 is a prerequisite for ENG 664, ENG 665, and ENG 668.

ENG 660 Principles of Educational Linguistics
 ENG 664 Sociolinguistics and Language Teaching
 ENG 665 Second Language Acquisition
 ENG 668 Second Language Assessment

Extracurricular Activities

English Club. Students interested in English are invited to participate in the English and Language Arts Club, which sponsors films, a play reading series, poetry readings, visiting lecturers, and social events.

NCTE. The department's NCTE affiliate group makes membership in the National Council of Teachers of English available at student rates. This group is of special interest to language arts majors and English majors in secondary education.

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.

fishladder: A Student Journal of Art and Writing. The literary arts magazine publishes creative work of students twice yearly and is edited by undergraduate students.

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.

Courses of Instruction

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

ENG 204 World Mythology. A comparative look at myths, folk tales, and fairy tales and how they derive from, and work on, the mind of a culture, both socially and aesthetically. Examines these tales as works of art in their own right and also as metaphors expressing a society's major values, themes, and preoccupations. Fulfills World Perspectives requirement. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

English

ENG 205 Literatures in English. Introduction to British, American, and other literatures written in English organized around a theme, period, or nationality. The course emphasizes close reading, writing skills, and introduces students to a variety of genres and cultural contexts for reading and understanding literature. Fulfills Philosophy and Literature Foundation. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

ENG 220 British Literature I. A survey of early British literature from Beowulf in the old English period through Chaucer in the middle English period, and such authors as Spenser, Marlowe, Shakespeare, Jonson, Donne, and Milton in the Renaissance. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

ENG 221 British Literature II. A survey of later British literature from the Restoration and the Eighteenth century, the Romantic and Victorian periods, modernism, and contemporary Anglophone literature. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

ENG 225 American Literature I: to 1860. A survey of American literature from its beginnings to 1860. Significant attention will be given to the writings of women and minorities. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

ENG 226 American Literature II: from 1860. A survey of American literature from the Realist period to the present. Significant attention will be given to the writings of women and minorities. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

ENG 232 Modern African American Literature. Analysis and discussion of discourse by and about African Americans primarily written during the twentieth century. Emphasizes literary discourse as a means of defining African American consciousness and community and understanding how the communities African Americans inhabit shaped their discursive expression. Cross listed with AAA 232. Students may not receive credit for both. Offered winter semester. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

ENG 261 Study of Modern English. An introduction to linguistic principles through a study of modern English. A review of historical and contemporary writings about the language and language use. Discussion of the premises underlying various approaches to English grammar, and the use of these grammars to understand English phonology, morphology, and syntax. Offered fall and winter semesters. Three credits.

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 odd years, winter semester. Prerequisite: Fulfillment of the freshman writing requirement and one literature course. Three credits.

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. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Four credits.

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 (ED 403). Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

ENG 310 Teaching Writing: Secondary. A study of the writing process and of current theories of rhetoric, discourse analysis, language acquisition, and reading at the secondary level. A tutoring practicum may be required, and students will also work on their own writing. Required for the secondary teacher certification English major. Should be taken prior to College of Education admission. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Should be taken prior to Student Teaching (ED 407). Three credits.

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. Prerequisites: Fulfillment of the freshman writing requirement, ENG 220 and ENG 221 or permission of instructor. Three credits.

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. Prerequisite: Two foundation courses or declared writing major or minor. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement and ENG 220

English

and ENG 221 or permission of instructor. May be repeated for credit if content varies. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Offered even 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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: Any two foundation courses or declared writing major or minor. Three credits.

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 Perspectives From the Outside theme. Fulfills U.S. Diversity requirement. Offered fall and winter semesters. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Three credits.

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. Prerequisite: Two foundation courses or declared writing major or minor. Three credits.

ENG 362 History of the English Language. Examination of the external and internal history of the English language from Old English to present day English. Investigation of regional and social varieties of English and the question of usage in the context of cultural change. Offered fall semester. Prerequisite: ENG 261. Three credits.

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 semester. Prerequisite: ENG 261. Three credits.

ENG 364 Sociolinguistics. Study of sociolinguistic theories investigating the interaction of language and society. An examination of the social and cultural aspects of language and language use: social stratification, power, gender, race, ethnicity, class, geographic origins, and networks. Offered fall semester. Prerequisite: ENG 261. Three credits.

ENG 365 Teaching English as a Second Language. Examination of the relevant issues of language, culture, and methodology for teachers of ESL students. Consideration of first and second language acquisition theory, language politics, second language teaching methodologies, and the classroom application of these issues. Offered fall and winter semesters. Prerequisite: ENG 261. Three credits.

ENG 366 English Grammar and Usage. A survey of the grammatical structure of English. The course helps students develop the ability to identify, understand, and analyze various syntactic properties of English, examines the historical and current contexts of teaching English in K-12/ESL settings, and explores the relationship between grammar and other areas of English study. Offered winter semester. Prerequisite: ENG 261 or permission of instructor. Three credits.

ENG 375 Comparative Literature. Introduces the methodologies and foundations of comparative literature, a discipline which systematically studies literature from different nations and/or times. Comparisons may be thematic, theoretical, historical, and biographical. Students will learn means and tools for appreciating textual productions from varying perspectives. Offered even years, winter semester. Prerequisites: Freshman Writing requirement. Three credits.

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. Three credits.

ENG 380 Topics in Literature. Studies of selected authors, concepts, movements, periods, theories, or genres. Topics will be announced in the class schedule and prerequisites may be listed. May be repeated for credit. Prerequisite: One literature foundation course. Three credits.

English

ENG 381 Regional Discourses in US Civil Rights. Regional differences in U.S. Civil Rights' discourse. Part of U.S. Civil Rights theme. Offered even years, fall semester. Prerequisite: Fulfillment of Freshman writing requirement. Three credits.

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. Fulfillment of freshman writing requirement. Offered fall and winter semesters. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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 Making War and Peace theme. Offered fall and winter semesters. Fulfillment of freshman writing requirement. Three credits.

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 Revolution and Evolution in Americas theme. Offered winter semester. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits.

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. Prerequisite: Fulfillment of the freshman writing requirement. Prior approval of instructor. One to four credits.

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. Taken concurrently with ED 330 or ED 430. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. One to three credits.

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. Three credits.

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. Three credits.

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. Three credits.

ENG 603 Seminar in British Literature. Aims at a synthesis of the development of British literature through a study of important literary themes, examining them closely in major works representative of the periods of British literature. Seminar presentation and research paper are required of each student. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

ENG 605 Seminar in American Literature. Aims at a synthesis of the development of American literature through a study of important literary themes, examining them closely in major works representative of the periods of American literature. Seminar presentation and research paper are required of each student. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

English

ENG 612 Women Writers. An in-depth study of selected works of women writers with attention to the literary and social contexts in which they wrote. Issues concerning the development of literature written by women and its status with regard to the canon will be addressed. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

ENG 614 Literature of American Ethnic Minorities. An in-depth study of selected pieces of African-American, Hispanic, Asian-American, Native American or immigrant American literature. Issues concerning the development of minority literature and its status with regard to the canon will be addressed. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

ENG 616 World Literature in English. A varied dynamic body of literary writing in English has emerged from formerly British territories in Africa, Asia, and Americas. This course will explore the emergence and characteristics of world literature in English. It will also examine the latter's relationship to the canons of British and American literature. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

ENG 621 Literary Theory and the Teaching of Literature. A study of literary theories with emphasis on current theories (including psychoanalysis, feminism, reader-response theory, Marxism, and deconstruction) in order to learn how these perspectives can be used in the classroom to enrich students' reading of literature. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

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. Prerequisite: Application and interview. Three credits.

ENG 633 Advanced Writing. An intensive writing course designed to help teachers develop their own writing using various forms of creative and expository writing. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

ENG 651 Literary Period Seminar. Intensive study of a period of British, American, or world literature. May be repeated for credit when content varies. Offered every year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

ENG 655 History of Literary Criticism and Theory. A study of literary criticism and theory from all major historical periods (Greek, Roman, medieval, Renaissance, Eighteenth Century, Romantic, Late Nineteenth Century), and of the various modern and contemporary schools. Emphasis on philosophical assumptions underlying literary theories and on application of critical approaches to literary works. Offered every other year (odd years). Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

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. Three credits.

ENG 661 Author or Topic Seminar. Intensive study of a work (or works) of a single author or focused literary topic. Offered every year. Prerequisite: Completion of English major or minor or consent of instructor. May be repeated for credit when content varies. Three credits.

ENG 663 Shakespeare. An in-depth study of selected plays, focusing on historical context, interpretive methods, and the development of Shakespeare's genius. Offered every other year. Prerequisite: Completion of English major or minor or consent of instructor. Three credits.

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. Prerequisite: Completion of ENG 660 or equivalent. Three credits.

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. Prerequisite: Completion of ENG 660 or equivalent. Three credits.

ENG 668 Second Language Assessment. An examination of the basic concepts in language testing, with special focus on K-12 and adult learners of English as a second language. Areas of coverage include test selection, evaluation, development, and application. Both qualitative and quantitative methods will be addressed, though the latter are the primary concern. Required of those seeking Michigan ESL endorsement. Offered fall semester. Prerequisite: Completion of ENG 660 or equivalent. Three credits.

ENG 680 Special Topics. Study of selected topics. Topics will be announced in the course schedule. May be repeated for credit. Offered upon sufficient demand. Three credits.

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. Prerequisite: completion of 27 credits and approval of thesis proposal. One to three credits.

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. One to three credits.

Reading Skills

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

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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. Three credits.

English as a Second Language

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. Four credits.

Geography and Planning (GPY)

Chair: Wagendorp. Associate Professor: Cole, Joseph, Lioubimtseva; Assistant Professors: Ma, Penn, Sun, Wagendorp, and Xu.

This program includes the geography major and minor and the city and regional planning minor.

Geography is one of the most ancient fields of study—and one of the most up to date as well. From the beginning of civilization, people wondered about the lands and people around them, and our curiosity is just as strong today. Geography satisfies that curiosity, because it is the study of the physical earth (mountains and rivers, weather and climate, plants and animals) and the earth as the home of people (agriculture and industry, politics and religion, city blocks and entire countries). Geography, then, is a bridge between the natural sciences and the social sciences. Our methods are as old as the earliest maps and as new as the latest computer technologies.

The geography program gives students the opportunity to develop an understanding of geographic principles, regions, and practices. Geography students will study where things are located and why things are located where they are, particularly with respect to the relationship between people and the environment. Career opportunities in geography are extensive, including teaching, urban planning, cartography, geographic information systems, community development, resource management, and environmental studies.

Degrees offered: B.S., B.A. in Geography; minor in Geography, minor in City and Regional Planning. Teaching certification in geography minor (secondary). Major with elementary and secondary education also offered in social studies, with geography emphasis.

Students seeking teacher certification in geography should note that beside geography, the new standards by the Michigan State Board of Education require basic knowledge of economics, history and political science. Students should take ECO 211, PLS 102 and HST 206 or equivalent to obtain basic knowledge in economics, political science, and history.

Geography Major

The geography program is organized into three parts: Concepts and Principles of Geography, Regional Studies, and Geographic Methods. The Concepts and Principles include introductory courses in cultural and physical geography. In Regional Studies the geographer's spatial and temporal lens is used to understand specific areas of the world. Geographic Methods involve such technical areas as cartography and computer mapping, remote sensing and the interpretation of aerial photographs, city and regional planning, and geographic information systems.

Requirements for a Geography Major

Core Courses

Students majoring in geography are required to complete a minimum 36 unduplicated hours, the other courses come from the four areas of concentration. No more than six hours of 399 and 499 combined may count toward the major. And also these core courses:

GEO 111 Exploring the Earth
 GPY 220 Cultural Geography
 GPY 400 Geographic Inquiry
 GPY 495 Senior Seminar in Social Sciences (capstone).

Cognate Sequence

Students may earn either a B.A. or B.S. degree. The B.A. degree requires third semester proficiency in a foreign language. The B.S. degree cognate sequence requirements are:

GPY 420 Sociology of Community
 SS 300 Research Methods in the Social Sciences
 STA 215 Introductory Applied Statistics

The following are the course requirements for each concentration:

Regional Studies Emphasis

Total credits for the regional studies concentration is 38, as indicated below. It is anticipated that students interested in teaching geography at the secondary levels will concentrate in regional studies, although regional studies may also be suitable for those seeking a general background in geography and planning.

1. The Core

GEO 111 Exploring the Earth
 GPY 220 Cultural Geography
 GPY 400 Geographic Inquiry
 GPY 495 Senior Seminar in Social Sciences (capstone).

2. Regional Studies

GPY 235 World Regional Geography
 Plus 12 credits from any of the following:
 ANT 215 Origins of Civilization
 GPY 335 Geographic Patterns-Global Development
 GPY 345 Geography of Michigan/Great Lakes Region
 GPY 350 Geography of Russia and Its Neighbors
 GPY 351 Geography of Africa
 GPY 352 Geography of Latin America
 GPY 353 Geography of Canada and the United States
 GPY 354 Geography of Asia
 GPY 355 Geography of Southwest Asia (The Middle East).
 GPY 356 Geography of Europe
 SS 324 Urbanization

3. Geographic Methods

GPY 200 Computer Cartography
 GPY 307 Introduction to Computer Mapping/Geographic Information Systems
 GPY 309 Introduction to City and Regional Planning
 GPY 420 Sociology of Community

Geography and Planning

NRM 250 Resource Measurement and Maps

NRM 350 Aerial Photography and Remote Sensing of the Environment

Geographic Methods Emphasis

Total credits for the geographic methods concentration is 39, as indicated below.

1. The Core

GEO 111 Exploring the Earth

GPY 220 Cultural Geography

GPY 400 Geographic Inquiry

GPY 495 Senior Seminar in Social Sciences (capstone).

2. Regional Studies

GPY 235 World Regional Geography

3. Geographic Methods

CS 230 Hardware and Software

Plus 20 additional credits from any of the following:

GPY 200 Computer Cartography

GPY 307 Introduction to Computer Mapping/Geographic Information Systems

GPY 407 Advanced GIS

GPY 420 Sociology of Community

GPY 470 Digital Image Processing

NRM 250 Resource Measurement and Maps

NRM 350 Aerial Photography and Remote Sensing of the Environment

NRM 395 GIS Applications in Resource Management

City and Regional Planning Emphasis

Total credits for the city and regional planning concentration is 38, as indicated below. In addition to the Core, GPY 309 Introduction to City and Regional Planning is a prerequisite for this concentration.

1. The Core

GEO 111 Exploring the Earth

GPY 220 Cultural Geography

GPY 400 Geographic Inquiry

GPY 495 Senior Seminar in Social Sciences (capstone).

2. Regional Studies

GPY 235 World Regional Geography

3. Geographic Methods

GPY 307 Introduction to Computer Mapping/Geographic Information Systems

Plus one course from any of the following:

GPY 200 Computer Cartography

GPY 407 Advanced GIS

GPY 420 Sociology of Community

NRM 250 Resource Measurement and Maps

NRM 350 Aerial Photography and Remote Sensing of the Environment

NRM 395 GIS Applications in Resource Management

4. City and Regional Planning

GPY 309 Introduction to City and Regional Planning

Plus nine credits from any of the following:

ECO 435 Urban Economics

GPY 310 Land Use Planning

GPY 410 Landscape Analysis

GPY 420 Sociology of Community

PA 307 Local Politics and Administration

PA 439 Community Analysis

SOC 351 Urban Sociology

SS 324 Urbanization

5. Internship

GPY 495 Senior Seminar in Social Sciences (capstone).

Community and Organizational Leadership Emphasis

Total credits for the community and organizational leadership concentration is 38, as indicated below.

1. The Core

GEO 111 Exploring the Earth

GPY 220 Cultural Geography

GPY 400 Geographic Inquiry

GPY 495 Senior Seminar in Social Sciences (capstone).

2. Regional Studies

GPY 235 World Regional Geography

Plus three credits from any of the following:

ANT 215 Origins of Civilization

GPY 345 Geography of Michigan/Great Lakes Region

GPY 350 Geography of Russia and Its Neighbors

GPY 351 Geography of Africa

GPY 352 Geography of Latin America

GPY 353 Geography of Canada and the United States

GPY 354 Geography of Asia

GPY 355 Geography of Southwest Asia (The Middle East).

GPY 356 Geography of Europe

SS 324 Urbanization

3. Geographic Methods

GPY 307 Introduction to Computer Mapping/Geographic Information Systems

Plus three credits from the following:

GPY 200 Computer Cartography

GPY 407 Advanced GIS

NRM 250 Resource Measurement and Maps

NRM 350 Aerial Photography and Remote Sensing of the Environment

NRM 395 GIS Applications in Resource Management

4. Community and Organizational Leadership

GPY 309 Introduction to City and Regional Planning

GPY 420 Sociology of Community

Geography and Planning

SOC 351 Urban Sociology
SOC 356 Sociology of Health Care
SS 324 Urbanization

5. Internship

GPY 490 Internship

Environmental Emphasis

Total credits for the environmental emphasis is 41, as indicated below.

1. The Core

GPY 100 Physical Geography
GPY 220 Cultural Geography
GPY 400 Geographic Inquiry
GPY 495 Senior Seminar in Social Sciences (capstone).

2. Regional Studies

GPY 235 World Regional Geography

3. Environmental concentration (including prerequisites)

ECO 345 Environmental and Resource Economics
GEO 320 Geomorphology (Earth Science Capstone)
GPY 412 Global Environmental Change
NRM 240 Principles of Climatology

4. Geographic Methods

GPY 307 Introduction to Computer Mapping/Geographic Information Systems

Geography Minor

Students minoring in geography are required to complete at least 22 hours of coursework. Two minors are available: teacher certification or GIS. The requirements for the minors are detailed within the programs.

Requirements for a Minor in Geography—Teacher Certification Hours: 22

Students seeking certification to teach geography at the secondary level are required to complete the following courses:

1. Two Core Courses:

GPY 100 Physical Geography
GPY 220 Cultural Geography

2. Four Regional Studies Courses

(one must be GPY 235):

GPY 235 World Regional Geography
GPY 345 Geography of Michigan/Great Lakes Region
GPY 350 Geography of Russia and Its Neighbors
GPY 351 Geography of Africa
 or GPY 352 Geography of Latin America
GPY 353 Geography of Canada and the United States
GPY 354 Geography of Asia
 or GPY 355 Geography of Southwest Asia (The Middle East)
GPY 356 Geography of Europe

Among their regional courses teachers should include:

GPY 345 Geography of Michigan/Great Lakes Region

GPY 353 Geography of Canada and the United States

3. One methods course from the following:

GPY 200 Computer Cartography

GPY 307 Introduction to Computer Mapping/Geographic Information Systems

GPY 309 Introduction to City and Regional Planning

NRM 250 Resource Measurement and Maps

NRM 350 Aerial Photography and Remote Sensing of the Environment

Requirements for a Minor in Geography—GIS Hours: 24

Students following the technical track are required to complete the following courses:

1. Two Core Courses:

GPY 100 Physical Geography

GPY 220 Cultural Geography

2. Geography Course

GPY 235 World Regional Geography (required)

3. Computer Science Course

CS 230 Hardware and Software (required)

4. At least four methods courses from the following:

GPY 200 Computer Cartography

GPY 307 Introduction to Computer Mapping/Geographic Information Systems

GPY 407 Advanced GIS

GPY 470 Digital Image Processing

NRM 250 Resource Measurement and Maps

NRM 350 Aerial Photography and Remote Sensing of the Environment

NRM 395 GIS Applications in Resource Management

Courses of Instruction

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. Three credits.

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 semester of even-numbered years. Three credits.

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 Sciences. Offered every semester. Three credits.

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 Sciences Foundation. Fulfills World Perspectives requirement. Offered every semester. Prerequisite: GPY 235. Three credits.

Geography and Planning

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. Prerequisite: Sophomore standing or permission of instructor. Three credits.

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. Three credits.

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. Prerequisite: GPY 309. Three credits.

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. Offered winter semester. Prerequisite: GPY 235 or permission of instructor. Part of Global Change theme. Three credits.

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. Lecture and discussion. Three credits.

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. Fulfills World Perspectives requirement. Part of the Global Change: Integration and Fragmentation theme. Offered winter semester. Three credits.

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 of odd-numbered years. Prerequisite: GPY 235 or permission of instructor. Three credits.

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. Part of Earth and Environment theme. Offered fall semester of odd-numbered years. Three credits.

GPY 353 Geography of Canada and the United States. A study of the physical and cultural environment north of the Rio Grande. Followed by a spatial analysis of the area's population, resources, and economy. Offered summer and winter semester. Three credits.

GPY 354 Geography of Asia. Introduction to the physical and cultural geography of Asia: The Indian subcontinent, China, the Korea's, Japan, Taiwan, and Southeast Asia. Offered fall semester of even-numbered years. Prerequisite: GPY 235 or permission of instructor. Three credits.

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. Three credits.

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 the area's population, resources, and economy. Part of the Earth and Environment theme. Offered winter semester of odd-numbered years. Three credits.

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. Three credits.

GPY 399 Independent Readings. Independent supervised readings in selected topics. Offered every semester. Prerequisite: Permission of program coordinator. Graded credit/no credit. One to three credits.

GPY 400 Geographic Inquiry. An introduction to diverse threads of geographic theory and practice, from ancient Egypt and Mesopotamia to the present day. Offered on sufficient demand. Prerequisites: GPY 220 and GEO 111. Three credits.

GPY 407 Advanced GIS. An advanced level GIS course emphasizing decision analysis through applications of spatial statistics and geospatial modeling. Topics include multivariate statistics, error assessment and propagation, fuzzy logic, uncertainty and decision risk in GIS modeling, location analysis, and terrain modeling using industry standard GIS software. Offered winter semester. Prerequisite: GPY 307. Four credits.

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 of odd-numbered years. Prerequisites: GPY 100 and GPY 310. Three credits.

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 of odd-numbered years. Prerequisites: GPY 100 or BIO 105. Three credits.

GPY 420 Sociology of Community. Provides students with an understanding of the concept of "community." Combines theory and practice. Students will work together as a team to examine, analyze, experience, and improve community life. GPY 420 is equivalent to SOC 420. Students may not receive credit for both courses. Offered winter semester of even-numbered years. Prerequisites: SOC 201 or GPY 220, STA 215, and SS 300. Three credits.

GPY 470 Digital Image Processing. Provides theory and applications of digital image processing techniques. Focuses on the methodologies of thematic extraction of environmental information using computer-based image processing systems and interface between GIS and remote sensing. Topics include image enhancement, multispectral classification algorithms, and model development. Offered winter semester of odd-numbered years. Prerequisite: GPY 307 and NRM 350 (or co-requisite) or permission of instructor. Three credits.

GPY 490 Internship. Supervised work experience in an area related to geography. Offered every semester. Prerequisite: Permission of program coordinator. Graded credit/no credit. One to nine credits.

GPY 495 Senior Seminar in Social Sciences (capstone). Considers the contemporary debates in the social sciences. By active reading and discussion of these debates, students write a personal assessment of their work to date and present a senior paper. GPY 495 is equivalent to SOC 495. Students may not receive credit for both courses. Offered fall and winter semester. Prerequisite: Senior standing in the department. Three credits.

GPY 499 Independent Research. Research conducted individually with faculty supervision. Attention given to written and oral presentation of research findings. Offered every semester. Prerequisite: Permission of program coordinator. Graded credit/no credit. One to three credits.

Geology (GEO)

Chair: Cole. Professor: Videtich; Associate Professors: Cole, Mattox, Mekik, Peterson, Riemersma, Weber; Assistant Professors: Colgan, Hessler, Wampler; Affiliate Faculty: Fegel.

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.

Major Requirements: 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)
- GEO electives — Two courses at the 300 or 400 level (geology theme courses cannot count toward the geology major)

GEO 111 Exploring the Earth

GEO 112 Earth History*

GEO 211 Mineralogy

GEO 212 Petrology

GEO 311 Structural Geology

GEO 312 Sedimentation-Stratigraphy*

GEO 320 Geomorphology (Earth Science Capstone)

GEO 485 Geology Seminar

GEO 495 Global Tectonics (Geology Capstone)

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

CHM 116 Principles of Chemistry II

b. Two Physics courses

(one of the following pairs)

Either

PHY 220 General Physics I

PHY 221 General Physics II

Or

PHY 230 Principles of Physics I

PHY 231 Principles of Physics II

c. Two basic Mathematics courses:

MTH 122 College Algebra

MTH 123 Trigonometry*

d. Two additional Mathematics, Statistics, or Computer Science courses

(one of the following pairs)

Either

MTH 201 Calculus I

MTH 202 Calculus II

Or

STA 215 Introductory Applied Statistics

STA 216 Intermediate Applied Statistics

Or

CS 150 Introduction to Computing

CS 162 Computer Science I

*Completion of GEO 112, GEO 212, and MTH 123 satisfies the general education B.S. degree cognate for the Geology majors.

Geology

Sample Curriculum for B.S. in Geology

First Year

Fall Semester

CHM 115 Principles of Chemistry I
GEO 111 Exploring the Earth
MTH 122 College Algebra
WRT 150 Strategies in Writing

Winter Semester

• General education courses
CHM 116 Principles of Chemistry II
GEO 112 Earth History

Second Year

Fall Semester

• General education courses
• Geology elective
GEO 211 Mineralogy
MTH 123 Trigonometry

Winter Semester

• General education courses
GEO 212 Petrology

Third Year

Fall Semester

• General education course
GEO 311 Structural Geology
GEO 320 Geomorphology (Earth Science
Capstone)
MTH 201 Calculus I

Winter Semester

• General education course
GEO 312 Sedimentation-Stratigraphy
MTH 202 Calculus II
PHY 230 Principles of Physics I
Summer Field Course

Fourth Year

Fall Semester

• Geology elective
• General education course
GEO 485 Geology Seminar
PHY 231 Principles of Physics II

Winter Semester

• General education course
• Geology elective
• Electives
GEO 485 Geology Seminar
GEO 495 Global Tectonics (Geology Capstone)

Major Requirements: Dual 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
GEO 112 Earth History*
GEO 211 Mineralogy
GEO 212 Petrology*
GEO 311 Structural Geology
GEO 312 Sedimentation-Stratigraphy

*Completion of GEO 112, GEO 212, and MTH 123 satisfies the general education B.S. degree cog-nate for the Geology majors.

GEO 445 Introduction to Geochemistry*

GEO 485 Geology Seminar

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

CHM 116 Principles of Chemistry II*

CHM 222 Quantitative Analysis

CHM 225 Instrumental Analysis I

CHM 351 Introduction to Physical Chemistry

CHM 352 Applied Physical Chemistry

CHM 491 Chemistry Seminar II

4. Mathematics Course

Five (5) semester credit hours of Mathematics.

MTH 201 Calculus I*

5. Physics Course

Five (5) semester credit hours.

PHY 230 Principles of Physics I

6. Capstone Course

Three (3) semester credit hours.

GEO 495 Global Tectonics (Geology Capstone)

Major Requirements: 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 2.8 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

GEO 112 Earth History

GEO 319 Earth Science in Secondary Education

*Completion of GEO 112, GEO 212, and MTH 123 satisfies the general education B.S. degree cog-nate for the Geology majors.

Geology

GEO 320 Geomorphology (Earth Science Capstone) Capstone course for earth science majors.

GEO 430 Oceanography

GEO 485 Geology Seminar

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

MTH 122 College Algebra

NRM 140 The Climatic Factor

or NRM 281 Principles of Soil Science

PHY 105 Descriptive Astronomy

PHY 220 General Physics I

PHY 221 General Physics II

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

GEO 212 Petrology

MTH 123 Trigonometry

Requirements for a Minor in Geology

Completion of a minor in Geology requires 24–26 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

GEO 112 Earth History

GEO 211 Mineralogy

GEO 212 Petrology

GEO 311 Structural Geology

GEO 485 Geology Seminar

Note: Participation in GEO 485—Geology Seminar is encouraged but not required.

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

GEO 112 Earth History

GEO 319 Earth Science in Secondary Education

GEO 320 Geomorphology (Earth Science Capstone)

NRM 140 The Climatic Factor

PHY 105 Descriptive Astronomy

Sample Curriculum for a minor in Earth Science

Fall I

GEO 111 Exploring the Earth

PHY 105 Descriptive Astronomy

Winter I

GEO 112 Earth History

NRM 140 The Climatic Factor

Fall II

GEO 320 Geomorphology (Earth Science
Capstone)

Winter II

GEO 319 Earth Science in Secondary
Education

Courses of Instruction

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. Three credits.

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. Three credits.

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 Sciences Foundation. (3-0-0) Offered in fall semester and in summer. Three credits.

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. Four credits.

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. Prerequisite: A course in physical or general geology. Five credits.

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). One credit.

GEO 180 Selected Topics in the Geological Sciences. Topics covered will reflect special interests of students and the instructor. Offered on sufficient demand. Prerequisite: Variable depending on topic. One to four credits.

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. Four credits.

GEO 202 Exploring the Hydrosphere. 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. Four credits.

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

Geology

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. Two credits.

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. Four credits.

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. Four credits.

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. Five credits.

GEO 280 Selected Topics in the Geological Sciences. Topics covered will reflect special interests of students and the instructor. Offered on sufficient demand. Prerequisite: Variable depending on topic. One to four credits.

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. Prerequisite: GEO 111 and permission of instructor. One or two credits.

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. Three credits.

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). Prerequisite: Junior standing and completion of physical and life sciences foundation. General Education requirement. Three credits.

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). Prerequisite: Completion of physical or life science foundations General Education requirement. Three credits.

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. Three credits.

GEO 312 Sedimentation-Stratigraphy. Principles and processes of sedimentation. Petrologic interpretation and basic laboratory techniques in the analysis of sediments. Study of layered rocks in terms of description of the local section; correlation of sections using petrology and paleontology and reconstruction of paleoenvironments. Lectures, laboratory, and field trips. (3-1-2) Offered winter semester. Prerequisite: GEO 112. Four credits.

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. Two credits.

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. Four credits.

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. Prerequisite: GEO 112. Four credits.

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 Revolution and Evolution in the Americas theme; not part of the Geology/Earth Science major or minor. (3-0-0) Offered fall semester. Prerequisite: Completion of physical or life science General Education requirement. Three credits.

GEO 380 Selected 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. Prerequisite: Variable depending on topic. One to four credits.

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. One to four credits.

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. Three credits.

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. Four credits.

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. Prerequisite: GEO 112. Three credits.

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. Three credits.

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 120 and CHM 116 (may be taken concurrently); MTH 201 strongly recommended. Four credits.

Health Administration

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. Prerequisite: GEO 212. Three credits.

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. Four credits.

GEO 480 Selected Topics in the Geological Sciences. Topics covered will reflect special interests of students and the instructor. Offered on sufficient demand. Prerequisite: Variable depending on topic. One to four credits.

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. Prerequisite: Geology or Earth Science major or minor. One credit.

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. One to ten credits.

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. Prerequisite: GEO 311. Three credits.

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. Prerequisite: Permission of supervisor. One to four credits.

GEO 580 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

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. Four credits.

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

The M.H.A. degree program broadens the commitment of the School of Public and Non-profit Administration to educate community leaders. The mission of the M.H.A. 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.

M.H.A. Curriculum and Requirements

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

PA 611 Research Methods

PA 630 Health Administration and Service

And Either

MGT 633 Management of Human Resources

Or

PA 612 Human Resources in Organizations

And Either

BUS 631 Leadership and Organizational Dynamics

Or

PA 614 Organization Theory

Core Level II

(prerequisite, PA 630—may be concurrent)

PA 631 U.S. Health Policy and Politics

PA 632 Health Services Financial Management

PA 633 Health Economics

PA 634 Health Care Law and Ethics

Level III: Specializations—choose one

1. Health Services Management

(Prerequisites: PA 630—may be concurrent)

Health Administration

Required:

MGT 635 Planned Change and Organizational Development
or PA 643 Strategic Management and Planning

Select 3:

NUR 646 Nursing Administration and Health Care Systems
PA 635 Hospital Organization and Management
PA 637 Ambulatory Care Organization and Management
PA 638 Long-Term Care Organization and Management
PA 640 Marketing Health and Human Services

2. Financial Management

(Prerequisites: Core Level I and PA 630 and 632 — may be concurrent)

Required:

ACC 511 Financial and Managerial Accounting Concepts
FIN 521 Data Analysis in Business
FIN 522 Finance Principles for Managers
PA 615 Public Financial Administration
or PA 662 Nonprofit Resource and Financial Management

3. Health Policy Analysis

(Prerequisites: PA 630 and PA 631 — may be concurrent)

Required:

PA 616 Public Policy Analysis

Select three:

CJ 605 Program Evaluation
PA 644 GIS in the Public Service
SW 610 Social Welfare Policy and Services I
SW 676 Community and Social Planning

Level IV: Capstone

(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
NUR 648 Administrative Practicum
PA 619 Public Management Seminar
PA 690 Public Administration Internship I

Graduate Courses of Instruction

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. Admission to the M.P.A. program or permit. One to three credits.

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. Admission to the M.P.A. program or permit. One to three credits.

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. Admission to the M.P.A. program or permit. One to three credits.

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. Admission to the M.P.A. program or permit. One to three credits.

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 M.P.A. program or permit. Three credits.

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: Admission to the M.P.A. program or permit. Appropriate background in statistics, computer science, and research methods. Three credits.

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. Three credits.

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. Three credits.

PA 615 Public Financial Administration. Practices and problems of public fiscal management with special attention to budgetary concepts and analytical techniques: the budget as an instrument of planning and control; organizing to ensure fiscal accountability; the public economy; financial decision-making; planning, programming, and budgeting systems; and allocation of scarce government resources in government and nonprofit agencies and programs. Offered fall semester. Prerequisite: PA 520 or equivalent. Three credits.

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. Prerequisite: PA 520, PA 611, PA 614, PA 615, and at least nine credits in a concentration. Three credits.

PA 619 Public Management Seminar. Examines the structure and dynamics of organizations; problems of financing, staffing, and program implementation; administrative reform and reorganization; qualitative and quantitative methods for managerial decision-making; goal-directed processes and effective planning. Uses a case study approach emphasizing management problems. Offered fall and winter semesters. Prerequisite: Completion of other required courses. Three credits.

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.

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Structures of politics and power both formal and informal are investigated. Offered summer and fall semesters. PA 520 (may be taken concurrently). Three credits.

PA 621 Administrative and Regulatory Law. An intensive study of administrative and regulatory law as it relates to the public sector. Requirements for, and limits on, the exercise of power by elected and appointed official and liability of public managers are covered. Offered fall semester. Prerequisite: PA 520 or permission of instructor. Three credits.

PA 623 Labor Management in the Public Sector. Acquaints students with the origins and status of public sector labor relations and collective bargaining and their importance for effective management in rapidly changing environments. The growth of unionism in the public sector and the extent of state bargaining legislation make the course particularly relevant for those in leadership positions. Offered on sufficient demand. Prerequisite: PA 520 or permission of instructor. Three credits.

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 M.P.A. program or permit. Three credits.

PA 631 U.S. Health Policy and Politics. Examines public policy-making in the health care sector since 1900. Emphasizes policy, the process of government regulation, and the character of health settings at the federal, state, and local levels; with attention to the constitutional foundations, legislative policies, and bureaucratic implementation features of the system in a political context. Offered fall semester. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

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 and PA 615, and admission to the M.P.A. program or permit. Three credits.

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. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

PA 634 Health Care Law and Ethics. Examines current and historical legal and ethical issues impacting health administration, including malpractice and other liability issues, licensing and regulation, professional ethics, contracts and property, insurance, corporate, taxation, antitrust, fraud and abuse, medical staff, confidentiality, health care access, peer review, ethics committees, legal and ethical aspects of patient care decision making and consent. Offered winter semester. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

PA 635 Hospital Organization and Management. Discussions of various types of hospitals. Study of their organization and management, including clinical, support and administrative functions, analysis of special operational problems, and administrative ethics. Requirements of the Joint Commission of Accreditation of Hospitals and other accrediting agencies are emphasized. Offered on sufficient demand. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

PA 637 Ambulatory Care Organization and Management. Study of the organizational and administrative aspects of ambulatory health services delivery. Focus on delivery strategies and

organizational models and the operational issues of financial control, personnel, regulation, and evaluation. Includes identification and discussions of various types of outpatient services. Offered fall semester. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

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. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

PA 640 Marketing Health and Human Services. Explores and applies marketing and public relations concepts to a variety of health and human service functions. Included are the integration of marketing and public relations planning and programs in organizations. Focuses on social and ethical issues of promoting wellness and health care, and communication with the community and media. Offered on sufficient demand. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

PA 641 Economic and Community Development. Describes and evaluates ways to coordinate the efforts of public agencies, private businesses, and nonprofit organizations to address planning, economic development, and employment issues more comprehensively. Included in this analysis are public and private programs basic to economic development; state and federal enabling legislation and regulations; local ordinance and public—private partnership alternatives. Offered winter semester. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

PA 642 Conflict Management. Provides an overview of theories of social conflict. Develops an understanding of the conceptual issues involving conflict and conflict management on many levels in diverse settings. Introduces specific dispute resolution skills such as negotiation and mediation. Offered on sufficient demand. Prerequisite: Admission to the M.P.A. program or permit. Three credits.

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. Admission to the M.P.A. program or permit. Three credits.

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. Three credits.

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 M.P.A. program or permit. Three credits.

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, PA 660, and admission to the M.P.A. program or permit. Three credits.

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

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include direct mail fundraising, planned giving, grant seeking, and philosophies and ethics of fundraising. Offered winter semester. Prerequisites: PA 520, PA 660, and admission to the M.P.A. program or permit. Three credits.

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, PA 660, and admission to the M.P.A. program or permission. Three credits.

PA 665 Nonprofit 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 nonprofit organizations. Explores specific functions of trustees within their legal, ethical, and fiduciary obligations. Offered every other year. Prerequisites: PA 520, PA 660, and admissions to the M.P.A. program or permit. Three credits.

PA 670 International NGO Management. Theory and cases in international nongovernment organizations (INGO) management. Analysis of various types and various roles played by INGOs. Relationship between NGOs 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. Three credits.

PA 680 Special Topics Seminar. 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. One to three credits.

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. Offered every semester. Prerequisites: Admission to M.P.A. program and completion of applicable course requirements. Permission of instructor. Graded credit/no credit. Three credits.

PA 691 Public Administration Internship II. A second internship. May be taken concurrently with PA 690 when field experience warrants it, or may be taken after PA 690 by those taking an additional fieldwork experience. Offered every semester. Prerequisites: PA 690. Permission of instructor. Graded credit/no credit. Three credits.

PA 693 Research Project. Course requires preparation of an extensive research and writing assignment under faculty supervision. Offered on sufficient demand. Prerequisite: Faculty approval of research proposal. Three or six credits.

PA 695 Master's Thesis. Preparation of an extensive research and writing assignment under faculty supervision. Offered fall and winter semesters. Prerequisite: Faculty approval of research proposal. Requires thesis committee. Three or six credits.

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. Permission of advisor. Graded credit/no credit. Three credits.

Health Professions (HPR)

Director: VanFleet; Faculty: Pleban, Ward; Adjunct Faculty: Garcia.

Degree Offered: Bachelor of Science in Health Professions

The College of Health Professions offers the B.S. in Health Professions and the B.S. in Occupational Safety and Health Management degrees which are housed within the Occupational Safety and Health Programs. 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. Those students interested in addressing safety and health issues in the work world should examine the B.S. in Occupational Safety and Health Management degree.

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 studies. 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.

Health Professions Studies at Grand Valley

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

Health Professions

of an externship and an appropriate minor. Students are awarded a B.S. degree in Health Professions upon successful completion of their academic requirements.

Degree Requirements

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 (28 semester credit hours):

BMS 208 Human Anatomy
BMS 212 Introductory Microbiology
BMS 213 Laboratory in Microbiology
BMS 290 Human Physiology
BMS 291 Laboratory in Human Physiology
HPR 110 Introduction to Health Professions
HPR 220 Health Care Delivery
HPR 301 Inquiry Into Evidence Based Practice
HPR 340 Health Care Management
HPR 495 Issues in Health Professions (capstone)
OSH 300 Introduction to Occupational Safety and Health

Required science cognate courses (27 semester credit hours):

BIO 120 General Biology I
BIO 355 Human Genetics
CHM 109 Introductory Chemistry
CHM 231 Introductory Organic Chemistry
CHM 232 Biological Chemistry
PHY 200 Physics for the Life Sciences
STA 215 Introductory Applied Statistics

A minor with advisor approval

B.S. cognate course sequence:

BIO 120 General Biology I
BMS 290 Human Physiology
STA 215 Introductory Applied Statistics

Sample Curriculum

Because of the variety of roles this degree serves based on individual student interests, students are strongly encouraged to seek out the director, student services coordinator, or advisor when setting up a curriculum that will move the student in the direction of their health professions area of interest.

Courses of Instruction

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. Two credits.

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. Two credits.

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). Prerequisite: At least junior standing and/or admission to one of the HPR professional programs. Two credits.

HPR 408 Professional Roles/Issues in Health Care. Interdisciplinary perspective that introduces the role of health care professionals in a changing health care system. Introduces managed care, documentation, and reimbursement issues. Examines how ethical and legal issues will affect the health care worker. Presents systems theory perspectives and familiarizes students with effective communication techniques. (2-2-0). Prerequisite: Admission to one of the programs in the College of Health Professions. Three credits.

HPR 419 Neuromuscular Development and Control. Emphasis on neurological and musculoskeletal development from conception to adolescence and how this development relates to function. Current theories in motor control, motor learning, and motor development will be introduced. (4-0-2). Prerequisite: BMS 427 and BMS 428 and admission to one of the programs in the College of Health Professions. Three credits.

HPR 480 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisites: Variable. Three credits.

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. Three credits.

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. Prerequisite: One semester of professional curriculum; permission of professional curriculum director. One to three credits.

History (HST)

Chair: Galbraith. Professors: Cole, Devlin, Goode, Kelleher, Mapes, O'Neill, Smither, G. Stark, Travis, Tripp; Associate Professors: Buckridge, Cooley, Coolidge, Galbraith, Murphy, Shapiro-Shapin, D. Stark, Underwood, Walker, Welch; Assistant Professors: Benjamin, Collier, Daley, Crouthamel, Gottlieb, Montagna, Morison, Shan, Stabler, Wangdi.

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.

Phi Alpha Theta

The local chapter of this international history honor society promotes the study of history by honorig 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.

Requirements for a History Major

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

History

pursuing teacher certification must also take SST 310 and six 300-level electives in history. Students not pursuing student certification must take seven history electives at the 200 or 300 level. The required courses include:

HST 203 World History to 1500 A.D.
HST 204 World History since 1500
HST 205 American History to 1877
HST 206 American History since 1877
HST 300 Writing History
HST 495 Varieties of History (capstone)
SST 310 Strategies for Social Studies Teachers

History Electives

The electives in history for all majors must include at least one course in United States history, one course in European history, and one course in non-Western history. Students pursuing teacher certification must take three additional 300-level history courses. Students not pursuing teacher certification must take four additional electives from HST 210 or 211, HST 301–391. 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.

Courses that fulfill the United States history requirement include

HST 301 Colonial U.S. History to 1763
HST 302 American Revolution and Federalist Era
HST 303 Era of Sectional Conflict and Civil War
HST 305 The United States Transformed
HST 306 Recent U.S. History, 1930 to Present
HST 312 History of American Women
HST 314 African American History
HST 315 Latinos: The Forging of Ethnic Identities
HST 316 U.S. Civil Rights Movement History
HST 317 History of American Foreign Relations
HST 318 History of Democracy in America
HST 320 American Indians
HST 323 Michigan History
HST 325 History of American Sports
HST 326 Industrializing America
HST 327 History of American Urban History
HST 328 Constitutional History of the U.S.
HST 329 Intellectual History of the United States
HST 370 History of Medicine and Health

Courses that fulfill the European history requirement include

HST 350 Classical Greece and Rome
HST 355 The Middle Ages
HST 360 Tudor and Stuart England
HST 361 Modern Britain
HST 363 European Social and Cultural History
HST 364 Renaissance and Reformation Europe
HST 365 Early Modern Europe
HST 370 History of Medicine and Health
HST 376 History of Witches

HST 377 History of Warfare
 HST 384 Revolutionary Europe, 1789–1900
 HST 385 Europe 1900—1945
 HST 386 Europe since World War II
 HST 387 Modern Germany
 HST 390 Soviet History

Courses that fulfill the non-U.S./non-European history requirement include

HST 330 Early Latin America
 HST 331 Modern Latin America
 HST 333 Survey of Modern Chinese History
 HST 334 The Making of the Caribbean
 HST 335 African Civilizations Before 1870
 HST 336 Africa after 1870
 HST 337 The Age of Islamic Empire
 HST 338 Modern Middle East
 HST 340 A History of East Asia to 1800
 HST 341 A History of East Asia since 1800
 HST 342 History of East Asian Religions
 HST 345 The Ancient Mediterranean and Orient
 HST 372 From Slavery to Freedom
 HST 374 Revolution in the Americas
 HST 389 Russian History
 HST 391 Russian Thought—Ninth to Twentieth Centuries

Course Option

HST 380 Special Topics in History
 Depending on the topic studied, may be used for any of the three categories above.

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.
 HST 204 World History since 1500
 HST 205 American History to 1877
 HST 206 American History since 1877

Additional Courses

The remaining three courses must be selected from the courses below; at least one of these courses must be in European or non-Western history. HST 210 counts as an elective in non-western history. 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.

Transfer students seeking a minor in history must complete at least six credits from among the Grand Valley history offerings.

HST 210 Empire, Culture, and Conflict
 HST 211 History of Islamic Civilization
 HST 301 Colonial U.S. History to 1763
 HST 302 American Revolution and Federalist Era
 HST 303 Era of Sectional Conflict and Civil War
 HST 305 The United States Transformed
 HST 306 Recent U.S. History, 1930 to Present
 HST 312 History of American Women
 HST 314 African American History

History

HST 315 Latinos: The Forging of Ethnic Identities
HST 316 U.S. Civil Rights Movement History
HST 317 History of American Foreign Relations
HST 318 History of Democracy in America
HST 320 American Indians
HST 323 Michigan History
HST 325 History of American Sports
HST 326 Industrializing America
HST 327 History of American Urban History
HST 328 Constitutional History of the U.S.
HST 329 Intellectual History of the United States
HST 330 Early Latin America
HST 331 Modern Latin America
HST 333 Survey of Modern Chinese History
HST 334 The Making of the Caribbean
HST 335 African Civilizations Before 1870
HST 336 Africa after 1870
HST 337 The Age of Islamic Empire
HST 338 Modern Middle East
HST 340 A History of East Asia to 1800
HST 341 A History of East Asia since 1800
HST 342 History of East Asian Religions
HST 345 The Ancient Mediterranean and Orient
HST 350 Classical Greece and Rome
HST 355 The Middle Ages
HST 360 Tudor and Stuart England
HST 361 Modern Britain
HST 363 European Social and Cultural History
HST 364 Renaissance and Reformation Europe
HST 365 Early Modern Europe
HST 370 History of Medicine and Health
HST 371 History of Gender, Family, Sexuality
HST 374 Revolution in the Americas
HST 376 History of Witches
HST 377 History of Warfare
HST 380 Special Topics in History
HST 384 Revolutionary Europe, 1789–1900
HST 385 Europe 1900–1945
HST 386 Europe since World War II
HST 387 Modern Germany
HST 389 Russian History
HST 390 Soviet History
HST 391 Russian Thought—Ninth to Twentieth Centuries

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.

Teacher Certification

Post-graduate students seeking teacher certification with a major in history must present a history major that includes courses in American, European, and world history and must

have obtained a major GPA of at least 2.7 in previous work. Postgraduate students whose degree in history was completed more than three years prior to Grand Valley admission must demonstrate currency by completing at least two upper-level history courses at Grand Valley; such students must maintain a minimum GPA of 2.7 in those courses. Such students should consult the chair or the assistant chair for an evaluation of their previous work and to discuss appropriate courses.

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:

CS 150 Introduction to Computing
 SS 300 Research Methods in the Social Sciences
 STA 215 Introductory Applied Statistics

The Breen Prize and Niemeyer Scholarship(s)

The Breen Prize for the best essay on a historical topic is awarded by the department each year. Essays are due in March. Details are available in the history department office.

Niemeyer Scholarship(s) are awarded in March. Details are available in the history department office, 1060A MAK.

Advanced Placement and CLEP tests are offered for History:

HST 203 World History to 1500 A.D.
 HST 204 World History since 1500
 HST 205 American History to 1877
 HST 206 American History since 1877

M.Ed. with a Concentration in History

The History Department offers graduate courses that are included in the options in the M.Ed. in general education (Middle and High School Emphasis).

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
 HST 605 Techniques in Local and Archival History

History

U.S. History (minimum of one course):

HST 625 The United States in the Nuclear Age

Non-Western History (minimum of one course):

HST 630 The Middle East in the Twentieth Century

HST 632 A History of Brazil

HST 633 Issues in Third World History

European History (minimum of one course):

HST 643 The French Revolution

HST 648 European Origins of World Wars I and II

Course Option

HST 680 Selected Topics in History

Depending on the topic, may be used for any of the categories above.

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.

Sample Curriculum

First Year

- Three General Education Foundation courses
- Two foreign language courses (B.A. candidates)
(B.A. candidates)

CS 150 Introduction to Computing

HST 203 World History to 1500 A.D.

HST 204 World History since 1500

MTH 110 Algebra Credits: 4

STA 215 Introductory Applied Statistics (B.S. candidates)

WRT 150 Strategies in Writing

Second Year

- Four General Education Foundation courses
- One foreign language course (B.A. candidates)

HST 205 American History to 1877

HST 206 American History since 1877

HST 210 Empire, Culture, and Conflict One elective (teacher certification candidates)
(non-teachers)

Or

HST 300 Writing History

SS 300 Research Methods in the Social Sciences (B.S. candidates)

Third Year

- Three 300-level history courses
- Five elective courses (non teachers)
- Two General Education Theme courses

Or
 SST 310 Strategies for Social Studies Teachers
 Four elective courses (teacher certification candidates)

Fourth Year

- Three 300-level history courses
- One General Education Theme course
- Six elective courses

HST 495 Varieties of History (capstone)

Courses of Instruction

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.

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. Three credits.

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. Three credits.

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. Three credits.

HST 180 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Three credits.

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. Three credits.

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. Three credits.

History

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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, 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. Prerequisite: Completion of writing skills course. Required for majors. Three credits.

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, HST 206, or junior standing. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: HST 206 or junior standing. Three credits.

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. Three credits.

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. Prerequisite: HST 205, HST 206 and junior standing. Three credits.

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: HST 206 or junior standing. Three credits.

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 Civil Rights theme. Offered fall semesters. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits.

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 Making War and Peace theme. Offered fall and winter semesters. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits.

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. Three credits.

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: HST 205, HST 206, or junior standing. Three credits.

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. Prerequisite: HST 206 or junior standing. Three credits.

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. Three credits.

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. Three credits.

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,

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and economic groups create social and cultural formations. Part of Cities theme. Offered fall and winter semesters. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits.

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. Prerequisite: HST 205 and HST 206 or junior standing. Three credits.

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. Prerequisite: HST 205 and HST 206 or junior standing. Three credits.

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 210 or junior standing. Three credits.

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 210 or junior standing. Three credits.

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. Prerequisite: Junior standing. Three credits.

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. Prerequisite: HST 210 or junior standing. Three credits.

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 210 or junior standing. Three credits.

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. Prerequisite: HST 210 or junior standing; students are encouraged to take HST 335. Three credits.

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. Prerequisite: HST 203, HST 204 or junior standing. Three credits.

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. Prerequisite: HST 204 and HST 206 or junior standing. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits.

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. Prerequisite: HST 203 or junior standing. Three credits.

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. Three credits.

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. Prerequisite: HST 203 or junior standing. Three credits.

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. Prerequisite: HST 204 or junior standing. Three credits.

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. Three credits.

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. Three credits.

HST 364 Renaissance and Reformation Europe. Survey of European history from 1350 to 1560. Topics include political, social, cultural, intellectual, and religious history, with emphasis on major changes in these areas in Renaissance Italy and Reformation Germany, and on the connections between these changes. Part of Changing Ideas; Changing Worlds theme. Offered fall semester. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits.

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. Prerequisite: HST 204 or junior standing. Three credits.

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

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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. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits.

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. Prerequisite: HST 204 or junior standing. Three credits.

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. Prerequisite: HST 210, LAS 210 or junior standing. Three credits.

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 Revolution and Evolution in the Americans theme. Offered winter semester. Prerequisite: HST 210, LAS 210 or junior standing. Three credits.

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 Perspectives from the Outside theme. Offered fall and winter semesters. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits.

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 Making War and Peace theme. Offered fall and winter semesters. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits.

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. Prerequisite: Junior standing. One to four credits.

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. Prerequisite: HST 204 or junior standing. Three credits.

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. Prerequisite: HST 204 or junior standing. Three credits.

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; decolo-

nization; 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. Prerequisite: Historical Perspectives Foundation or junior standing. Three credits.

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. Prerequisite: Historical Perspectives Foundation or junior standing. Three credits.

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. Prerequisite: HST 203 and HST 204 or junior standing. Three credits.

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. Prerequisite: HST 204 or junior standing. Three credits.

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. Three credits.

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. One to three credits.

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. Prerequisite: 15 hours of coursework in history and permission of the department chair. One to three credits.

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. Prerequisite: HST 300 and senior standing. For history majors only except by permission of the chair. Required for majors. Three credits.

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. Senior standing. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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

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requires no prior knowledge of the history of Brazil. Offered every other year. Prerequisites: prior approval or graduate standing. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

HST 680 Selected 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. Prerequisites: prior approval. One to three credits.

History of Science Minor (HSC)

Faculty: Castelão-Lawless, Kopperl.

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."

Courses of Instruction

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. Three credits.

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. Three credits.

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. One to three credits.

University Honors College (HNR)

Director: J. Chamberlain. Faculty: D. McGee, S. Swartzlander, J. Toot. Faculty Fellows: M. Al-Mallah, D. Alvarez, B. Ambrose, P. Anderson, D. Balfour, E. Baum, C. Benjamin, D. Bernstein, S. Buckridge, D. Burg, E. Cole, G. Coolidge, J. Crouthamel, K. DenDulk, D. Devlin, M. deYoung, L. Feurzeig, C. Fitzpatrick, B. Flaschenriem, R. Franciosi, K. Gadhoun, J. Gross, A. Hewitt.

Joint Appointments: P. Anderson, B. Flaschenriem, W. Levitan, M. Morison, C. Pazdernik, D. Raynor.

Web site: www.gvsu.edu/honors

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

University Honors College course offerings are designed to enhance and integrate the intellectual curiosity of students and to enlarge their world-view and personal development. The designation “University Honors College Graduate” on a Grand Valley State University diploma and transcript is intended to recognize the distinctive work of Honors students.

Honors courses are taught by uniquely qualified and carefully selected faculty drawn from all disciplines. Each Honors student must design and complete a directed, independent project in their senior year. This is an opportunity to explore a topic of interest within or outside of their major. This requirement of the Honors College must be approved by the Honors College director. The objective of University Honors College courses is to provide a qualitative rich learning experience.

Students benefit from participation in the University Honors College in a number of ways. They are presented with intellectual and academic challenges through sharing specially designed classes with other students of outstanding potential. These small classes are comprised of highly motivated learners and provide a special atmosphere in which important questions and student ideas are examined. By participating with other students in small classes and by living with these students in Glenn A. Niemeyer Living Center (optional), students in the college form a community of scholars.

Advantages

There are several advantages to an Honors education — some practical and some more philosophical in nature. The practical advantages are:

University Honors College

1. Honors classes are normally no larger than 25 students per section;
2. Students use the Honors Arts and Humanities course sequences to satisfy their writing requirements;
3. Completion of the program core satisfies the requirement for a general education theme;
4. Participation in Honors provides students the opportunity to live in Glenn A. Niemeyer Living Center, a combined residential and instructional building;
5. Students in Honors form a close association with similar students and have the opportunity to form close intellectual relationships with faculty members;
6. Honors students have unique travel opportunities such as trips to Chicago, to the Holocaust Museum and Supreme Court in Washington, D.C., Paris, Beijing, and Rome. Students are also encouraged to take advantage of the University's study abroad opportunities;
7. Honors students have increased opportunities to participate in and present research as undergraduates at the Grand Valley State University Student Scholarship Day, the National Collegiate Honors Council annual meeting, and other professional meetings;
8. Honors graduates receive an Honors diploma upon graduation.

Perhaps the most significant advantages of an Honors education are less obvious:

9. Honors education is qualitatively different from regular general education because it is an integrated package with classes that are specially designed to foster advanced writing and speaking skills; critical thinking and analysis; and increased opportunities for student-faculty interaction. Smaller class sizes facilitate student-faculty interaction. In addition to greater classroom interaction with students, most faculty are also involved in activities in the residential setting.
10. The Honors College prepares 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 analytical skills to primary sources.
11. Honors students are frequently selected for unique service and volunteer projects at the university. Volunteerism, service, and leadership opportunities allow students to grow and participate in challenging activities. This is viewed favorably by selection committees and future employers.
12. Honors students study, live, and interact with other serious student scholars. Close friendships form between students in classes and in the residence hall. Glenn A. Niemeyer Living Center is alcohol free. Like all Grand Valley buildings, the center is smoke free.
13. The faculty and older students in the University Honors College strive to instill a love of learning and pride in accomplishment in new students so that they can grow academically and personally while enjoying the baccalaureate experience. The ultimate goal is to help students become productive, intelligent, and competent citizens who know how to meet challenges.

Completion of the University Honors College should not be confused with "Graduation with Honors," which is determined strictly by final grade point average. The University Honors College requires not only a high grade point average but also successful completion of a special series of challenging courses. Completion of all University Honors College requirements results in the "University Honors College Graduate" designation on both the baccalaureate diploma and the college transcript. Graduates wear a special stole at Commencement.

There are special University Honors College tracks for most students in preprofessional areas, including business, engineering, and pre-health (nursing, physicians assistant studies, physical therapy, premed, etc.). Students in such major areas have a preplanned course

program that includes not only their University Honors College requirements but also their basic major requirements as well.

The University Honors College is administered by the Interim Director. The Honors Faculty Fellows, the Honors Faculty Council and student representatives advise and aid in setting the direction.

Admission

Qualified students will be invited to participate in the University Honors College if they have a 3.5 or higher high school grade point average and an ACT score of 28 or higher.

Transfer students and those already enrolled at Grand Valley State University who wish to enter the University 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 at 181 Niemeyer Living Center or from the Web site (www.gvsu.edu/honors).

Transfer students and students already enrolled at Grand Valley may request substitutions for Honors College requirements. Admission criteria are not waived. Transfer and current students who meet the admissions requirements or who have been enrolled in an Honors College at other universities are encouraged to apply by contacting the University Honors College Director.

Students may withdraw from the University Honors College on their own initiative by notifying the director of their intent to do so. Students who do not maintain a 3.2 grade point average are not considered to be active members of the college but may petition to continue to take University Honors College courses. Honors courses may be repeated only with the consent of both the director and the faculty member involved.

It is assumed that all University Honors College courses require two hours per week of work for each hour of registered credit. Thus, University Honors College students should expect six hours of homework a week in a three-credit course.

Glenn A. Niemeyer Living Center

The Glenn A. Niemeyer Living Center has been designated as the University Honors College Living Center. Students who have been admitted to the University Honors College may apply to live in this center. 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 University Honors College Director. Students living in Niemeyer are involved in governance, social activities, and in program planning. Residents are often called upon by various university staff and administrators for suggestions, ideas, and reactions.

Space in Niemeyer is limited. Returning Honors students are encouraged to submit their housing applications, which can be picked up at the Honors office at 181 Niemeyer, as soon as possible. Incoming freshmen interested in living in Niemeyer must submit (1) their University 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.

Honors Society

Students share in the governance of the living center. The Honors Society is the student group responsible for University Honors College governance and provides all Honors students, not just those living in the living center, opportunities to be heard. Through the Honors Society, representatives attend faculty meetings, make recommendations to the director, and assume responsibility for the Honors Code.

Co-Curricular

Program Students are encouraged to engage in extra-curricular activities. These develop leadership skills and appreciation of the richness and diversity of university life.

University Honors College Freshman Orientation/Registration

Parents and incoming Honors students are invited to participate in an overnight program at the Niemeyer Living Center, which is an addition to the regular Freshman Orientation/Registration Program. Students receive additional help in selecting courses, learning the Honors requirements, and meeting the Honors faculty and staff.

Program Requirements and Courses

To complete the University Honors College a student must satisfy the following course requirements, which also fulfill the general education and writing skills requirements of the University, including 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

2. Writing

Many Honors students satisfy this requirement by taking AP English in high school and scoring 4 or 5 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

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, reaching junior standing, and completing any Arts and Humanities sequence with a B or better grade average.
- Or passing a junior level writing proficiency test administered through the Advising Resource 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:

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

5. General Education Theme

Honors students satisfy this requirement by completing the Honors curricular requirements.

Honors College Requirements

1. Integrated Arts and Humanities

All Honors students must complete one of the four following integrated Honors Arts and Humanities sequences:

American Civilization, Classical World, Islamic Middle East, and European Civilization are offered two courses per semester for two successive semesters. The Making of Europe is offered one course per semester for four successive semesters.

American Civilization

HNR 213 American Civilization I
 HNR 214 American Civilization I
 HNR 223 American Civilization II
 HNR 224 American Civilization II

Classical World

HNR 211 Classical World I
 HNR 212 Classical World I
 HNR 221 Classical World II
 HNR 222 Classical World II

European Civilization

HNR 215 European Civilization I
 HNR 216 European Civilization I
 HNR 225 European Civilization II
 HNR 226 European Civilization II

Islamic Middle East

HNR 209 Islamic Middle East I
 HNR 210 Islamic Middle East I
 HNR 219 Islamic Middle East II
 HNR 220 Islamic Middle East II

The Making of Europe

HNR 217 The Making of Europe I
 HNR 218 The Making of Europe II: The High Middle Ages
 HNR 227 The Making of Europe III: Early Renaissance
 HNR 228 The Making of Europe IV: Late Renaissance

2. World Perspectives

Students taking American Civilization will need a World Perspectives course. Students taking Classical World, European Civilization, Islamic Middle East, and the Making of Europe will need a U.S. Diversity course.

3. Honors Social Sciences

A student may select the integrated sequence, Society and Self

HNR 233 Society and Self: Sociological Perspective
 HNR 234 Society and Self: Psychological Perspective

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Or two courses from The Holocaust

HNR 231 The Holocaust

HNR 232 Trauma, Culture, Memory

Or Democracy and Political Thinking

HNR 235 Democracy and Political Thinking

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. Honors Sciences are as follows:

Physical Sciences: (choose one)

HNR 241 The Earth, A Global View

HNR 246 Chemistry in Perspective

Life Sciences: (choose one)

HNR 242 Plants and People

HNR 245 Microbes and Society

HNR 247 Molecules of Life in Perspective

Or

HNR 243 The Human Body in Motion I

and HNR 244 The Human Body in Motion II

Engineering, Pre-Health or the Sciences

Honors students majoring in engineering, pre-health curricula, or the sciences may use science courses required in their majors.

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

HNR 311 Honors Junior Seminar

HNR 312 Honors Junior Seminar

HNR 313 Honors Junior Seminar

HNR 331 Culture and the Holocaust

6. Honors Senior Project

See course description under course offerings.

HNR 499 Honors Senior Project

General Education Requirements Information

Satisfaction of the Grand Valley general education requirements through completion of the University Honors College 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 University Honors College advisor to prepare a course of study, which satisfies University requirements and Honors College requirements. There is flexibility in University Honors College planning to meet the needs of various majors. Engineering majors must meet with the Director of Engineering as well as a University Honors College advisor for program planning.

Students in the pre-health curricula need to meet with the pre-health advisor as well as with a University Honors College advisor.

Students selecting the University Honors College general education alternative satisfy either the U.S. Diversity or World Perspectives University requirements with the Arts and Humanities sequences. The University Honors College, like Grand Valley, is committed to appreciation of multicultural richness. The other diversity requirement can be met with specific junior seminar courses, or a general education course with the World Perspectives (WP) designation or the United States Diversity (USD) designation.

The information given in Course Offerings (below) helps the student and her/his advisor determine which requirements in General Education have been satisfied.

Courses of Instruction

HNR 209 Islamic Middle East I. 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. HNR 209 and HNR 210 must be taken concurrently. Three credits.

HNR 210 Islamic Middle East I. 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. HNR 209 and HNR 210 must be taken concurrently. Three credits.

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. HNR 211 and HNR 212 must be taken concurrently. Three credits.

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. HNR 211 and HNR 212 must be taken concurrently. Three credits.

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. HNR 213 and HNR 214 must be taken concurrently. Three credits.

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. HNR 213 and HNR 214 must be taken concurrently. Three credits.

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. HNR 215 and HNR 216 must be taken concurrently. Three credits.

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. HNR 215 and HNR 216 must be taken concurrently. Three credits.

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. Three credits.

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. Prerequisite: HNR 217. Three credits.

HNR 219 Islamic Middle East II. 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. HNR 209 and HNR 210. Must be taken concurrently with HNR 220. Three credits.

HNR 220 Islamic Middle East II. 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. HNR 209 and HNR 210. Must be taken concurrently with HNR 219. Three credits.

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. Prerequisite: HNR 211. Concurrent Enrollment: HNR 222. Three credits.

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. Prerequisite: HNR 212. Concurrent enrollment: HNR 221. Three credits.

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. Prerequisite: HNR 213. Three credits.

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. Prerequisite: HNR 214. Three credits.

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. Prerequisite: HNR 215. Three credits.

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. Prerequisite: HNR 216. Three credits.

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. HNR 217 and HNR 218. Three credits.

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. HNR 217, HNR 218 and HNR 227. Three credits.

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. Three credits.

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. Prerequisite: HNR 231 or permission of instructor. Three credits.

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. Corequisite: HNR 234. Three credits.

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. Corequisite: HNR 233. Three credits.

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. Three credits.

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 semester. Four credits.

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. Three credits.

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. Four credits.

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. Prerequisite: HNR 243. Three credits.

HNR 245 Microbes and Society. This course addresses the fundamental nature of microorganisms, microbial diversity, microorganisms as agents of disease, the role of microorganisms

University Honors College

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. Three credits.

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. Four credits.

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 fall semester. Three credits.

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. One to three credits.

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 winter semester. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: Junior standing. Three credits.

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 fall semester. Three credits.

HNR 340 Fuel Cell Science and Technology. Fuel cells are at the heart of the rapidly emerging alternative and renewable energy economy. This course is an integrated approach among the scientific concepts, technologies, and commercial applications of different types of fuel cells. CHM 115 or PHY 230, and MTH 201; admitted to the Honors College or permit. Three credits.

HNR 380 Honors Advanced Special Topics. Advanced study of special topics, areas, or experiences not covered in the curriculum. The selected focus will be described in the class schedule. Offered on demand. Prerequisites: junior standing or 12 previous credits in HNR courses. One to four credits.

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. One to four credits.

Hospitality and Tourism Management (HTM)

Chair: Stansbie; Associate Professor: Baker-Clark; Assistant Professors: Adams, Jack, Longstreet, Stansbie; Visiting Instructors: Morey, Rood, Roy, Sisson.

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.

The Hospitality and Tourism Management program prepares students for management positions and leadership roles in the fields of hospitality management and meeting and convention management. The program was established in 1977 in response to a regional need for educational support to prepare qualified managers for the profession. The integrative nature of hospitality and tourism education fits Grand Valley's goal of providing a curriculum that integrates liberal arts with professional courses that stress practical application. The industry's diversity and rapid expansion provide excellent career opportunities for Grand Valley graduates. Job placement rates for graduates from the Hospitality and Tourism Management program have consistently been among the highest at Grand Valley.

Career Opportunities

Hotel and Resort Management
Convention Sales and Service Management
Convention and Visitors Bureau Management
Conference/Meeting Planning
Food and Beverage Service Management
Banquet and Catering Management
Restaurant Management
Club Management
Recreation and Theme Park Management
Special Events Coordination

Mission

The mission of the Hospitality and Tourism Management department is to prepare professionals in the global industry of hospitality and tourism. The department's goal is to develop skilled graduates who are professional in demeanor and are respected for their integrity and humanity. This goal will be accomplished through a commitment to student learning and development marked by

- High expectations and standards of conduct and performance.
- Excellence in scholarship and instruction.
- Appropriate exposure to the industry and successful industry professionals.
- Sequential training and experience in the student's chosen area of the industry.
- Opportunities for community service.

Major Requirements

Students interested in majoring in hospitality and tourism management should discuss their career plans with a faculty member of the department and secure an advisor as soon as possible.

Hospitality and Tourism Management

Majors must complete the following:

1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. Hospitality and Tourism Management Courses

(minimum of 28 credits):

a. Core courses:

- HTM 101 Fundamentals
- HTM 343 Human Resource Management
- HTM 361 Hospitality Law and Legislation
- HTM 373 Hospitality Information Analysis*
- HTM 452 Hospitality Marketing
- HTM 495 Hospitality Management (capstone)

b. Systems Courses

(two of the following, with advisor approval):

- HTM 202 International Tourism
- HTM 213 Food Service Systems
- HTM 222 Lodging Systems
- HTM 235 Tourism & Commercial Recreation Systems

3. Hospitality and Tourism Management Field Requirement Credits: 7

- HTM 190 Field Preparation
- HTM 290 Field Experience I
- HTM 390 Field Experience II
- HTM 490 Senior Internship

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.

*Successful completion of CS 150, STA 215, and HTM 373 satisfies the B.S. degree cognate for all HTM majors.

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

CS 150 Introduction to Computing*
MTH 110 Algebra
STA 215 Introductory Applied Statistics*

6. Business Cognate

ACC 212 Principles of Financial Accounting
ACC 213 Principles of Managerial Accounting
BUS 201 Legal Environment for Business
MKT 350 Marketing Management

Transfer Students

The hospitality and tourism management program maintains articulation agreements or has established transfer equivalencies with many Michigan community colleges. These options facilitate the transfer of credits for work completed toward an associate degree. Transfer students interested in a major or minor in hospitality and tourism management should contact the department to review their options and develop a plan of study with an advisor. Transfer students do not need to have studied hospitality or tourism in their two-year program to be eligible for a hospitality and tourism management major or minor. Transfer students should contact the department prior to enrolling in any hospitality and tourism management courses. An advisor will assist with scheduling and ensure that the courses selected are appropriate for the student and meet the program requirements.

Minor Requirements

Students in other majors may minor in hospitality and tourism management by completing a minimum of six HTM courses, including HTM 101 totaling a minimum of 21 credits, **with advisor approval**. Interested students must meet with a hospitality and tourism management faculty advisor to establish a specific plan.

Courses of Instruction

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 socio-economic and political force. Offered fall and winter semesters. Four credits.

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. Prerequisite: CHM 102 or permission. Four credits.

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. Three credits.

*Successful completion of CS 150, STA 215, and HTM 373 satisfies the B.S. degree cognate for all HTM majors.

Hospitality and Tourism Management

HTM 180 Special Topics. 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. One to four credits.

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. One credit.

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. Three credits.

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, HTM 101, HTM 112 (or concurrence), or permission; CS 150 recommended. Four credits.

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: ACC 212, HTM 101, or permission; CS 150 recommended. Four credits.

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. Prerequisite: HTM 101 or permission. Three credits.

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. Prerequisite: HTM 101. Three credits.

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. Three credits.

HTM 280 Special Topics. 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. One to four credits.

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. Prerequisite: HTM 190 and permission. Two credits.

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 or concurrency, with permission. Three credits.

HTM 333 Property Management. The care of the hospitality facility with emphasis on preventive maintenance, energy, management systems, security, and sanitation. Offered fall semester. Prerequisite: HTM 101 or permission. Three credits.

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. Four credits.

HTM 353 Meeting Planning. A study of the planning, marketing, execution, and follow-up of meetings, conferences, conventions, and package promotions. Offered fall semester. Prerequisites: MKT 350, HTM 222, or permission. Three credits.

HTM 361 Hospitality Law and Legislation. A study of hospitality and travel law with emphasis on current legislative and lobbying activities. Consideration given to societal leverage in influencing and initiating legal and political activity and policy. Offered fall and winter semesters. Prerequisite: BUS 201 or permission; junior standing. Three credits.

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: CS 150, ACC 213, and STA 215; junior standing. Four credits.

HTM 380 Special Topics. 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. Prerequisites: Junior standing; permission. One to four credits.

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. Prerequisite: HTM 290 and permission. Two credits.

HTM 399 Independent Study. Study of an advanced topic of interest in hospitality and tourism management. Offered every semester. Prerequisite: Permission. One to four credits.

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: HTM 222 or HTM 213 or department permission; STA 215; and MKT 350. Three credits.

HTM 480 Critical Issues in HTM. 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. Three credits.

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. Two credits.

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 through the 300 level; senior standing. Three credits.

International Relations

HTM 499 Independent Research. Supervised research in hospitality and tourism management for junior and senior majors. Offered every semester. Prerequisite: permission. One to four credits.

International Relations Program (IR)

Coordinator: Diven. Committee: Diven, Goode, Namaste, Simons, Steward-Ingersoll.

Worldwide mass communications, technological advances, and burgeoning international trade have increased the frequency and complexity of international relations. As the interaction among nations 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 nation-states. Students in the international relations program examine the sources of tension that create conflict among nations, study 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 journalism, teaching, information technology, and research.

Study Abroad and Area Studies

Students in the international relations program are strongly encouraged to take advantage of opportunities to study abroad. Grand Valley has institutional agreements with universities in China, England, France, Ghana, Hungary, Italy, Japan, Mexico, the Netherlands, Poland, Turkey, and Tobago. 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 Barbara H. Padnos International Center and the international relations program coordinator before enrolling in study abroad programs.

Requirements for Major and Minor Programs

Major Program. 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, and possibly a minor in a modern language.

Students majoring in international relations are required to complete at least 36 credit hours, including Economics 210 and 211, Geography 235, History 317, and Political Science 211 and 312. Majors are also required to complete the capstone course in international relations (IR 495). The remaining 15 hours should be selected from the list of international relations course electives below and must include a minimum of nine hours at the 300 level or above. However, students should not regard this list as definitive. With the permission of the program coordinator, courses not included in this list can be used as electives for the international relations major. In selecting international relations electives, students must choose at least one course each from business and economics, geography and history, and political science. These choices should be made in consultation with an advisor.

Minor Program. 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. We recommend that nine elective credits be taken at the 300-level.

International Relations Major Requirements

ECO 210 Introductory Macroeconomics
ECO 211 Introductory Microeconomics
GPY 235 World Regional Geography
PLS 211 International Relations
PLS 312 U.S. Foreign Policy
HST 317 History of American Foreign Relations
IR 495 Seminar in International Relations (capstone)

International Relations Course Electives

Business and Economics Courses

ECO 349 Emerging Markets Issues
ECO 365 Comparative Economic Systems
ECO 369 International Economic Issues
FIN 429 International Financial Management
HST 211 History of Islamic Civilization
HTM 202 International Tourism
MGT 466 International Management and Multinational Corporations
MKT 359 Multinational Marketing

Geography and History Courses

GPY 350 Geography of Russia and Its Neighbors
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
HST 210 Empire, Culture, and Conflict
HST 331 Modern Latin America
HST 333 Survey of Modern Chinese History
HST 336 Africa after 1870
HST 337 The Age of Islamic Empire
HST 338 Modern Middle East
HST 341 A History of East Asia since 1800
HST 385 Europe 1900–1945

Latin American Studies

HST 386 Europe since World War II

HST 390 Soviet History

LAS 374 Revolution in the Americas

Political Science Courses

PLS 212 Great Decisions

PLS 221 Government and Politics of Western Europe

PLS 282 Government and Politics of Russia and Eastern Europe

PLS 283 Chinese Politics and US-China Relations

PLS 284 Latin American Politics

PLS 311 International Conflict and Conflict Resolution

PLS 313 International Organization

PLS 314 International Law

PLS 315 International Political Economy

PLS 316 Human Rights in International Politics

PLS 319 African Politics

PLS 321 The European Union

PLS 327 Politics of Developing Countries

PLS 339 Comparative Democratization

PLS 382 Politics of Post-Communist Europe

PLS 385 Russian and Post-Soviet Politics

Special Topics and Independent Study

IR 380 Special Topics

IR 399 Independent Readings

IR 499 Independent Research

Courses of Instruction

IR 380 Special Topics. 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. Variable credit. Offered on sufficient demand.

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. Prerequisite: Approval of instructor before registration. One to three credits. Offered fall and winter semesters.

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. Prerequisites: Senior standing with a major in international relations or consent of the instructor. Three credits. Offered winter semester.

IR 499 Independent Research. Independent study and research into an area of mutual interest to the student and faculty member. IR 499 culminates in a research paper on the approved topic. Prerequisite: Approval of instructor before registration. One to three credits. Offered fall and winter semesters.

Latin American Studies Minor (LAS)

Coordinator: Rhoads.

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 Michi-

gan 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. 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 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.

The Latin American Studies program encourages student participation with Latin American and international student organizations on campus, the West Michigan Latino community and its institutions, and 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.

A sister university agreement with the Universidad de las Americas in Puebla, Mexico, provides Grand Valley students and faculty with opportunities for prolonged study abroad and opens the door to an exchange with Mexican students and faculty. New agreements with institutions in the Caribbean, Central, and South America are constantly being pursued. Consult the Padnos International Center or the LAS coordinator for information on international internships and other study abroad opportunities in Latin America.

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. (Students majoring in Spanish should check with their major advisor and with the coordinator of LAS before attempting to double-count courses for the major and minor.)

All minors will be required to complete three core courses

LAS 210 Exploring Latin America
 LAS 374 Revolution in the Americas
 SPA 202 Intermediate Spanish II
 (or higher)

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
 ANT 355 Migration in Americas
 ANT 360 Ethnology of Mesoamerica
 BIO 310 Biological Diversity of the Americas
 ENG 378 Contemporary Latin American Literature

Latin American Studies

ENG 385 Writing and Revolution in the Americas
GEO 350 Geology's Great Debate in the New World
GPY 352 Geography of Latin America
HST 315 Latinos: The Forging of Ethnic Identities
HST 330 Early Latin America
HST 331 Modern Latin America
HST 334 The Making of the Caribbean
HST 372 From Slavery to Freedom
HST 632 A History of Brazil
LAS 378 Contemporary Latin American Literature
LAS 380 Special Topics in Latin American Studies
LAS 399 Independent Studies
LAS 475 Latinos in West Michigan
LAS 490 Latin American Studies Internship
PLS 284 Latin American Politics
SPA 311 Latin American Civilization and Culture I
SPA 312 Latin American Civilization and Culture II
SPA 313 U.S. Latino/a Civilization and Culture
SPA 324 Spanish-American Novel in Translation
SPA 329 Sociolinguistics of Spanish
SPA 410 Spanish American Narrative
SPA 430 U.S. Latino/a Literature
SPA 460 Women Authors

Comparative Courses

One course (excluding Spanish below 202) from the Grand Valley Study Abroad programs in Guadalajara and in Puebla, Mexico or from another study abroad program in Latin America can be applied to the minor with approval from the coordinator of the Latin American Studies program.

Students may choose to take only three courses from the above list and to take a fourth course from a list of comparative courses approved by the LAS program. To be approved, such comparative courses must have a minimum of 25 percent of their content devoted to Latin America. A list of approved courses is available each semester from the coordinator of Latin American Studies and from other Latin American Studies faculty. Below are some examples of comparative courses that often include adequate Latin American content. However, as the following courses may not always deal with Latin America, consult the instructor or the coordinator of LAS before registering for Latin American Studies minor credit.

For more information, check our Web page at www4.gvsu.edu/las

ANT 330 Ethnology of Selected World Areas
BIO 417 International Field Biology
ENG 203 World Literature
ENG 616 World Literature in English
GPY 235 World Regional Geography
HST 210 Empire, Culture, and Conflict
HST 633 Issues in Third World History
SS 351 Family & Gender in the Developing World

Courses of Instruction

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 Revolution and Evolution in the Americas theme. Offered fall semester. Three credits.

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 Revolution and Evolution in the Americas theme. Offered winter semester. Prerequisite: LAS 210 or junior standing. Three credits.

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 or junior standing. Three credits.

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. One to three credits.

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. One to three credits.

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. Prerequisite: LAS 210 or junior standing. Three credits.

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. One to three credits.

Law

Dual Degree Programs

The Seidman College of Business and Michigan State University College of Law have partnered to offer the dual M.B.A./J.D. and the dual M.S.T./J.D. For more information refer to the Business section of this catalog.

The Grand Valley School of Criminal Justice and the Michigan State University—College of Law have partnered to offer a 3 + 3 program 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.

LEAP (3+3)

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 and a Juris Doctor from Michigan State 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.

Legal Institute of West Michigan

The Business and Tax Law Center is a subunit of the Legal Institute of West Michigan, a collaboration of Michigan State University College of Law (MSU Law), Grand Valley State University (GVSU), Michigan State University (MSU), and the Grand Rapids Bar Association (GRBA). Created in December 2002, the Institute was formed to offer law-related courses for the benefit of the West Michigan public and Bar.

The center provides a rigorous academic program for business and law professionals who desire to advance their organizations and their careers. Course enrollment at the Business and Tax Law Center is open to law students; graduate students; members of the practicing bar; and graduates who hold a Bachelor of Arts or Bachelor of Science degree from an accredited college or university. The certificate is composed of 14 credits from numerous course offerings and can be completed at Grand Valley's Pew Campus or at MSU Law in East Lansing. Courses may also be pursued on an individual basis.

Courses in the center will be taught by members of the MSU Law faculty as well as faculty of the Grand Valley Seidman College of Business. The orientation will be practical, designed to give you the power you need to negotiate successful business transactions, and move strategically into the future.

A sampling of courses available for the Business and Tax Law Certificates is listed below. For additional course offerings, term specific course offerings, and an application, visit the Web site at <http://lawcenters.law.msu.edu>. Inquiries may be directed to Tami Passeno at passenot@gvsu.edu or by phone at (616) 331-6827. To reach MSU Law in East Lansing contact admiss@law.msu.edu or phone (800) 844-9352.

Business Law Certificate

Accounting for Lawyers
Bankruptcy Reorganization of Business
Business Enterprises
Business, Securities and Tax Planning
Corporate Counsel Seminar
Corporate Finance
European Business Law
Franchise Law
International Sale of Goods
Law of Financial Institutions
Legal Environment of Business
Mergers & Acquisitions
Mortgage Banking Law
Negotiation & Drafting for the
Close Corporation
Problem-solving Approaches to
Conflict Resolution
Securities Regulation I

Tax Law Certificate

Basic Income Taxation
Corporate Tax I
Employee Benefit Plans and
Deferred Compensation
Estate, Gift and Trust I
International Tax Practice
Multistate Taxation
Partnership Taxation
Sales, Exchanges, and Other
Property Transactions
Tax Accounting
Tax Fraud
Tax Policy Seminar
Tax Research and Writing
Taxation Problems, Planning,
and Current Issues

Legal Education Admissions Program (LEAP)

B.B.A./J.D.

The Seidman College of Business and Michigan State University College of 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 specified 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.

B.A./J.D.

The Political Science Department and Michigan State University College of Law have partnered to offer a “3+3” program that gives Grand Valley political science students the opportunity to earn a B.A. or a B.S. and a Juris Doctor (J.D.) in approximately six years. For more information refer to the Political Science section of this catalog.

B.S./J.D.

The Political Science Department and Michigan State University College of Law have partnered to offer a “3+3” program that gives Grand Valley political science students the opportunity to earn a B.A. or a B.S. and a Juris Doctor (J.D.) in approximately six years. For more information refer to the Political Science section of this catalog.

Legal Studies (LS)

Director: Crawley. Associate Professors: Mullendore; Assistant Professor: Yalda.

The School of Criminal Justice administers the major in legal studies. The legal studies major is designed to prepare students by providing a liberal arts education for careers as legal assistants. A legal assistant, also known as a paralegal, performs substantive legal work under the supervision of a licensed attorney. Legal assistants may not provide legal service directly to the public, except as permitted by law. In addition to preparing its graduates to work as legal assistants, the Legal Studies program provides its graduates with skill and knowledge necessary for post graduate study at Law schools and graduate study programs including criminal justice, social justice, and other related programs.

Degree Requirements

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 should take at least two-thirds of the credits constituting their major at Grand Valley State University.

Interested students 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

Legal Studies

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 MSU-CL 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.

The Legal Education Admission 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 MSU-CL, 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 MSU-CL admission requirements.

Major Program Requirements

A minimum of 36 credit hours is required. All majors must take the following core courses:

LS 301 Introduction to Law
LS 420 Property and Probate Law
LS 422 Commercial Law
LS 424 Legal Research and Writing
LS 426 Civil Litigation
LS 428 Factual Investigation
LS 490 Legal Studies Internship
LS 495 Legal Thought (capstone)

In addition, all majors must take:

ACC 212 Principles of Financial Accounting

and three of the following courses:

CJ 302 Criminal Law
CJ 305 Constitutional Rights and Civil Liberties
CJ 408 White-Collar and Corporate Crime
CJ 444 Forensic Behavior and Law
CS 150 Introduction to Computing
LS 370 Women and the Law
LS 380 Special Topics in Legal Studies
LS 399 Independent Reading in Legal Studies
LS 499 Independent Study and Research
WRT 350 Business Communication

Minor Program Requirements

Minors must complete 21 credit hours, including:

LS 301 Introduction to Law
LS 420 Property and Probate Law
LS 422 Commercial Law
LS 424 Legal Research and Writing
LS 426 Civil Litigation
LS 428 Factual Investigation
and LS 490 Legal Studies Internship
or LS 495 Legal Thought (capstone)

Sample Curriculum

Note: Students may with advisor approval substitute one or two first year law school classes to satisfy six credits of courses with a Legal Studies (LS) prefix.

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

LS 301 Introduction to Law

LS 426 Civil Litigation

Second Year

- Three or four Legal Studies courses at 400-level (such as LS 424, LS 428 and LS 420)
- CJ 300 and STA 215 (B.S. degree)
- One or two general education courses
- Electives or foreign language
- Additional writing skills if needed

Third year

- Two or three Legal Studies courses at 400-level (such as LS 420 and LS 422)
- Completion of general education courses

LS 490 Legal Studies Internship

LS 495 Legal Thought (capstone)

Courses of Instruction

LS 301 Introduction to Law. Introduction to the major substantive areas of American law, including agency, business organizations, contracts, real and personal property, torts, wills, and estate administration. Offered fall and winter semesters. Three credits.

LS 370 Women and the Law. An overview of the U.S. law's treatment of constitutional limitations on sex discrimination in law 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. Three credits.

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. One to four credits.

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. One to three credits.

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. Prerequisite: CJ 101. Three credits.

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

Liberal Studies

and drafting considerations will be highlighted. Topics include real estate, personal property, environmental law, wills, and probate. Offered fall semester. Prerequisites: LS 301 (may be taken concurrently) or permission of instructor. Three credits.

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 301 (may be taken concurrently) or permission of instructor. Three credits.

LS 424 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 the writing of case briefs and memoranda. Offered fall and winter semesters. Prerequisites: LS 301 (may be taken concurrently) or permission of instructor. Three credits.

LS 426 Civil Litigation. Introduction to civil litigation. Particular attention paid to jurisdiction, venue, service of process, pleading, motions, and the discovery process. Offered fall semester. Prerequisites: LS 301 (may be taken concurrently) or permission of instructor. Three credits.

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 301 (may be taken concurrently) or permission of instructor. Three credits.

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 301, senior status, permission of instructor attained through completion of an application form submitted during the semester before the internship, and LS 424 and LS 426 (taken before or concurrently with LS 490). Requires 200 hours. Three credits.

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 American jurisprudence 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 301, senior standing, and LS 424 (may be taken concurrently). Three credits.

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. Senior standing and permission of instructor. One to three credits.

Liberal Studies (LIB)

Chair: Whippis; Professors: Ford; Assistant Professors: Mahoney, McClure; Affiliate Professors: Drewel, Krohmer, Maodush-Pitzer, Marshall, Povolo, Wolverton.

Liberal Studies provides an individualized major, allowing students to design a significant portion of their degree around a topic or theme, 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 goals. This provides a context in which the individual educational needs of each student can be addressed and a rich intellectual heritage can be engaged, while a variety of interdisciplinary and/or career-relevant specializations are pursued.

Liberal studies emphases 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 program arises from a vigorous dialogue between individual interests and a tradition of inquiry and questioning. This is the conversational relationship out of which creative work occurs. It is from this same relationship that we emerge as alert and effective human beings.

Overview of the Liberal Studies Major

The Liberal Studies major (not including the degrees cognate courses) consists of 44 credits, distributed as follows:

The Core (Credits: 12)

The Emphasis (Credits: 18)

Electives (Credits: 9)

Practicum (Credits: 2 or more)

Senior Seminar (Credits: 3)

The Core

All majors are required to take four core courses that introduce them to the basic principles of liberal arts education: Students 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. PHI 102 is an ethics course which engages questions of value and judgment. For their third core course students take either COM 202 or COM 203 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.

The Emphasis (Credits: 18, at least 15 upper divisional)

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 Environmental Studies, 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.

Liberal Studies Electives

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 electives as a career component to their study plan, including areas such as business, computer science, and international study.

Liberal Studies

Senior Seminar and Practicum

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. 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.

Degree Cognates

Liberal studies majors may earn either a B.A. degree (by demonstrating third semester proficiency in a foreign language) or a B.S. degree (by successfully completing STA 215, SS 300, and PHI 103).

Synoptic Lecture

Each year, the program sponsors a Synoptic lecturer, providing as a model someone who has successfully integrated life and vocation. LIB 480, a one-credit reading course, which may be repeated each year, allows majors to study the ideas of the Synoptic lecturer. Lecturers have included Francis Moore Lappe, John McDermott, Bayard Rustin, Tillie Olson, Michael Harrington, Martin E. Marty, and Elizabeth Kamarck Minnich.

Advising

The chair works with prospective majors to 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.

Admission to the Liberal Studies Major and Submission of the Study Plan

To be admitted to the major, students must, with the advisor, construct, and submit their study plans. These consist of listings of courses selected for emphasis area and electives, and a narrative statement that describes the student's course of study, its coherence, and its significance. 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.

Courses of Instruction

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. Three credits.

LIB 268 Wine: History, Anthropology, Appreciation. Introduces the history and geography of wine-producing regions, the role of wine in Western cultures, cultural factors affecting patterns of wine consumption in Europe and America, some of the technicalities of wine production, and the discipline of wine tasting. Prerequisite: Junior standing or permission of instructor. Three credits.

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. A course in philosophy or anthropology or junior standing or permission of instructor. Three credits.

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. Three credits.

LIB 311 Meaning. Introduction to concepts related to the construction, expression, propagation and understanding of meaning. Emphasis on critical, multidisciplinary perspectives with readings from different fields. Part of perception theme. Offered once a year. Three credits.

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. Prerequisite: WRT 150. Three credits.

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 U.S. Civil Rights Movement theme. Fulfills U.S. Diversity requirement. Offered every other year. Three credits.

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 and Identity theme. Offered once a year. Three credits.

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. Three credits.

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. Three credits.

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. Offered fall semester. Part of Religion theme. Fulfills World Perspectives requirement. Three credits.

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. Three credits.

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 Making War and Peace theme. Offered fall semester. Three credits.

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 Perspectives from the Outside theme. Fulfills U.S. Diversity requirement. Offered fall semester. Three credits.

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

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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. Three credits.

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. Three credits.

LIB 380 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. Three credits.

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. One to six credits.

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. Three credits.

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. Three credits.

LIB 480 Annual Synoptic Lecture Series. Features a person who has done significant work in several areas and whose life and career we can usefully study. Students meet in discussion groups before and after lecturer's visit. May be repeated for credit. Offered winter semester. One credit.

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. Prerequisite: Senior standing and a 3.0 GPA in the major. One to six credits.

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. One to six credits.

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. Three credits.

LIB 499 Independent Research. Independent research and investigation from an interdisciplinary perspective. Offered every semester. One to six credits.

Mathematics (MTH)

Chair: Aboufadel. Professors: Aboufadel, Austin, Arendsen, Beckmann, Fishback, Kind-schi, Mack, Novotny, Schlicker, Sundstrom; Associate Professors: Billings, Boelkins, Coffey, Dickinson, Gardner, Golden, Haidar, Tefera, C. Wells, P. Wells, Wyneken; Assistant Professors: Alayont, Chakrabarti, Dogru, Hodge, Klingler, Smith, Walker, Yu; Instructors:

Alexander, Friar, Mays; Visiting Assistant Professor: Hindeleh, Park, Wilmot; Math Lab Director: Stone.

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.

Requirements for a Major in Mathematics

Students planning a major in mathematics 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. Mathematics Core

All mathematics majors must complete the following courses

MTH 201 Calculus I*

MTH 202 Calculus II*

MTH 210 Communicating in Mathematics

MTH 227 Linear Algebra I

MTH 310 Modern Algebra

MTH 495 The Nature of Modern Mathematics (capstone)**

MTH 496 Senior Thesis (capstone)**

Additional Requirements

All mathematics majors must also complete the requirements listed in (3), (4), or (5) below.

3. In Addition to the Core

Students who are not seeking teacher certification must complete the following requirements:

a. Required mathematics courses:

MTH 203 Calculus III

MTH 408 Advanced Calculus I

*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.

**Satisfies capstone course requirement for a mathematics major.

b. One of the following upper-level two-course sequences:

Modern Algebra

MTH 310 Modern Algebra

and

MTH 410 Modern Algebra II

Advanced Calculus

MTH 408 Advanced Calculus I

and

MTH 409 Advanced Calculus II

Geometry

MTH 341 Euclidean Geometry

and

MTH 431 Non-Euclidean Geometry

Applied Analysis

MTH 300 Applied Analysis I

and

MTH 400 Applied Analysis II

Discrete Mathematics and Applications

MTH 345 Discrete Mathematics

and

MTH 360 Operations Research

c. Additional Course(s)

From the following list for a total of 37 credits in mathematics:

MTH 300 Applied Analysis I

MTH 304 Analysis of Differential Equations

MTH 327 Linear Algebra II

MTH 341 Euclidean Geometry

MTH 345 Discrete Mathematics

MTH 360 Operations Research

MTH 400 Applied Analysis II

MTH 402 Complex Variables

MTH 405 Numerical Analysis

MTH 409 Advanced Calculus II

MTH 410 Modern Algebra II

MTH 431 Non-Euclidean Geometry

MTH 441 Topology

MTH 465 Automata and Theory of Computation

d. Cognate Requirements

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 upperlevel 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.

CS 160 Programming with Visual Basic

or CS 162 Computer Science I

STA 312 Probability and Statistics

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.

And one course from the following:

BIO 355 Human Genetics
 BIO 375 Genetics
 CHM 351 Introduction to Physical Chemistry
 ECO 342 Strategic Games
 ECO 480 Econometrics and Forecasting
 EGR 304 Creativity and Innovation
 GEO 440 Geohydrology
 GEO 470 Geophysics
 HSC 201 The Scientific Revolution
 PHY 230 Principles of Physics I
 PSY 300 Research Methods in Psychology
 SS 300 Research Methods in the Social Sciences
 STA 314 Statistical Quality Methods
 or STA 412 Mathematical Statistics I

4. Elementary Certification Emphasis

A minimum GPA of 2.7 is required in the major for recommendation for teacher certification. In addition to the core, students who are seeking a mathematics degree with elementary certification must complete the following requirements:

a. Required Mathematics Courses

MTH 322 Geometry for Elementary Teachers
 MTH 323 Probability and Statistics for Elementary Teachers
 MTH 324 Algebra for Elementary Teachers
 MTH 341 Euclidean Geometry
 MTH 345 Discrete Mathematics

b. Cognate Requirements

STA 312 Probability and Statistics

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.

And one course from the following:

BIO 355 Human Genetics
 BIO 375 Genetics
 CHM 351 Introduction to Physical Chemistry
 CS 160 Programming with Visual Basic
 CS 162 Computer Science I
 ECO 342 Strategic Games
 ECO 480 Econometrics and Forecasting
 EGR 304 Creativity and Innovation
 GEO 440 Geohydrology
 GEO 470 Geophysics
 HSC 201 The Scientific Revolution
 PHY 220 General Physics I
 PHY 230 Principles of Physics I
 PSY 300 Research Methods in Psychology

Mathematics

SS 300 Research Methods in the Social Sciences
STA 314 Statistical Quality Methods
STA 345 Statistics in Sports
STA 412 Mathematical Statistics I

c. College of Education Requirements

For elementary certification must also be met.

To be approved for student teaching, students must complete at least 24 credit hours in the major, including

MTH 210 Communicating in Mathematics

And at least two of:

MTH 322 Geometry for Elementary Teachers

or

MTH 323 Probability and Statistics for Elementary Teachers

or

MTH 324 Algebra for Elementary Teachers

5. Secondary Certification Emphasis

A minimum GPA of 2.7 is required in the major for recommendation for teacher certification. In addition to the core, students who are seeking a mathematics major with secondary certification must complete the following requirements:

a. Required Mathematics Courses

MTH 203 Calculus III

MTH 229 Mathematical Activities for Secondary Teachers

MTH 329 Teaching Middle Grades Mathematics

MTH 341 Euclidean Geometry

MTH 345 Discrete Mathematics

b. One additional elective course from the Following

(your elective course must be different than your capstone course):

MTH 300 Applied Analysis I

MTH 304 Analysis of Differential Equations

MTH 327 Linear Algebra II

MTH 360 Operations Research

MTH 400 Applied Analysis II

MTH 402 Complex Variables

MTH 405 Numerical Analysis

MTH 408 Advanced Calculus I

MTH 409 Advanced Calculus II

MTH 410 Modern Algebra II

MTH 431 Non-Euclidean Geometry

MTH 441 Topology

MTH 465 Automata and Theory of Computation

MTH 495 The Nature of Modern Mathematics (capstone)

MTH 496 Senior Thesis (capstone)

c. Cognate Requirements

STA 312 Probability and Statistics

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.

And one course from the following:

BIO 355 Human Genetics
 BIO 375 Genetics
 CHM 351 Introduction to Physical Chemistry
 CS 160 Programming with Visual Basic
 CS 162 Computer Science I
 ECO 342 Strategic Games
 ECO 480 Econometrics and Forecasting
 EGR 304 Creativity and Innovation
 GEO 440 Geohydrology
 GEO 470 Geophysics
 HSC 201 The Scientific Revolution
 PHY 230 Principles of Physics I
 PSY 300 Research Methods in Psychology
 SS 300 Research Methods in the Social Sciences
 STA 314 Statistical Quality Methods
 STA 345 Statistics in Sports
 STA 412 Mathematical Statistics I

d. College of Education Requirements

For secondary certification must also be met.

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.

To be approved for student teaching, students must complete at least 24 credit hours in the major, including:

MTH 210 Communicating in Mathematics
 MTH 229 Mathematical Activities for Secondary Teachers
 MTH 341 Euclidean Geometry

Requirements for a Minor in Mathematics

Each of the following minors requires a minimum GPA of 2.0 to be approved. Credit in the following classes may not be applied toward the mathematics minor: MTH 110, 122, 123, 125, 131, 221, 225, 302, 307, 322, 323, 324, and STA 215. There is one exception: 322, 323 and 324 may be included in the mathematics minor for elementary teacher certification.

1. Mathematics (not for teacher certification)

Minors in mathematics must complete at least 21 hours at the 200 level or above, including

MTH 201 Calculus I
 MTH 202 Calculus II
 MTH 203 Calculus III
 or MTH 210 Communicating in Mathematics
 MTH 227 Linear Algebra I
 or MTH 302 Linear Algebra and Differential Equations

Mathematics

Note:

Credit in only one of MTH 302 or MTH 304 may be applied toward this minor.

- At least two additional mathematics or statistics courses at the 300–400 level (other than MTH 302), at least one of which is a mathematics course.

2. Mathematics (for secondary teacher certification)

Minors seeking a mathematics endorsement must complete the following courses (27 credits) with a minimum GPA of 2.7 as required for teacher certification.

MTH 201 Calculus I

MTH 202 Calculus II

MTH 210 Communicating in Mathematics

MTH 227 Linear Algebra I

MTH 310 Modern Algebra

MTH 341 Euclidean Geometry

STA 312 Probability and Statistics

Plus

MTH 229 Mathematical Activities for Secondary Teachers

or

MTH 329 Teaching Middle Grades Mathematics

3. Mathematics for elementary teacher certification

Minors seeking a mathematics endorsement must complete a minimum of 24 hours with a minimum GPA of 2.7 as required for teacher certification. Courses must include:

- One additional approved course

MTH 201 Calculus I

MTH 202 Calculus II

MTH 210 Communicating in Mathematics

MTH 322 Geometry for Elementary Teachers

MTH 323 Probability and Statistics for Elementary Teachers

MTH 324 Algebra for Elementary Teachers

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.

Placement Test

To ensure that students begin their study of mathematics at the appropriate level, all entering students will be advised to enroll in MTH 097 or 110 or to waive MTH 110 based on the individual's ACT math score and high school units of mathematics earned. If this placement is disputed, the student may take the Mathematics Placement Test once.

If the ACT math score or units of high school mathematics earned is not available, the student must complete the Mathematics Placement Test. This test covers prealgebra and algebra. A sample is available in the library or online in any Grand Valley computer lab. Students in this category may take the placement test twice but no more than two times.

Students who waive MTH 110 have satisfied the basic skills requirement for mathematics. Those who expect to take additional mathematics courses should contact the Department

of Mathematics for information about a second placement test to determine whether to enroll in MTH 122, 123, or 201.

Sample Curriculum

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 Major not for Teacher Certification

First Year

- Appropriate courses in general education
- MTH 201 Calculus I
MTH 202 Calculus II
MTH 210 Communicating in Mathematics

Third Year

- Cognate course in the major
 - Appropriate courses in general education
- MTH 408 Advanced Calculus I
MTH 409 Advanced Calculus II
STA 312 Probability and Statistics

Second Year

- Appropriate courses in general education
- CS 162 Computer Science I
MTH 203 Calculus III
MTH 227 Linear Algebra I
MTH 310 Modern Algebra

Fourth Year

- Two electives for the major
- Capstone course
- Appropriate courses for the major

Mathematics Major (Secondary Certification Emphasis)

First Year

- Appropriate courses in general education
- MTH 201 Calculus I
MTH 202 Calculus II
MTH 210 Communicating in Mathematics
PSY 101 Introductory Psychology

Third Year

- Elective in the major
 - Student Assisting
 - Cognate course for major
 - Appropriate courses in general education
- MTH 310 Modern Algebra
MTH 341 Euclidean Geometry
STA 312 Probability and Statistics

Second Year

- Appropriate courses in general education
- MTH 203 Calculus III
MTH 227 Linear Algebra I
MTH 229 Mathematical Activities for
Secondary Teachers
MTH 329 Teaching Middle Grades
Mathematics

Fourth Year

- Capstone course
 - Student Teaching
 - Appropriate courses in general education
- MTH 345 Discrete Mathematics

Mathematics Major (Elementary Certification Emphasis)

First Year

- Appropriate courses in general education
- MTH 201 Calculus I
MTH 202 Calculus II
MTH 210 Communicating in Mathematics
PSY 101 Introductory Psychology

Second Year

- Appropriate courses in general education
- MTH 227 Linear Algebra I
MTH 310 Modern Algebra
MTH 322 Geometry for Elementary Teachers
STA 312 Probability and Statistics

Mathematics

Third Year

- Student Assisting
- Cognate course for major
- Appropriate courses in general education

MTH 323 Probability and Statistics for

Elementary Teachers

MTH 324 Algebra for Elementary Teachers

MTH 341 Euclidean Geometry

Fourth Year

- Capstone course
- Student Teaching
- Appropriate courses in general education

MTH 345 Discrete Mathematics

M.Ed. with a Concentration in Mathematics

A Master of Education degree with a concentration in mathematics along with an emphasis in either middle school and high school education 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 Undergraduate and Graduate 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 Undergraduate and Graduate Catalog.

Upon admission to the degree program, the student and an advisor in the Department of Mathematics 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

MTH 620 Modern Algebra

MTH 641 Modern Geometry

At least one course from

MTH 615 Statistics with Probability

MTH 625 Number Theory

MTH 645 Discrete Mathematics

At most three credits from

MTH 685 Mathematics Workshop for Teachers

MTH 686 High School Mathematics Workshop

Courses of Instruction

To fulfill a prerequisite, a student should obtain a grade of C or higher in the prerequisite course.

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. Prerequisite: Assignment through Grand Valley math placement. Four credits.

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. Prerequisite: MTH 097 or assignment through Grand Valley math placement. Four credits.

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. Prerequisite: MTH 110 or assignment through Grand Valley math placement. Fulfills Mathematical Sciences Foundation. Three credits.

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. Prerequisite: MTH 110; Corequisite: MTH 122 or satisfactory score on the placement test. Three credits.

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. Prerequisite: MTH 110. Three credits.

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. Prerequisite: MTH 110. Three credits.

MTH 180 Special Topics. Readings, lecture, discussions, or lab (or any combination) in specific mathematics topics at an introductory or elementary level. Offered on sufficient demand. Prerequisite: Permission of the instructor. One to three credits.

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. Five credits.

MTH 202 Calculus II. Continuation of MTH 201 using graphical, numerical, and analytic methods to study exponential, logarithmic, hyperbolic, and inverse trigonometric functions. Indeterminate forms, improper integrals, integration techniques, sequences and series, Taylor polynomials and power series. Offered fall and winter semesters. Prerequisite: MTH 201. Four credits.

Mathematics

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. Prerequisite: MTH 202. Four credits.

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. Three credits.

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 and at least sophomore standing. Fulfills Mathematical Sciences Foundation. Four credits.

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 and at least sophomore standing; MTH 221 strongly recommended. Three credits.

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. Prerequisite: MTH 201. Five credits.

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. Prerequisite: MTH 122 or equivalent. Three credits.

MTH 227 Linear Algebra I. Vectors in two and three dimensional space, systems of linear equations, matrix algebra, determinants, vectors in n dimensional space, subspace, dependence, bases, linear transformations, eigenvectors and applications. Offered fall and winter semesters. Prerequisite: MTH 202. Three credits.

MTH 229 Mathematical Activities for Secondary Teachers. Problem-solving techniques, motivational ideas, and activities suitable for the secondary classroom. Includes tutorial training and experience in the Grand Valley Mathematics Laboratory. (2-0-2) Offered fall and winter semesters. Prerequisites: MTH 201 and sophomore standing. Three credits.

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. Prerequisite: MTH 203. Three credits.

MTH 302 Linear Algebra and Differential Equations. Matrix algebra and determinants. Introduction to the theory of differential equations. Methods of solution (including Laplace transform techniques) of linear equations as well as some special types of nonlinear equations. Applications in physical, biological, and social sciences. Offered fall and winter semesters. Prerequisite: MTH 203. Four credits.

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. Three credits.

MTH 307 Mathematics Teacher Assisting Seminar. Strategies for teaching mathematics in junior and senior high school. Coordinated and taken concurrently with ED 331. Offered fall and winter semesters. Prerequisites: CS 205 or CS 309, PSY 301, and at least 12 hours in the major, including MTH 229. Three credits.

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 MTH 225 or MTH 227. Three credits.

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. Prerequisite: MTH 223, MTH 221, and MTH 222. Three credits.

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. Prerequisite: MTH 322. Three credits.

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 either MTH 221 or MTH 223 and MTH 222. Three credits.

MTH 325 Discrete Structures: Computer Science 2. Properties of relations, equivalence relations, partial orderings, fundamental concepts of graphs, trees, digraphs, networks, and associated algorithms; computer science applications. Offered fall and winter semesters. Prerequisite: MTH 225. Three credits.

MTH 327 Linear Algebra II. Vector spaces, bases, dimensions, linear transformations, canonical forms, eigenvalues and geometric applications. Offered spring semester. Prerequisites: MTH 202 and MTH 227. Three credits.

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. Three credits.

Mathematics

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. Three credits.

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. Three credits.

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. Prerequisite: MTH 210. Three credits.

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). Three credits.

MTH 380 Special Topics. 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. One to four credits.

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. One to four credits.

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. Three credits.

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. Prerequisite: MTH 203 and either MTH 227 or MTH 302. Three credits.

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 CS 162. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: MTH 310. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

MTH 480 Special Topics. 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. One to four credits.

MTH 490 Mathematics Internship Seminar. Offered fall and winter semesters. Prerequisite: Approval of the department; senior status. Two credits.

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. Three credits.

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. Prerequisite: 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 co. Three credits.

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. One to four credits.

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. Prerequisite: Certification in secondary mathematics. Three credits.

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 distribu-

Radiologic and Imaging Sciences

tions, sampling, estimation, confidence intervals, hypothesis testing, and regression. A statistical computer package will be used extensively. Prerequisite: Certification in secondary mathematics. Three credits.

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. Prerequisite: Certification in secondary mathematics. Three credits.

MTH 625 Number Theory. The mathematical treatment of the properties and the structure of the set of integers. Topics include prime numbers, divisibility, number-theoretic functions, the algebra of congruence classes, and applications. Prerequisite: Certification in secondary mathematics. Three credits.

MTH 629 Secondary Student Issues. Research, theories, and recommendations of professional groups provide the foundation for exploring appropriate content, activities, applications and teaching techniques for meeting special needs of secondary students in mathematics. Special attention will be given to mathematics anxiety and avoidance. Prerequisite: Completion of 24 credit hours in program. Three credits.

MTH 641 Modern Geometry. The study of geometry as a mathematical system, explorations of different geometries and their relations to physical space and as sources of mathematical models, investigations of geometrical thinking in problem solving in mathematics and areas outside of mathematics. Computer applications appropriate to school classrooms. Prerequisite: Certification in secondary mathematics. Three credits.

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. Three credits.

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. Prerequisite: Permission of the department. One to three credits.

MTH 686 High School Mathematics Workshop. Expands the perspective on the teaching of precalculus secondary mathematics. The workshop will focus on the impact of technology, general approaches to problem solving, and the use of writing in the teaching of mathematics. Offered on sufficient demand. Prerequisite: Permission of department. One to three credits.

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. One to three credits.

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Director: Carlton, R.M.S., R.T.(R)(CV). Program Coordinator: Pawloski, B.S., R.T.(R)(T). Medical Director: Bott-Kothari, M.D. Associate Professor: Carlton, R. M.S., R.T.(R)(CV). Instructor: Pawloski, B. B.S., R.T.(R)(T). Adjunct Faculty: Meadows, M.S., A.B.M.P., Reuter, M.S., A.B.M.P., Roundtree, B.S., R.T.(R)(T), Smereka, M.S. Clinical Faculty: Crompton, Pd.D., Dawson, R.T.(R)(T), Dean, B.S., R.T.(T), Erard, B.S., R.T.(T), Galecka B.S., R.T.(R)(T), Hubbard, B.S., R.T.(T), Wood, B.A., R.T.(T), Rowland, B.S., R.T.(T)(N), Weberg, R.T.(R)(T).

Diagnostic Medical Sonography-General Concentration (Abdominal and Obstetrics-Gynecology) Program Coordinator: Carlton, L., M.S., R.D.M.S., R.T. (R) (M). Instructors:

Burke, R.D.M.S., Haskins, R.D.M.S., Heath, R.D.M.S., Kamp, R.D.M.S., Kraus, B.S., R.T. (R) (CT), Schippers, M.S. Clinical Faculty, Johnson, R.D.M.S., Schriener, R.D.M.S.

Echocardiography Program Coordinator: Susan Raaymakers, B.S., R.D.C.S.(AE)(PE), Donahue, R.D.C.S., Dykstra, B.S., R.D.C.S.(AE)(PE), Eberhardt, R.D.C.S., (AE)(PE), Eitnear, B.S., R.D.C.S.(AE)(PE), Pawloski, B.S., R.C.D.C.(AE)(PE), Volk, B.S., R.D.C.S.

Vascular Sonography: Jennifer Heft, B.S., R.D.C.S., R.V.T., R.M.A., Hopewell, B.S., R.T.(R)(N), R.V.T., Koehler, R.N., R.V.T., Kmiciek, R.N., R.V.T.

This degree program will offer four emphases with a projected timeline as follows:

- Radiation Therapy — currently available.
- Diagnostic Medical Sonography General Concentration (Abdominal and Obstetrics-Gynecology) — currently available.
- Diagnostic Medical Sonography Echocardiography Concentration (Adult Echocardiography and Pediatric Echocardiography or Vascular Sonography) — currently available.
- Radiologic Sciences (Advanced Specialties) — Fall 2007.

Radiation Therapy

Radiation Therapy is a Radiologic and Imaging Science specialty that is an essential part of the multi-disciplinary field of radiation oncology.

Radiation Therapists practice in a cooperative effort between medical and radiation oncology physicians, medical physicists, dosimetrists and oncology nurses and dietitians. Radiation therapists are integral members of the patient treatment team. Their duties include patient positioning during simulated and actual radiation treatments, the charting and verification of doses, the fabrication of special radiation shields, filters and immobilization devices, and the monitoring of patients' general medical condition based on a knowledge of basic nursing care and the nature of radiation-induced side effects. Duties also include the handling of radioactive materials used in therapeutic treatment.

Radiation therapists are responsible for accurately recording, interpreting and administering the treatment prescribed by radiation oncologists. During treatment, therapists help physicians use fluoroscopy, X-ray films or CT scans to localize and outline anatomical areas requiring treatment. Close interpersonal relationships that often develop between patients and their therapists demand that the therapist also be a sympathetic caregiver and patient advocate. 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 and procedures, including treatment planning, simulation, quality assurance, brachytherapy, external beam therapy, stereotactic radiosurgery, intraoperative radiation therapy, Intensity Modulated Radiation Therapy, and total body irradiation.

Students who receive a B.S. degree in Radiologic and Imaging Sciences with an emphasis in radiation therapy from Grand Valley are eligible for the American Registry of Radiologic Technologists (ARRT) examination in radiation therapy. The ARRT has recognized the program and established eligibility for students who complete the full degree program.

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 their Web site at www.rrt.org (Ethics, Pre-Application Process). The ARRT may be contacted by phone at 651-687-0048 for more information.

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The Radiation Therapy program is in the process of acquiring accreditation through the Joint Review Committee on Education in Radiologic Technology (JRCERT). The program adheres to JRCERT standards. Upon accreditation, 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 900, Chicago, IL 60606-2901, phone 312-704-5300.

Diagnostic Medical Sonography General Concentration (Abdominal and Obstetrics-Gynecology)

Diagnostic Medical Sonography is a Radiologic and Imaging Science specialty with 9 specialties. This emphasis prepares students for clinical practice in abdominal and obstetrics-gynecology. Vascular sonography is an elective option that may be taken concurrently.

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 and pathological 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 work collaboratively with radiologists and other physicians to produce differential diagnoses.

Diagnostic Medical Sonography Echocardiography Concentration (Adult Echocardiography and Pediatric Echocardiography or Vascular Sonography)

Diagnostic Medical Sonography is a Radiologic and Imaging Science specialty with nine specialties. This emphasis prepares 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 to produce differential diagnoses.

The Diagnostic Medical Sonography program intends to initiate accreditation through the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCEDMS). Although this process cannot be completed until the program has graduates, the program adheres to JRCEDMS standards. Upon accreditation, students have the right to notify the JRCEDMS if they believe the university is not adhering to these standards. The JRCEDMS is at 2025 Woodlane Drive, St. Paul, MN 55125-2998, phone 651-731-1582.

Admission to Radiologic and Imaging Sciences

Radiologic and Imaging Sciences emphases are competitive selective admission for each emphasis and require completion of a secondary application. Please contact the College of Health Professions for secondary application packages. Applications are due March 1 of the sophomore year with applicants invited to enroll based on the following criteria:

- Academic grade point average from prerequisite courses (50%).
- Academic grade point average from previous 2 calendar years (10%).
- 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%).
- Two 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.

Program emphases class size limit is based on clinical availability.

A grade of B–or higher is required in all emphases 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. Satisfactory scores on the junior-level assessment essay or the WRT 305 course is also required.

Radiation therapy students must complete SS 381 Death and Dying (3 credits). Although this course is part of Theme 14, students may choose any theme to meet the General Education Theme requirements.

The information which follows is a draft which may be revised through requirements of university committees and administrative officers prior to final approval through the university curriculum approval process.

Major completion in Radiologic and Imaging Sciences requires the following:

General university degree requirements as identified in the General Academic Regulations of the catalog (of particular note are General Education Requirements).

Courses for Radiation Therapy and Sonography are going through University approval. Please call Rick Carlton at (616) 331-5953, Bonita Pawloski at (616) 331-5954, or Darlene Zwart at (616) 331-3958 for specific information regarding required courses.

Radiologic and Imaging Sciences Prerequisites:

BIO 120 General Biology I
BMS 208 Human Anatomy
BMS 290 Human Physiology
BMS 291 Laboratory in Human Physiology
BMS 309 Laboratory in Human Anatomy
CHM 109 Introductory Chemistry
CHM 230 Introduction to Organic and Biochemistry
MTH 123 Trigonometry
PHY 220 General Physics I
PHY 221 General Physics II
PSY 101 Introductory Psychology
SOC 280 Social Problems
WRT 150 Strategies in Writing

Courses of Instruction

RAD 300 Intro Radiation Therapy. Overview of the foundations of Radiation Therapy and the practitioner's role in the health care delivery system with correlated laboratory practice. Admitted MIRS. Two credits.

RAD 310 Patient Care. Patient care procedures and interactive communication used in physical and psychological care of the patient during imaging and therapy with emphasis on assessment; identification of emergencies; and specific patient care procedures for patients who are undergoing medical imaging and radiation therapy. Patient education, advocacy, and independent/team roles in patient care are also addressed. Admitted MIRS. Three credits.

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RAD 311 QA in Radiation Therapy. Identification and application of a comprehensive quality management program in a radiation oncology facility. Includes discussion on the operations and functions of a radiation oncology facility on quality improvement techniques. Radiation health and safety requirements of State and Federal regulatory agencies, accreditation agencies, and health care organizations for radiation therapy. Rad 460, RAD 341, and RAD 420. Two credits.

RAD 320 Protection & Monitoring. Physical principles underlying the properties and production of radiation, interaction of radiation and matter, detection of radiation, and protection of radiation workers and patients from exposure to ionizing radiation. Admitted MIRS. Three credits.

RAD 321 Radiation Biology. The effect of ionizing radiation on cells, which form human tissues. Reviews normal and abnormal cell development and the growth and structure of human cells. Explores in depth the quality of tissue response, and radiosensitivity. Admitted MIRS. Three credits.

RAD 330 Principles of Rad Imaging Sci. Principles governing production of radiation, interaction of radiation with matter, and protection of the radiation worker and patient from exposure. Basic principles of x-ray equipment, exposure factors, latent image formulation and processing of radiographs are presented. Admitted MIRS. Three credits.

RAD 341 Principles & Practices 1. Concepts of radiation therapy treatment principles and practices for head, head and neck, pelvis, spine, lung, and brain with associated laboratory practice. Corequisite: RAD 361; Prerequisites: RAD 300, RAD 310, and admitted MIRS. Three credits.

RAD 342 Principles & Practices 2. Radiation therapy treatment principles and practices for breast, esophagus, mantle, inverted Y, pituitary, total body, and hemi-body common palliative portals with associated laboratory practice. Corequisite: RAD 362. Requisite: RAD 300, RAD 310, and admitted MIRS. Two credits.

RAD 361 Clinical Education 1. Clinical education course in which the student executes 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. Completion of first semester of required courses and admitted MIRS. Two credits.

RAD 362 Clinical Education 2. Clinical education course focusing on basic treatment procedures under direct supervision. Individualized evaluation of performance and analysis of results obtained are an inherent part of this course. RAD 361 with a grade of B– or better and admitted MIRS. Three credits.

RAD 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

RAD 420 Applied Nuclear Physics 1. The principles of radiation dosimetry and related instrumentation as applied to radiation therapy. Topics include aspects of calibration, monitoring, protection and dose determination of X and gamma radiation. RAD 320 and admitted MIRS. Two credits.

RAD 421 Applied Nuclear Physics 2. Advanced principles and clinical correlation of radiation dosimetry and related instrumentation. RAD 420 and admitted MIRS. Two credits.

RAD 430 Treatment Planning. Fundamentals of clinical radiation oncology treatment planning. Precise descriptive methods are presented for a wide range of typical patient conditions. The procedures and methods utilized to plan the dose delivery and presented in correlated laboratory demonstrations. RAD 341 or RAD 342 and RAD 420; admitted MIRS. Two credits.

RAD 431 Introduction to Med Dosimetry. Concepts in medical dosimetry as they are applied to clinical radiation oncology treatment planning. Presentations, demonstrations, and evalu-

ations using laboratory treatment planning software are correlated to the lectures. RAD 430. Two credits.

RAD 440 Principles & Practices 3. Advanced clinical detail for specific skill practices in radiation therapy. Malignant conditions of the head and neck, gynecological neoplasms, renal, respiratory, and breast, their etiology, and methods of treatment are discussed. Attention is given to patient prognosis, treatment results and the effects of combined therapies through clinical case studies. The course includes a laboratory component. Corequisite: RAD 460. Prerequisites: RAD 300 and RAD 301; admitted MIRS. Three credits.

RAD 441 Principles & Practices 4. Advanced clinical detail for specific skill practices in radiation therapy. Malignant conditions of the skin, GI system, endocrine, Hodgkin's, leukemia, myeloma, and palliation, their etiology, and methods of treatment are discussed. Attention is given to patient prognosis, treatment results and the effects of combined therapies through clinical case studies. The course includes a laboratory component. Corequisite: RAD 461. Prerequisites: RAD 300 and RAD 310; admitted MIRS. Three credits.

RAD 460 Clinical Education 3. Advanced clinical education course focusing on advanced treatment procedures under direct supervision. Individualized evaluation of performance and analysis of results obtained are an inherent part of this course. RAD 361 with a grade of B– or better and admitted MIRS. Three credits.

RAD 461 Clinical Education 4. Advanced clinical education course in which the student continues to execute both basic and advanced 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 obtained are an inherent part of this course. RAD 361 with a grade of B– or better and admitted MIRS. Three credits.

RAD 495 Advanced Clinical Problems. A broad and comprehensive perspective on the relationship of radiation physics and protection, radiobiology, radiation oncology, patient care, communication, anatomy, and pathophysiology to the clinical practice of radiation therapy. Problem-based learning methods form a framework for the application of critical thinking in achieving reflection and contemplation on the practice of radiation therapy. RAD 421, RAD 431, RAD 441, RAD 461, and admitted MIRS. Three credits.

Middle East Studies (MES)

Director: M. Al-Mallah. Professors: J. Brashler, J. Goode, S. Kopperl; Associate Professors: R. Cole, M. Al-Mallah, B. Roos, M. Schaub, Assistant Professors: S. Danielson, F. Dogru, C. Fitzpatrick, S. F. Mekik, M. Schwartz.

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.

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.

Students come from anthropology, business, communications, criminal justice, geography, history, and international relations—indeed, from all those disciplines in which there is

Middle East Studies

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.

Study-abroad programs in Egypt and Jordan are offered during spring term. There is a partnership program with Middle East Technical University in Ankara, where students may study for a semester or a full year. Students may also study in Tunisia and Turkey through COUNCIL programs. For more information, consult the Padnos International Center or the coordinator of the Middle East studies program.

Students are encouraged to participate in the Model Arab League simulations held annually in late February and early April and in field trips to points of cultural interest locally and in the Detroit area.

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 13 hours of core courses (including four credits of language) and six 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

GPY 355 Geography of Southwest Asia (The Middle East).

HST 337 The Age of Islamic Empire

or HST 338 Modern Middle East

MES 201 Introduction to the Middle East

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 two courses (six credits) from the following list:

ANT 330 Ethnology of Selected World Areas (when focus is the Middle East)

ANT 350 Archaeology of Mid-East

ART 380 Special Topics in Art

ENG 303 Studies in World Literature

HST 211 History of Islamic Civilization

HST 337 The Age of Islamic Empire

HST 338 Modern Middle East

LIB 300 Jewish Scriptures and Traditions

MES 380 Special Topics in Middle East Studies

MES 399 Independent Studies (when focus is the Middle East)

Courses of Instruction

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. Three credits.

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. Three credits.

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. One to three credits.

Modern Languages and Literatures

Chair: Caillaud. Professors: Fernandez-Levin, Rydel; Associate Professors: Al-Mallah, Caillaud, Cata, Golemebeski, Gomez, Pozzi, C. Smith, Vrooman, Watts, Wright; Assistant Professors: Eick, Fidalgo-Eick, Fox, Fuentes, Gadhoun, Namaste, R. Smith.

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.

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 modern languages department 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 modern language department at Grand Valley is required.

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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 (FL) 331, in order to be certified. It is further recommended that students seeking elementary certification audit the seminar.

Students may also choose to enroll in foreign language and literature courses on a credit/no credit basis.

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”).

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 modern languages department for proper placement.

“150” Course

This course is designed for students who have sufficient prior study to make placement in 101 inappropriate. The 150 course includes a review of first semester language (101) and covers the same material as 102. Completion of the course with a grade of C or higher prepares students for 201. The “150” course fulfills the general education category CGE/B.

Foreign Language Resource Center (Laboratory)

The Learning 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 also 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

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 Barbara H. 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.

Germany—A summer school program in German language and culture located in Tübingen in southern Germany.

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.

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: 101, 102, 201, and 202. 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

Classes are conducted primarily in Arabic.

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. Four credits. Offered fall semester.

ARA 102 Elementary Arabic II. Continuation of 101. Prerequisite: C (not C–) or better in 101, or credit. Four credits. Offered winter semester.

ARA 180 Special Topics in Arabic. Expectations of students approximate those in other 100-level courses. May be repeated when content differs. Variable credit. Offered on sufficient demand.

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ARA 201 Intermediate Arabic I. Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Prerequisite: C (not C-) or better in 102, or credit. Four credits. Offered fall semester.

ARA 202 Intermediate Arabic II. Continuation of 201. Prerequisite: C (not C-) or better in 201, or credit. Four credits. Offered winter semester.

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. Variable credit. Offered on sufficient demand.

ARA 380 Special Topics in Arabic. Three credits. Offered on sufficient demand.

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. Variable credit. Offered on sufficient demand.

Courses of Instruction in Chinese

Classes are conducted primarily in Chinese.

CHI 101 Elementary Chinese I. An introduction to the language with emphasis on listening, speaking, reading, and writing. Four credits. Offered fall semester.

CHI 102 Elementary Chinese II. Continuation of 101. Prerequisite: C (not C-) or better in 101. Four credits. Offered winter semester.

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. Variable credit. Offered on sufficient demand.

CHI 201 Intermediate Chinese I. Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Prerequisite: C (not C-) or better in 102. Four credits. Offered fall semester.

CHI 202 Intermediate Chinese II. Continuation of 201. Prerequisite: C (not C-) or better in 201. Four credits. Offered winter semester. (World Perspectives designation.)

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. Variable credit. Offered on sufficient demand.

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. Three credits.

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. Prerequisites: CHI 301. Three credits.

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.)). Three credits. Offered fall semester on demand.

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). Three credits. Offered winter semester on demand.

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. Three credits.

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. Three credits.

CHI 380 Special Topics in Chinese. Three credits. Offered on sufficient demand.

CHI 399 Independent Reading. One to four credits. Offered fall and winter semesters.

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. Variable credit. Offered on sufficient demand.

CHI 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. Prerequisite: Senior standing with a major in Chinese studies. Three credits.

Courses of Instruction in Italian

Classes are conducted primarily in Italian.

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.

ITA 102 Elementary Italian II Continuation of Italian 101. Prerequisites: Italian 101 with C (not C-) or better, or permission of instructor. Winter. 4 credits.

ITA 201 Intermediate Italian I Continuation of Italian 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. Prerequisites: Italian 102 with C (not C-) or better, or permission of instructor. Fall. 4 credits.

ITA 202 Intermediate Italian II Continuation of Italian 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. Prerequisites: Italian 201 with C (not C-) or better, or permission of instructor. Fall. 4 credits. (World Perspectives designation)

Courses of Instruction in Japanese

Classes are conducted primarily in Japanese.

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. Four credits. Offered fall semester.

JPN 102 Elementary Japanese II. Continuation of 101. Prerequisite: C (not C-) or better in 101. Four credits. Offered winter semester.

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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. Variable credit. Offered on sufficient demand.

JPN 201 Intermediate Japanese I. Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Prerequisite: C (not C-) or better in 102. Four credits. Offered fall semester.

JPN 202 Intermediate Japanese II. Continuation of 201. Prerequisite: C (not C-) or better in 201. Four credits. Offered winter semester. (World Perspectives designation.)

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. Variable credit. Offered on sufficient demand.

JPN 380 Special Topics in Japanese. Three credits. Offered on sufficient demand.

JPN 399 Independent Reading. One to four credits. Offered fall and winter semesters.

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. Variable credit. Offered on sufficient demand.

Course of Instruction in Polish

Classes are conducted primarily in Polish.

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. Fall. 4 credits.

POL 102 Elementary Polish II Continuation of Polish 101. Prerequisites: Polish 101 with C (not C-) or better, or permission of instructor. Winter. 4 credits.

POL 201 Intermediate Polish I Continuation of Polish 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. Prerequisites: Polish 102 with C (not C-) or better, or permission of instructor. Fall. 4 credits.

POL 202 Intermediate Polish II Continuation of Polish 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. Prerequisites: Polish 201 with C (not C-) or better, or permission of instructor. Fall. 4 credits.

French (FRE)

Requirements for Major Programs

Students majoring in French are required to complete 33 hours beyond the FRE 202 course, including the core curriculum courses (FRE 301, 304, 306, 307), and FRE 495 (capstone). The core curriculum requirement must be fulfilled before a student may take advanced courses, although he/she may enroll in these courses in the same semester as their final core curriculum class. FRE 495 must be taken in the last year preceding graduation, and not before. In addition, majors must take ENG 261 if they are seeking elementary or secondary teacher certification.

Upon declaring the French major, or completing the core curriculum, whichever comes first, students must elect one of three specialized tracks: literature, linguistics, or civilization.

For the **literature track**, students must complete FRE 300, 302, and 303.

For the **linguistics track**, students must complete FRE 305, FRE 355, and either FRE 308 or 310. Additionally, students in this track are strongly encouraged to take at least one of the following courses in general linguistics: ENG 261, ENG 363, or ENG 364.

For the **civilization track**, students must complete FRE 308, FRE 310, and FRE 312. Students in this track are strongly encouraged to take at least one of the following courses in European or French History: HST 365, HST 385, HST 386, HST 643.

Electives: In addition to the courses listed above, students in all tracks must complete four elective courses at the 300 and 400 level, at least two of which have a focus on literature. At least one of these four courses must be at the 400 level. Students should take careful note of the prerequisites for their chosen courses. The elective courses chosen should be pre-approved by a faculty advisor.

Students seeking to pursue a graduate degree are strongly advised to complete a minor or major in a second foreign language. All majors are urged to complete a study abroad program in France or a French-speaking country.

Requirements for Minor Programs

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 301, FRE 304, FRE 306, and FRE 307). Students must then complete six more hours of 300- or 400-level French courses. In addition, minors must take ENG 261 if they are seeking elementary or secondary teacher certification.

Courses of Instruction

FRE 202 fulfills the General Education Program's World Perspectives designation.

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. Four credits. Offered fall and winter semesters.

FRE 102 Elementary French II. Continuation of 101. Students may not receive credit for both 150 and 102. Prerequisite: C (not C-) or better in 101, or credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

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 101 and 102. Not open to students with credit in FRE 101 or 102 or their equivalent. Prerequisite: appropriate high school background or placement test score. Four credits. Offered fall and winter semesters.

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. Variable credit. Offered on sufficient demand.

FRE 201 Intermediate French I. Continuation of 102 or 150. Prerequisite: C (not C-) or better in 102 or 150, or credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

FRE 202 Intermediate French II. Study of written language through readings from modern authors, continued practice in listening and speaking, review of grammar. Prerequisite: C (not

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C-) or better in 201, or credit, or appropriate placement test score. Fulfills World Perspective requirement. Four credits. Offered fall and winter semester.

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. Prerequisite: FRE 201. Variable credit. Offered on sufficient demand.

FRE 300 Survey of French Literature I. A survey of French literature of the Middle Ages and the Renaissance. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307) or permission of instructor. Three Credits. Offered winter semester in even-numbered years.

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. Prerequisite: C (not C-) or better in FRE 202 or permission of instructor and C (not C-) or better in FRE 306. Three credits. Offered winter semester.

FRE 302 Survey of French Literature II. A survey of French literature of the 17th and 18th centuries. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307) or permission of instructor. Three credits. Offered winter semester in even-numbered years.

FRE 303 Survey of French Literature III. A survey of French literature of the 19th and 20th centuries. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307) or permission of instructor. Three credits. Offered fall semester in even-numbered years.

FRE 304 French Conversation. Extensive practice in oral communication. Prerequisite: C (not C-) or better in FRE 202 or permission of instructor. A French core curriculum course required for advanced study. Three credits. Offered fall semester.

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. Prerequisite: C (not C-) or better in FRE 202, and one other course at the 300 level, or permission of instructor. Three credits. Offered fall semester odd-numbered years.

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. Prerequisite C (not C-) or better in FRE 202. A French core curriculum course required for advanced study. Three credits. Offered fall semester.

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. Prerequisite: C (not C-) or better in FRE 202, or permission of instructor. A French core curriculum course required for advanced study. Three credits. Offered winter semester.

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. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307) or permission of instructor. Three credits. Offered fall semester even-numbered years.

FRE 310 Contemporary France. French civilization and culture as seen through books, periodicals, and films; discussion of current events. Prerequisite: C (not C-) or better in core cur-

riculum courses (FRE 301, 304, 306, 307) or permission of instructor. Three credits. Offered winter semester odd-numbered years.

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. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307) or permission of instructor. Three credits. Offered fall semester odd-numbered years.

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. Prerequisite: C (not C-) or better in FRE 202 or permission of instructor. Three credits. Offered fall and winter semester odd-numbered years.

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. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307) and FRE 305, or permission of instructor. Three credits. Offered winter semester in even-numbered years.

FRE 380 Special Topics in French. Course content varies. Expectations of students approximate those in other 300-level courses. May be repeated for credit. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307), or permission of instructor. Variable credit. Offered on sufficient demand.

FRE 399 Independent Reading. One to four credits. Offered fall and winter semesters.

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. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307), and C (not C-) or better in FRE 300, or permission of instructor. Three credits. Offered fall semester even-numbered years.

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. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307), and C (not C-) or better in FRE 302, or permission of instructor. Three credits. Offered fall semester in odd-numbered years.

FRE 414 French Literature of the 19th Century. Study of drama, criticism, poetry, and the novel of the 19th century. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307), and C (not C-) or better in FRE 303, or permission of instructor. Three credits. Offered winter semester in even-numbered years.

FRE 416 French Literature of the 20th Century. Study of contemporary literature with representative works in prose, poetry, drama, and scenarios. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307), and C (not C-) or better in FRE 303, or permission of instructor. Three credits. Offered winter semester in odd-numbered years.

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. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301,

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304, 306, 307), and C (not C-) or better in FRE 312, or permission of instructor. Three credits. Offered fall semester in even-numbered years.

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. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307), or permission of instructor. Variable credit. Offered on sufficient demand.

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. Prerequisite: C (not C-) or better in core curriculum courses (FRE 301, 304, 306, 307), or permission of instructor, and senior standing. Three credits. Offered winter semester.

FRE 499 Independent Study and Research. One to four credits. Offered fall and winter semesters.

German (GER)

Requirements for the Major

Students majoring in German are required to complete at least 34 hours beyond GER 201, including 202 (if needed), GER 301 and 302 (Composition and Conversation I and II), a 400-level course, and GER 495 (Capstone). Of the elective courses, they must take:

- At least two Literature courses (selected from GER 303, GER 304, or GER 401);
- At least two Culture and Civilization courses (selected from GER 310, GER 311, GER 312, or GER 315);
- And at least one Linguistics course (selected from GER 321, GER 322, or GER 421).

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.

Requirements for the Minor

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:

- At least two Literature courses (GER 303, GER 304, or GER 401)
- And at least one Culture and Civilization course (GER 310, GER 311, GER 312, or GER 315).
- Teaching minors are strongly advised to take a linguistics course as well, preferably GER 322.

Courses of Instruction

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. Four credits. Offered fall and winter semesters.

GER 102 Elementary German II. Continuation of 101. Students may not receive credit for both 102 and 150. Prerequisite: C (not C-) or better in German 101, credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

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 101 and 102. Not open to students with credit in German 101 or 102 or their equivalent. Prerequisite: appropriate high school background or placement-test score. Four credits. Offered fall and winter semesters.

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. Variable credit. Offered on sufficient demand.

GER 201 Intermediate German I. Continuation of 102. Review and advancement of grammar, with additional focus on reading, writing, and the culture of German-speaking countries. Prerequisite: C (not C-) or better in German 102/150, credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

GER 202 Intermediate German II. Continuation of 201. Prerequisite: C (not C-) or better in German 201, credit, or appropriate placement test score. Fulfills World Perspective requirement.) Four credits. Offered fall and winter semesters.

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. Prerequisite: German 201. Variable credit—no more than four credits may be applied to the major or minor. Offered on sufficient demand.

GER 301 Composition and Conversation I. Extensive practice and real-life application of oral and written communication to advance proficiency in German language and culture. Prerequisite: German 202 with a C (not C-) or better. Three credits. Offered fall semester.

GER 302 Composition and Conversation II. Continuation of 301. Extensive practice and real-life application of oral and written communication to advance proficiency in German language and culture, with attention to advanced stylistic and grammatical concepts. Prerequisite: German 301. Three credits. Offered winter semester.

GER 303 Introduction to German Literature I. A brief survey of German literature from the Germanic period to the end of the seventeenth century. Prerequisite: German 301. Corequisite: German 302 should be taken concurrently if not already completed. Three credits. Offered winter semester in odd-numbered years.

GER 304 Introduction to German Literature II. A survey of German literature from the eighteenth century to 1945. Prerequisite: German 301. German 302 should be taken concurrently if not already completed. Three credits. Offered winter semester in even-numbered years.

GER 310 German Civilization and Culture I. A study of the cultural, social, and economic history and development of the German-speaking peoples from the prehistoric beginnings to the Baroque. Prerequisite: German 301. Three credits. Offered fall semester in even-numbered years.

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. Prerequisite: German 301. Three credits. Offered fall semester in odd-numbered years.

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. Prerequisite: German 301. German 302 should be taken concurrently if not already completed. Three credits. Offered winter semester in even-numbered years.

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. Prerequisite: German 302. Three credits. Offered fall semester in even-numbered years.

Modern Languages and Literatures

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. Prerequisite: German 202 with a C (not C-) or better. Three credits. Offered fall semester.

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. Prerequisite: German 301. German 302 should be taken concurrently if not already completed. Three credits. Offered winter semester in odd-numbered years.

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. Prerequisite: GER 302. Three credits. Offered fall semester, odd-numbered years.

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. Prerequisite: GER 331. Three credits. Offered winter semester, even-numbered years.

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. Prerequisite: German 301. Variable credit. Offered on sufficient demand.

GER 399 Independent Reading. One to four credits. Offered fall and winter semesters.

GER 401 Modern German Literature. Continuation of 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. Prerequisite: German 304. Three credits. Offered fall semester in even-numbered years.

GER 402 German Authors. Reading and analysis of selected German authors within their cultural and historical context. Prerequisite: Two 300-level courses or permission of the instructor. Three credits.

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. Prerequisites: 321. Three credits. Offered fall semester in odd-numbered years.

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. Variable credit. Offered on sufficient demand.

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. Prerequisite: Senior standing with a major in German. Three credits. Offered winter semester.

GER 499 Independent Study and Research. One to four credits. Offered fall and winter semesters.

Russian (RUS)

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 back-

ground on Russia are History 389, 390, and 391 and Russian Studies 225, 331, 332, 333. 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.

Courses of Instruction

RUS 101 Elementary Russian I. An introduction to Russian pronunciation and grammar. Four credits. Offered fall semester.

RUS 102 Elementary Russian II. Continuation of 101. Prerequisite: C (not C-) or better in 101, or credit. Four credits. Offered winter semester.

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. Variable credit. Offered on sufficient demand.

RUS 201 Intermediate Russian I. Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Prerequisite: C (not C-) or better in 102, or credit. Four credits. Offered fall semester.

RUS 202 Intermediate Russian II. Continuation of 201. Prerequisite: C (not C-) or better in 201, or credit. (World Perspectives designation.) Four credits. Offered winter semester.

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. Variable credit. Offered on sufficient demand.

RUS 301 Advanced Russian Grammar I. Continued study of grammar and vocabulary. Prerequisite: 202 or equivalent. Three credits. Offered fall semester.

RUS 302 Advanced Russian Grammar II. Continuation of 301. Three credits. Offered winter semester.

RUS 304 Russian Conversation and Composition I. Practice in oral and written Russian; development of listening and reading skills. Prerequisite: Successful completion of RUS 302 (C or better) or permission of instructor. Three credits. Offered fall semester.

RUS 306 Russian Conversation and Composition II. Continuation of RUS 304. Prerequisite: Successful completion of RUS 304 (C or better) or permission of instructor. Three credits. Offered winter semester.

RUS 380 Special Topics in Russian. Offered on sufficient demand.

RUS 399 Independent Reading. One to four credits. Offered fall and winter semesters.

RUS 401 Introduction to Russian Literature I. A brief survey of nineteenth-century Russian literature. Course taught in Russian. Prerequisite: 302 or equivalent. Three credits. Offered fall semester.

RUS 402 Introduction to Russian Literature II. A brief survey of Russian literature of the twentieth century. Course taught in Russian. Prerequisite: 401. Three credits. Offered winter semester.

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. Variable credit. Offered on sufficient demand.

RUS 499 Independent Study and Research. One to four credits. Offered fall and winter semesters.

Spanish (SPA)

Requirements for Major and Minor Programs

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 elementary and 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.

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.

Suggested progression of courses for the Major

In order to complete the program in four years, work toward the major should begin in a student's sophomore year. The suggested distribution of courses is as follows:

Sophomore Year

First semester: SPA 321 Conversation and Composition I; **one** elective from SPA 300 Reading and Telling Stories, SPA 308 Spanish Phonetics.

Second semester: SPA 322 Conversation and Composition II; **one** elective from SPA 300 Reading and Telling Stories, SPA 308 Spanish Phonetics.

Teaching majors should take SPA 314 Teaching Methods at this point.

Junior Year

First semester: SPA 330 Introduction to Literary Analysis OR SPA 331 Survey of Spanish Literature; **one** Civilization and Culture course from SPA 310 Spanish Civilization and Culture, SPA 311 Spanish American Civilization and Culture I, SPA 312 Spanish American Civilization and Culture II, SPA 313 U.S. Latino Civilization and Culture;

Second semester: SPA 330 Introduction to Literary Analysis OR SPA 332 Survey of Spanish American Literature; **one** elective from SPA 300 Reading and Telling Stories, SPA 308 Spanish Phonetics, SPA 309 Advance Grammar; a second Civilization and Culture course; either SPA 330 or 332 if not taken above.

Teaching majors should take a second Civilization and Culture course at this point.

Senior Year

First semester: **One** 400-level literature course; **one** elective from SPA 303 Professional Writing, SPA 327 History of the Spanish Language, SPA 329 Spanish Sociolinguistics, SPA 335 Introduction to Spanish Linguistics, a second 400-level literature course, a second Civilization and Culture course, a second survey course.

Teaching majors should take SPA 335 Introduction to Spanish Linguistics at this point.

Second semester: SPA 495 Capstone.

Note: Majors may also take any of the Spanish for the professions courses as electives at any time.

Courses of Instruction

Classes are conducted primarily in Spanish.

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. Four credits. Offered fall and winter semesters.

SPA 102 Elementary Spanish II. Continuation of 101. Students may not receive credit for both 102 and 150. Prerequisite: C (not C-) or better in 101, or credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

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 101 and 102. Not open to students with credit in Spanish 101 or 102 or their equivalent. Prerequisite: Appropriate high school background or placement test score. Four credits. Offered fall and winter semesters.

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. Variable credit. Offered on sufficient demand.

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. Prerequisite: C (not C-) or better in 102 or 150, or credit, or appropriate placement test score. Four credits. Offered fall and winter semesters.

SPA 202 Intermediate Spanish II. Continuation of 201. Introduction of writing techniques. Prerequisite: C (not C-) or better in 201, or "credit," or appropriate placement test score. Fulfills World Perspectives requirement. Four credits. Offered fall and winter semesters.

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. Prerequisite: Permission of instructor. Four credits. Offered fall semesters.

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. Prerequisite: 202. Four credits. Offered fall and winter semesters.

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. Variable credit. Offered on sufficient demand.

Modern Languages and Literatures

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. Prerequisite: C (not C-) or better in 202, or credit, or appropriate placement test score. Three credits. Offered fall and winter semesters.

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. Prerequisite: 322 with a grade of C (not C-) or better. Three credits. Offered fall semester.

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. Prerequisite: 202 with a grade of C (not C-) or better. Three credits. Offered winter semester.

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. Prerequisite: 202 with a grade of C (not C-) or better. Three credits. Offered fall semester.

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. Prerequisite: 202 with a grade of C (not C-) or better. Three credits. Offered winter semester.

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. May be used toward the General Education requirement in the Theme category. Does not count toward Spanish major or minor. Three credits. Offered winter semester. Part of Death and Dying theme.

SPA 308 Spanish Phonetics. Introduction to the sound system of Spanish. Phonetic transcription of texts in Spanish. Prerequisite: Completion of 202 with a grade of C (not a C-) or better. Three credits. Offered fall semester.

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. Prerequisite: Completion of 322 with a grade of C (not C-) or better. Three credits. Offered fall and winter semesters.

SPA 310 Spanish Civilization and Culture. An introduction to the political, social, economic, and cultural history of Spain. Fulfills World Perspectives requirement. Prerequisite: Completion of 322 with a grade of C (not C-) or better. Three credits. Offered winter semester.

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. Prerequisite: Completion of 322 with a grade of C (not C-) or better. Three credits. Offered fall semester.

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. Prerequisite: Completion of 322 with a grade of C (not C-) or better. Three credits. Offered winter semester.

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. Prerequisite: Completion of 322 with a grade of C (not C-) or better. Three credits. Offered fall semester.

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. Prerequisite: Completion of 202 with a grade of C (not C-). Three credits. Offered fall and winter semesters.

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. Prerequisite: C (not C-) or better in 202, or credit, or appropriate placement test score. Three credits. Offered fall semester.

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. Prerequisite: C (not C-) or better in 321. Three credits. Offered winter semester.

SPA 324 Spanish-American Novel in Translation. A study of the twentieth-century Spanish-American novel. Three credits. Offered on sufficient demand.

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. Three credits. Offered on sufficient demand.

SPA 326 Modern Spanish Literature in Translation. A survey of Spanish literature of the nineteenth and twentieth centuries. Three credits. Offered on sufficient demand.

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. Prerequisite: 308 and 309 with a grade of C (not C-) or better. Three credits. Offered winter semesters in even-numbered years.

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. Prerequisite: Completion of 322 with a grade of C (not C-) or better, or permission of instructor. Three credits. Offered fall semester.

SPA 330 Introduction to Literary Analysis. Introduction to the literary analysis of the narrative, poetry, and drama of Spain and Spanish America. Prerequisite: Completion of 322 plus three credits at the 300 level with a grade of C (not C-) or better. Three credits. Offered fall and winter semesters.

SPA 331 Survey of Spanish Literature. A historically grounded survey of the principal literary works and movements of Spain. Prerequisite: Completion of 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. Three credits. Offered fall semester.

SPA 332 Survey of Spanish American Literature. A historically grounded survey of the principal literary works and movements of Spanish America. Prerequisite: Completion of 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. Three credits. Offered winter semester.

Modern Languages and Literatures

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. Prerequisite: Spanish 309 with a grade of C (not C-) or better or permission of instructor. Three credits. Offered winter semester.

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. Prerequisite: WRT 150 and one literature course (SPA 330 for Spanish majors). Three credits. Offered winter semesters in even-numbered years. Cross-listed with ENG 378/LAS 378.

SPA 380 Special Topics in Spanish. Offered on sufficient demand.

SPA 399 Independent Reading. One to four credits. Offered fall and winter semesters.

SPA 410 Spanish American Narrative. Study of some of the major prose writers of the twentieth century. Prerequisite: Completion of 330 and 332 with a grade of C (not C-) or better, or permission of instructor. Three credits. Offered fall semester in even-numbered years.

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. Prerequisite: Completion of 330 and 331 with a grade of C (not C-) or better. Three credits. Offered winter semester in odd-numbered years.

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. Prerequisite: 330 and 332 with a grade of C (not C-) or better. Three credits. Offered winter in even-numbered years.

SPA 440 Cervantes. Survey of Cervantes' masterwork, *Don Quixote de la Mancha*. Prerequisite: 330 and 331 with a grade of C (not C-) or better. Three credits. Offered winter semester in even-numbered years.

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. Prerequisite: 330 and 331 with a grade of C (not C-) or better. Three credits. Offered fall semester in odd-numbered years.

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. Prerequisite: Completion of 330, plus 331 or 332 with a grade of C (not C-) or better. Three credits. Offered fall semester in even-numbered years.

SPA 470 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. Prerequisite: Completion of 330, plus 331 or 332 with a grade of C (not C-) or better. Three credits. Offered winter semester in odd-numbered years.

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.

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. Prerequisite: 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. Three credits. Offered fall and winter semesters.

SPA 499 Independent Study and Research. One to four credits. Offered fall and winter semesters.

Movement Science (ATH/MOV/PED)

Chair: Rowe. Associate Professors: Albrecht, Kilbourne, Lewis, Rowe, Schutten, Scott; Assistant Professors: Bartz, Coe, Hatzel, Munk, Parker; Instructors: Garrola, Newsome, Roskamp, Woods.

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 Athlete 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, sports 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 the majors and minors to complete appropriate fieldwork, clinical rotation and internship experiences to fulfill program requirements.

Career Opportunities: Movement Sciences

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,

Movement Science

outdoor-adventure activities programming, aquatics instructor, and corporate fitness administration.

Requirements for a Major in Exercise Science

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.

Please note: The Exercise Science Major replaces the Physical Education Emphasis areas of Exercise Science and Fitness-Wellness. These emphasis areas will no longer appear in the catalog.

Students seeking a major in exercise science must compete the following requirements:

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: Exercise Science Major (Credit Hours: 9–10)

BMS 202 Anatomy and Physiology
or BMS 208 Human Anatomy
MOV 304 Physiology of Activity
STA 215 Introductory Applied Statistics

3. Exercise Science Foundation Courses (Credit Hours: 36–42)

BMS 105 Basic Nutrition
MOV 101 Foundations of Physical Education and Sport
MOV 300 Kinesiology
MOV 309 Measurement and Evaluation
MOV 320 Exercise Testing and Prescription
MOV 321 Exercise Testing Lab
MOV 420 Laboratory Practicum in Exercise Science
MOV 470 Exercise for Special Populations
MOV 475 Fieldwork in Exercise Science
MOV 490 Internship in Exercise Science
MOV 495 Professionalism in Exercise Science
PED 102 First Aid
PED 217 Modern Principles of Athletic Training

Note: MOV 475 and 490 will have separate experiences for Health-Fitness Instruction and Clinical Science emphasis areas by advisement.

4. Emphasis Areas

Complete one of the following emphasis areas:

A. Health-Fitness Instruction (Credit Hours: 27)
BMS 223 Public Health Concepts

- CS 150 Introduction to Computing
- CS 238 Internet Media and Programming
- MOV 201 Psycho-social Aspects of Physical Education and Sport
- PSY 310 Behavior Modification
- PSY 364 Life Span Developmental Psychology
- SOC 356 Sociology of Health Care
- SOC 384 Sociology of Drug Use and Abuse
- B. Clinical Exercise Science (Credit Hours: 28)
 - * BMS 290 Human Physiology
 - * BMS 291 Laboratory in Human Physiology. Credits: 1
 - * BMS 306 Advanced Human Nutrition
 - * BMS 415 Nutrition and Physical Performance
 - * CHM 231 Introductory Organic Chemistry. Credits: 4
 - * CHM 232 Biological Chemistry. Credits: 4
 - * MOV 365 Clinical Exercise Physiology
 - * PHY 200 Physics for the Life Sciences. Credits: 4
 - * PSY 310 Behavior Modification

Requirements for a Major in Physical Education

Students seeking a major in physical education must complete the following requirements:

1. University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. Core curriculum for the major in Physical Education (Credit Hours: 19)

- MOV 101 Foundations of Physical Education and Sport
- MOV 201 Psycho-social Aspects of Physical Education and Sport
- MOV 300 Kinesiology
- MOV 309 Measurement and Evaluation
- MOV 310 Motor Skill Development
- PED 102 First Aid
- PED 401 Organization and Administration of Physical Education and Sport (capstone)

3. Skills Development Activity Courses (Credit Hours: 5)

Selected from PED 100 through 179, one of which must be swimming. Each skills course must be from a different numerical category. PED 180 courses may be selected and substituted for this requirement. PED 214 and/or PED 215 may be substituted for the swimming requirement.

4. Emphasis Areas

Emphasis areas are designed to allow students to pursue in-depth knowledge in one or more areas, which provide a specialized focus for their professional preparation. Two emphasis areas are available for majors in Physical Education. At least one emphasis area must be completed in addition to the major core curriculum and Skills Development Activity Courses.

Emphasis A. K–12 Professional Instruction (Credit Hours: 24)

Physical education majors selecting emphasis A, K–12 Professional Instruction, must meet all requirements of the College of Education if they intend to pursue teacher

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certification. Emphasis A 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:

MOV 320 Exercise Testing and Prescription (with MOV 321)

PED 200 Rhythms and Dance K–12

PED 202 Adapted Physical Education and Recreation (Required only for PED majors who are College of Education teacher certification candidates.)

PED 210 Tumbling and Gymnastics, K–12

PED 220 Individual Sports

PED 230 Team Sports

PED 301 Methods of Teaching Health Education

PED 306/307 must be taken before teacher assisting.

PED 306 Teaching Physical Education — Elementary

PED 307 Teaching Physical Education — Secondary

Emphasis B. Sport Pedagogy (coaching) (Credit Hours: 24)

Majors who select Emphasis B, Sport Pedagogy, must complete the following courses in addition to the core curriculum, B.S. degree cognates, and skills development activity courses.

- Psychology Elective

PED 206 Conditioning Activities, Body Mechanics, and Dynamics

PED 217 Modern Principles of Athletic Training

PED 218 Officiating Seasonal Sports

PED 220 Individual Sports

PED 230 Team Sports

Elect 8 credit hours from the following:

PED 250 Coaching Theory Course

PED 251 Coaching Theory Course

PED 252 Coaching Theory Course

PED 253 Coaching Theory Course

PED 254 Coaching Theory Course

PED 255 Coaching Theory Course

PED 256 Coaching Theory Course

PED 257 Coaching Theory Course

PED 258 Coaching Theory Course

5. Cognate Electives

Students in certain emphasis areas are required to take selected prerequisites, as follows:

BMS 202 Anatomy and Physiology — Prerequisite for MOV 300 and MOV 304.

(for emphasis A and B)

PSY 101 Introductory Psychology — (GenEd SS/A) Prerequisite for MOV 310.

(for emphasis A and B)

PSY 301 Child Development

6. 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 (Gen. Ed. NS/B)

MOV 304 Physiology of Activity
 STA 215 Introductory Applied Statistics (Gen. Ed. CGE/A)

Physical Education Major Course Sequence Guide

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 schedule we 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.

Recommended Sequences:

For the Core and Cognates

- I. MOV 101 Foundations of Physical Education and Sports
 MUST be taken before any/all other PED/MOV courses
 - BMS 202 Anatomy and Physiology
 Before all of the following courses
 - MOV 300 Kinesiology
 - MOV 304 Physiology of Activity
 - MOV 320 Exercise Testing and Prescription
 - MOV 321 Exercise Testing Lab
- II. • MTH 110 Algebra
 before
 - STA 215 Introductory Applied Statistics
- III. • STA 215 Introductory Applied Statistics
 before
 - MOV 309 Measurement and Evaluation
- VI. • PSY 101 Introductory Psychology
 before
 - MOV 201 Psycho-social Aspects of Physical Education and Sport
 - MOV 310 Motor Skill Development

For Emphasis A, K–12 Professional Instruction

MOV 309 Measurement and Evaluation
 MOV 310 Motor Skill Development
 (before PED 306 and/or PED 307)
 PED 200 Rhythms and Dance K–12
 PED 210 Tumbling and Gymnastics, K–12
 PED 220 Individual Sports
 PED 230 Team Sports
 PED 306 Teaching Physical Education — Elementary
 PED 307 Teaching Physical Education — Secondary
 (for Physical Education major emphasis A students)

Note: PED 306 and PED 307 must be completed before College of Education firework and before PED 401.

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For Emphasis B, Sport Pedagogy/Coaching

Follow sequence for Core and Degree Cognates.

Requirements for a Teachable Minor in Physical Education (Credit Hours: 23)

Teachable Minor in Physical Education

This 23-credit hour minor is approved by the State of Michigan for secondary education majors. This minor prepares Physical Education candidates to teach Physical Education in grades 7-12. Students seeking a teachable minor in physical education must complete the following:

MOV 201 Psycho-social Aspects of Physical Education and Sport

MOV 300 Kinesiology (Prerequisite: BMS 202, General Education NS/B)

MOV 304 Physiology of Activity (Prerequisite: BMS 202, General Education NS/B)

MOV 310 Motor Skill Development

PED 202 Adapted Physical Education and Recreation

PED 307 Teaching Physical Education—Secondary

Teachable Minor in Physical Education Electives

Students seeking a teachable minor in physical education *must* elect six credit hours from the following courses, in addition to the required courses:

PED 200 Rhythms and Dance K-12

PED 210 Tumbling and Gymnastics, K-12

PED 220 Individual Sports K-12

PED 230 Team Sports K-12

Requirements for a Minor in School Health Education

This 30-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 7-12. Students seeking a teachable minor in School Health *must* complete the following requirements:

BIO 103 The Biology of People

BMS 105 Basic Nutrition

BMS 202 Anatomy and Physiology

BMS 222 Introduction to Public Health

NUR 220 Self-Health and Wellness

PED 102 First Aid

PED 270 School Health Education

PED 301 Methods of Teaching Health Education

SOC 384 Sociology of Drug Use and Abuse

And Either

BIO 325 Human Sexuality

or PSY 316 The Psychology of Human Intimacy and Sexuality

Athletic Training

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 cer-

tified 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 the 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 Allied Health Education Programs (CAAHEP).

Program Costs: Students will be responsible for the costs associated with required immunizations, travel to and from clinical sites, identification tags and clothing items.

Degree 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 admission process. Application for admission to the program takes place two times per year; at the end of the fall semester to start in the winter and at the end of the winter semester to start in the fall. 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. Physical Education

Students must receive a B or better in all prerequisite coursework.
PED 217 Modern Principles of Athletic Training

2. Athletic Training

Students must receive a B or better in all prerequisite coursework.
ATH 210 Directed Observation in AT

3. Movement Science

Students must receive a B or better in all prerequisite coursework.
MOV 300 Kinesiology

Movement Science

4. Current First Aid and CPR Certification

5. Cumulative GPA of 2.8 or higher

6. 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:

7. Written Test

Students must receive a 70 percent or higher to qualify for an interview.

8. Practical Test

Students must receive a 70 percent or higher to qualify for an interview.

9. Admission Application

10. Interview

11. Recommendations

12. Technical Standards

(individuals must be able to meet all technical standards of the Athletic Training Program as outlined in the Athletic Training Policies and Procedures Manual)

Transfer Student Policy for the Athletic Training Education Program

- 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.

Coursework

Athletic Training majors must complete the following courses in addition to their general education and prerequisite requirements:

ATH 220 Athletic Training Clinical I

ATH 225 AT Emergency Care

ATH 230 Athletic Training Clinical II

ATH 314 Athletic Injury Assessment I

ATH 315 Athletic Injury Assessment II

ATH 316 Therapeutic Exercise

ATH 320 Athletic Training Clinical III
 ATH 330 Athletic Training Clinical IV
 ATH 405 Therapeutic Modalities
 ATH 406 Intervention and Referral
 ATH 490 Internship in Athletic Training Credits: 6 to 12
 ATH 495 Organization and Administration
 BMS 105 Basic Nutrition
 BMS 202 Anatomy and Physiology
 BMS 208 Human Anatomy
 BMS 309 Laboratory in Human Anatomy
 BMS 355 Anatomy of Joints
 MOV 101 Foundations of Physical Education and Sport
 MOV 304 Physiology of Activity
 MOV 320 Exercise Testing and Prescription
 MOV 321 Exercise Testing Lab
 MOV 470 Exercise for Special Populations
 PHY 200 Physics for the Life Sciences

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.

Athletic Training Major B.S. Degree Cognates

BMS 208 Human Anatomy
 CHM 109 Introductory Chemistry
 STA 215 Introductory Applied Statistics

Courses of Instruction

Skills Development Activity Courses

Skills development activity courses provide instruction for the purpose of developing proficiency in fitness, sport, recreation, and leisure activities. Each activity course carries one credit hour. Activity courses are offered to meet student demand and are graded credit/no credit.

PED 120–129 Individual Sports

PED 120 Bowling
 PED 121 Golf
 PED 122 Weight Training
 PED 126 Conditioning and Flexibility—Beginning
 PED 128 Rock Climbing

PED 130–139 Team Sports

PED 130 Volleyball
 PED 131 Basketball
 PED 132 Lacrosse
 PED 133 Softball

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PED 140–149 Racquet Sports

- PED 140 Beginning Racquetball
- PED 142 Beginning Tennis
- PED 143 Intermediate–Advanced Tennis
- PED 144 Badminton

PED 106, PED 150–159, PED 215 Aquatics

- PED 106 Swimming and Lifeguarding
- PED 150 Beginning Swimming
- PED 151 Intermediate–Advanced Swimming
- PED 215 Water Safety Instruction

PED 160–169 Dance

- PED 160 Beginning Jazz Dance
- PED 161 Intermediate–Advanced Jazz Dance
- PED 162 Beginning Tap Dance
- PED 163 Intermediate–Advanced Tap Dance
- PED 164 Beginning Modern Dance
- PED 165 Intermediate–Advanced Modern Dance
- PED 166 Beginning Ballet
- PED 167 Intermediate–Advanced Ballet
- PED 168 Aerobic Dance Exercise
- PED 169 Folk Square Soc Dance

PED 170–179 Combatives

- PED 170 Wrestling

PED 180 Courses

Based on student demand and interest, special topic activity courses are offered under the PED 180 code. Students may select courses from this category to fulfill activity course requirements in the major and minor. Activities will vary year-to-year. PED 180 courses are given letter grades.

Professional Courses

Numbers in parentheses at the end of course descriptions indicate the number of lecture, discussion, and laboratory hours per week.

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. Prerequisite: PED 217 (or concurrently). One credit.

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. Two credits.

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). Prerequisite: Current American Red Cross or National Safety Council First Aid and CPR certification. Three credits.

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 or ATH 315. Two credits.

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. Three credits.

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. Three credits.

ATH 316 Therapeutic Exercise. Provides an introduction to the concepts and principles of carrying out a comprehensive rehabilitation program. Students will identify the physiological effects of tissue trauma, select appropriate exercises/techniques for musculoskeletal injury, develop criteria for rehab progression and establish return to play/activity guidelines. (0-2-2). Prerequisites: ATH 314 and ATH 315. Corequisite: ATH 405. Three credits.

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. Two credits.

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). Prerequisites: ATH 320, ATH 316, and ATH 405. Two credits.

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). Prerequisite: PHY 200; Corequisite: ATH 316. Three credits.

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, MOV 320, MOV 321, ATH 316, ATH 405. Three credits.

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. Six to twelve credits.

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. Three credits.

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). Three credits.

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MOV 102 First Aid, CPR and AED. Emergency care for the teacher, recreation leader and allied health professionals. Preparation for First Aid, CPR (cardiopulmonary resuscitation), and AED (automated external defibrillation) certification. Note: Created to replace PED 102. Two Credits.

MOV 180 Selected Topics. Lecture, discussion, laboratory, or field study on a topic related to Movement Science. Offered on demand. One to four credits.

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 behavioral factors that influence the sport setting, and participation will be studied. Prerequisite: MOV 101. Three credits.

MOV 280 Selected Topics. Lecture, discussion, laboratory, or field study on a topic related to Movement Science. Offered on demand. One to four credits.

MOV 300 Kinesiology. Laws and principles of mechanics as they apply to the use of the human body, human mechanism, and its process of motor function. (2-1-0). Prerequisite: BMS 202. Three credits.

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). Prerequisite: BMS 202 or equivalent. Three credits.

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). Two credits.

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. Prerequisite: PSY 101. Three credits.

MOV 320 Exercise Testing and Prescription. Provides students the fundamental background for health and fitness assessment commonly used in fitness and clinical settings. Topics include epidemiology, cardiovascular assessment, strength assessment, weight control, body composition assessment and exercise prescription. Prerequisite: MOV 304. Corequisite: MOV 321. Three credits.

MOV 321 Exercise Testing Lab. Introduction to health and fitness assessments currently used in fitness, rehabilitation, and clinical settings. Prerequisite: MOV 304. Corequisite: MOV 320. One credit.

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. Three credits.

MOV 380 Selected Topics. Lecture, discussion, laboratory, or field study on a topic related to Movement Science. Offered on demand. One to four credits.

MOV 399 Independent Readings. Special studies in movement science upon consultation with faculty advisor and approval of department chair. One to three credits. One to three credits.

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. Two credits.

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. Two credits.

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. Prerequisite: MOV 320 or MOV 321. Three credits.

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 MON 420. Two credits.

MOV 480 Selected Topics. Lecture, discussion, laboratory, or field study on a topic related to Movement Science. Offered on demand. One to three credits.

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. Six to twelve credits.

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. Three credits.

MOV 499 Independent Study and Research. Special studies in movement science in consultation with advisor and approval of department chair. One to three credits.

MOV 580 Special Topics in Movement Science. Lecture, discussion, laboratory, or field study on a topic related to Movement Science. One to three credits.

MOV 680 Special Topics in Movement Science. Lecture, discussion, laboratory, or field study on a topic related to Movement Science. One to three credits.

PED 102 First Aid. First Aid and CPR Certification. First aid care for the teacher and recreation leader. (1-1-0). Two credits.

PED 106 Swimming and Lifeguarding. Skills and techniques of lifesaving and water safety. ARC Certification. Instructor approval. Two credits.

PED 109 Yoga I. Course is graded credit/no credit. One credit.

PED 110 Yoga II. Course is graded credit/no credit. One credit.

PED 120 Bowling. Course is graded credit/no credit. (0-1-0). One credit.

PED 121 Golf. Course is graded credit/no credit. One credit.

PED 122 Weight Training. Course is graded credit/no credit. One credit.

PED 126 Conditioning and Flexibility Beginning. Course is graded credit/no credit. One credit.

PED 128 Rock Climbing. Course is graded credit/no credit. One credit.

PED 130 Volleyball. Course is graded credit/no credit. One credit.

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- PED 131 Basketball.** Course is graded credit/no credit. One credit.
- PED 132 Lacrosse.** Course is graded credit/no credit. One credit.
- PED 133 Softball.** Course is graded credit/no credit. One credit.
- PED 140 Beginning Racquetball.** Course is graded credit/no credit. One credit.
- PED 142 Beginning Tennis.** Course is graded credit/no credit. One credit.
- PED 143 Inter Adv Tennis.** Course is graded credit/no credit. One credit.
- PED 144 Badminton.** Course is graded credit/no credit. One credit.
- PED 149 Stretch and Tone for Dancers.** Course is graded credit/no credit. One credit.
- PED 150 Beginning Swimming.** Course is graded credit/no credit. One credit.
- PED 151 Inter Adv Swimming.** Course is graded credit/no credit. One credit.
- PED 160 Beginning Jazz Dance.** Course is graded credit/no credit. One credit.
- PED 161 Inter Adv Jazz Dance.** Course is graded credit/no credit. One credit.
- PED 162 Beginning Tap Dance.** Course is graded credit/no credit. One credit.
- PED 163 Inter Adv Tap Dance.** Course is graded credit/no credit. One credit.
- PED 164 Beginning Modern Dance.** Course is graded credit/no credit. One credit.
- PED 165 Inter Adv Modern Dance.** Course is graded credit/no credit. One credit.
- PED 166 Beginning Ballet.** Course is graded credit/no credit. One credit.
- PED 167 Inter Adv Ballet.** Course is graded credit/no credit. One credit.
- PED 168 Aerobic Dance Exercise.** Course is graded credit/no credit. One credit.
- PED 169 Folk Square Soc Dance.** Course is graded credit/no credit. One credit.
- PED 170 Wrestling.** Course is graded credit/no credit. One credit.
- PED 171 Pointe Ballet I.** Course is graded credit/no credit. One credit.
- PED 172 Pointe Ballet II.** Course is graded credit/no credit. One credit.
- PED 178 Ballroom Dance for Women.** Course is graded credit/no credit. One credit.
- PED 179 Ballroom Dance for Men.** Course is graded credit/no credit. One credit.
- PED 180 Selected Topics.** Lecture, discussion, laboratory, or field study on a topic related to Physical Education. Offered on demand. One to three credits.
- 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. Three credits.
- 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). Two credits.
- 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). Two credits.
- 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). Two credits.

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. Three credits.

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). Prerequisite: Swimming proficiency. Three credits.

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). Prerequisites: Current first aid and CPR certification. Three credits.

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). Two credits.

PED 220 Individual Sports. The study of individual and lifetime sport skills and techniques for teaching those skills in the K–12 physical education curriculum. Three credits.

PED 230 Team Sports. Technique and procedures for teaching and coaching soccer, speedball, team handball, lacrosse, field hockey and other selected team sports. Three credits.

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. Three credits.

PED 250–258 Coaching Theory Courses. Intense and comprehensive theory oriented 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. Two credits.

PED 250 Baseball Coaching Theory

PED 251 Basketball Coaching Theory

PED 252 Football Coaching Theory

PED 253 Tennis Coaching Theory

PED 254 Track and Cross Country Coaching Theory

PED 255 Volleyball Coaching Theory

PED 256 Wrestling Coaching Theory

PED 257 Swimming and Diving Coaching Theory

PED 258 Softball Coaching Theory

PED 280 Selected Topics. Lecture, discussion, laboratory, or field study on a topic related to Physical Education. One to three credits.

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). Three credits.

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). Three credits.

Music

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). Prerequisite: COM 201. Three credits.

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). Prerequisites: PED 306 and COM 201. Three credits.

PED 315 Sport: Psychosocial Aspects. This course presents an analysis of concepts and application of principles related to the psychosocial aspects of sport participation. Students apply psychosocial principles 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. Two credits.

PED 380 Selected Topics. Lecture, discussion, laboratory, or field study on a topic related to Physical Education. One to three credits.

PED 399 Independent Readings. Special studies in physical education upon consultation with faculty advisor and approval of department chair. One to three credits.

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). Three credits.

PED 480 Selected Topics. Lecture, discussion, laboratory, or field study on a topic related to Physical Education. One to three credits.

PED 499 Independent Study and Research. Special studies in physical education upon consultation with advisor and approval of department chair. One to three credits.

PED 580 Special Topics in Physical Education. Lecture, discussion, laboratory, or field study on a topic related to physical education. One to three credits.

PED 680 Special Topics in Physical Education. Lecture, discussion, laboratory, or field study on a topic related to physical education. One to three credits.

Music (MUS)

Chair: Phipps. Professors: Phipps, Schuster-Craig, Vanden Wyngaard; Associate Professors: Campbell, Copenhaver, Ellenberger, Feurzeig, Marlais, Martin, Norris, Pool, Reichert, Ryan, Schriemer, Stoelzel; Assistant Professors: Catrett-Belrose, Mahave-Veglia, Ryan, Stieler, Tutt, Vavrikova; Distinguished Professor: Jenson.

In addition to the full-time faculty, 40+ distinguished musicians and educators teach applied music and courses in music on a part-time basis.

The Department of Music offers curricula leading to the Bachelor of Arts (B.A.), Bachelor of Music (B.M.), and Bachelor of Music Education degrees (B.M.E.), 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.

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

Music

additional hours in music to be determined by the advisor. Any exceptions to these requirements are left to the discretion of the music department.

Bachelor of Arts

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. 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. Students electing a B.A. in music must complete a minimum of 42 credit hours in music, planned with the approval of a faculty advisor in the department. Course requirements are as follows:

Major Ensembles (4 credit hours)

Choose from the following:

- MUS 101 Grand Valley Singers
- MUS 102 Grand Valley Concert Band
- MUS 103 Grand Valley Symphony Orchestra
- MUS 104 Chamber Music Ensembles
- MUS 105 Grand Valley Jazz Ensemble
- MUS 107 Grand Valley Marching Band
- MUS 109 Festival Chorale
- MUS 110 Collegium Musicum
- MUS 112 Symphonic Wind Ensemble
- MUS 117 Grand Valley University Arts Chorale

Applied Music (8 credit hours)

- MUS 141 Private Instruction in Voice and Instruments— Freshman
- MUS 142 Private Instruction in Voice and Instruments— Freshman
- MUS 241 Private Instruction in Voice and Instruments— Sophomore
- MUS 242 Private Instruction in Voice and Instruments— Sophomore

Music Theory (15 credit hours)

- MUS 130 Music Theory I
- MUS 131 Music Theory II
- MUS 230 Music Theory III
- MUS 231 Music Theory IV
- MUS 495 Analytical Techniques (capstone)

Keyboard Musicianship (2 credit hours)

- MUS 263 Keyboard Musicianship I
- MUS 264 Keyboard Musicianship II

Aural Skills (2 credit hours)

- MUS 133 Aural Perception and Sight-Singing I
- MUS 134 Aural Perception and Sight-Singing II

Music Technology (1 credit hour)

- MUS 181 Technology for Musicians

Music Literature (4 credit hours)

MUS 119 Survey of Music Literature I
 MUS 120 Survey of Music Literature II

Music Electives (6 credit hours)

Choose from the following:

MUS 218 World Music
 MUS 219 Jazz History
 MUS 290 Composition Seminar
 MUS 300 Exploring American Music
 MUS 302 Music: Medieval and Renaissance Eras
 MUS 303 Music: Baroque Era
 MUS 304 Music: Classical Era
 MUS 305 Music: Nineteenth Century
 MUS 306 Music after 1900
 MUS 310 Piano Literature
 MUS 313 Vocal Literature
 MUS 320 Introduction to Conducting
 MUS 330 Instrumentation/Orchestration
 MUS 335 Modal Counterpoint
 MUS 337 Jazz Theory
 MUS 339 Jazz Arranging and Composition
 MUS 380 Special Topics
 MUS 390 Composition Seminar
 MUS 460 Composition Seminar

Final Project

A half recital (minimum 30 minutes) in performance or composition, lecture-recital, or senior honors thesis — May be taken for 1 credit under MUS 499.

Suggested pattern of coursework**Freshman Year — Fall**

- Major ensemble

MUS 141 Private Instruction in Voice and Instruments — Freshman
 MUS 263 Keyboard Musicianship I

Freshman Year — Winter

- Major ensemble

MUS 142 Private Instruction in Voice and Instruments — Freshman
 MUS 264 Keyboard Musicianship II

Sophomore Year — Fall

MUS 119 Survey of Music Literature I
 MUS 130 Music Theory I
 MUS 133 Aural Perception and Sight-Singing I
 MUS 241 Private Instruction in Voice and Instruments — Sophomore

Sophomore Year — Winter

MUS 120 Survey of Music Literature II
 MUS 131 Music Theory II

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MUS 134 Aural Perception and Sight-Singing II

MUS 242 Private Instruction in Voice and Instruments—Sophomore

Junior Year — Fall

- Major ensemble

MUS 181 Technology for Musicians

MUS 230 Music Theory III

Junior Year — Winter

- Major ensemble
- Music electives

MUS 231 Music Theory IV

Senior Year — Fall

- Music electives

Senior Year — Winter

- Senior project

MUS 495 Analytical Techniques (capstone)

Music (B.M.)

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. Students admitted to this program must complete a minimum of 84 credit hours in music. For students with abilities in composition and/or jazz studies, there is opportunity to develop these skills as well. Requirements for the B.M. are as follows:

Music Theory and Ear Training (Hours: 22)

MUS 130 Music Theory I

MUS 131 Music Theory II

MUS 133 Aural Perception and Sight-Singing I

MUS 134 Aural Perception and Sight-Singing II

MUS 230 Music Theory III

MUS 231 Music Theory IV

MUS 233 Aural Perception and Sight-Singing III

MUS 234 Aural Perception and Sight-Singing IV

MUS 495 Analytical Techniques (capstone)

And one course from:

MUS 330 Instrumentation/Orchestration

MUS 335 Modal Counterpoint

Music Literature and History (Hours: 8)

MUS 119 Survey of Music Literature I

MUS 120 Survey of Music Literature II

MUS 306 Music after 1900

And one course from:

MUS 302 Music: Medieval and Renaissance Eras

MUS 303 Music: Baroque Era

MUS 304 Music: Classical Era
 MUS 305 Music: Nineteenth Century

Keyboard Musicianship (Hours: 0-4)

Piano majors are exempt from this requirement

MUS 263 Keyboard Musicianship I
 MUS 264 Keyboard Musicianship II
 MUS 283 Keyboard Musicianship III
 MUS 284 Keyboard Musicianship IV (voice majors only)

Conducting (Hours: 2)

MUS 320 Introduction to Conducting

Music Technology (Hour: 1)

MUS 181 Technology for Musicians

Major Ensembles (Hours: 7)

To be selected according to major instrument:

MUS 101 Grand Valley Singers
 MUS 102 Grand Valley Concert Band
 MUS 103 Grand Valley Symphony Orchestra
 MUS 107 Grand Valley Marching Band
 MUS 112 Symphonic Wind Ensemble
 MUS 117 Grand Valley University Arts Chorale

Applied Music (Hours: 32)

MUS 144 Private Instruction in Voice and Instruments— Freshman
 MUS 145 Private Instruction in Voice and Instruments— Freshman
 MUS 244 Private Instruction in Voice and Instruments— Sophomore
 MUS 245 Private Instruction in Voice and Instruments— Sophomore
 MUS 344 Private Instruction in Voice and Instruments— Junior
 MUS 345 Private Instruction in Voice and Instruments— Junior
 MUS 444 Private Instruction in Voice and Instruments— Senior
 MUS 445 Private Instruction in Voice and Instruments— Senior

Other Applied (Hours: 2)

May be fulfilled with Keyboard Musicianship courses and recital credits.

Pedagogy and Literature:

Piano Majors (Hours: 8)

MUS 310 Piano Literature
 MUS 361 Piano Pedagogy I
 MUS 371 Piano Pedagogy II

Voice Majors (Hours: 6)

MUS 313 Vocal Literature
 MUS 358 Vocal Pedagogy
 MUS 359 Diction for Singers

All others (Hours: 4)

MUS 499 Independent Study and Research in Music
 (independent study with applied or other instructor)

Music

Music Electives (Hours: 6)

Half Recital and Full Senior Recital

(0 hours or may be taken for credit under “other applied”)

Additional Requirements:

Foreign Language for Voice Majors (Hours: 8)

Two courses in differing languages.

Bachelor of Music—Jazz Studies

Music Theory and Ear Training (Hours: 25)

MUS 130 Music Theory I

MUS 131 Music Theory II

MUS 133 Aural Perception and Sight-Singing I

MUS 134 Aural Perception and Sight-Singing II

MUS 230 Music Theory III

MUS 231 Music Theory IV

MUS 233 Aural Perception and Sight-Singing III

MUS 234 Aural Perception and Sight-Singing IV

MUS 337 Jazz Theory

MUS 339 Jazz Arranging and Composition

MUS 495 Analytical Techniques (capstone)

Music Literature and History (Hours: 9)

MUS 119 Survey of Music Literature I

MUS 120 Survey of Music Literature II

MUS 219 Jazz History

And one course from:

MUS 302 Music: Medieval and Renaissance Eras

MUS 303 Music: Baroque Era

MUS 304 Music: Classical Era

MUS 305 Music: Nineteenth Century

MUS 306 Music after 1900

Keyboard Musicianship (Hours: 0-3)

MUS 263 Keyboard Musicianship I

MUS 264 Keyboard Musicianship II

MUS 283 Keyboard Musicianship III

Conducting (Hours: 2)

MUS 320 Introduction to Conducting

Music Technology (Hour: 1)

MUS 181 Technology for Musicians

Major Ensembles (Hours: 12)

6 hours chosen from:

MUS 101 Grand Valley Singers

MUS 102 Grand Valley Concert Band

MUS 103 Grand Valley Symphony Orchestra

MUS 107 Grand Valley Marching Band

MUS 112 Symphonic Wind Ensemble
 MUS 117 Grand Valley University Arts Chorale

6 hours chosen from:

MUS 105 Grand Valley Jazz Ensemble
 MUS 106 Small Jazz Ensemble

Applied Music (Hours: 26)

MUS 141 Private Instruction in Voice and Instruments—Freshman
 MUS 142 Private Instruction in Voice and Instruments—Freshman
 MUS 246 Private Instruction in Voice and Instruments Jazz—Sophomore
 MUS 247 Private Instruction in Voice and Instruments Jazz—Sophomore
 MUS 346 Private Instruction in Voice and Instruments Jazz—Junior
 MUS 347 Private Instruction in Voice and Instruments Jazz—Junior
 MUS 446 Private Instruction in Voice and Instruments Jazz—Senior
 MUS 447 Private Instruction in Voice and Instruments Jazz—Senior

Pedagogy (Hours: 2)

MUS 374 Jazz Pedagogy

Music Electives (Hours: 6)

(The following may be substituted for music electives)

CBR 281 Audio Production I
 CBR 382 Audio Production II
 CBR 485 Audio Production III

Half Recital and Full Senior Recital

Music Education (B.M.E.)

The B.M.E. enables students to meet certification requirements for teaching music in Michigan elementary and secondary schools. This degree has two tracks—vocal/choral emphasis and instrumental emphasis. Students must earn a minimum of 68 hours in music and 39 hours in professional education.

Vocal/choral majors normally will choose an applied emphasis in voice or keyboard. In addition, they must take one semester each of Class Woodwinds, Class Brass, and Class Strings.

Instrumental majors normally will choose a standard band or orchestra instrument as their applied emphasis. In addition, they must take one semester each of Class Voice and Class Percussion and two semesters each of Class Woodwinds, Class Brass, and Class Strings. Requirements for the B.M.E. are as follows:

Music Theory and Ear Training (Hours: 22)

MUS 130 Music Theory I
 MUS 131 Music Theory II
 MUS 133 Aural Perception and Sight-Singing I
 MUS 134 Aural Perception and Sight-Singing II
 MUS 230 Music Theory III
 MUS 231 Music Theory IV
 MUS 233 Aural Perception and Sight-Singing III
 MUS 234 Aural Perception and Sight-Singing IV
 MUS 495 Analytical Techniques (capstone)

Music

And one course from:

MUS 330 Instrumentation/Orchestration
MUS 335 Modal Counterpoint
MUS 337 Jazz Theory

Music Literature and History (Hours: 8)

MUS 119 Survey of Music Literature I
MUS 120 Survey of Music Literature II
MUS 306 Music after 1900

And one course from:

MUS 302 Music: Medieval and Renaissance Eras
MUS 303 Music: Baroque Era
MUS 304 Music: Classical Era
MUS 305 Music: Nineteenth Century

Keyboard Musicianship (Hours: 0-4)

Piano majors are exempt from this requirement

MUS 263 Keyboard Musicianship I
MUS 264 Keyboard Musicianship II
MUS 283 Keyboard Musicianship III
MUS 284 Keyboard Musicianship IV (voice majors only)

Music Technology (Hour: 1)

MUS 181 Technology for Musicians

Major Ensembles (Hours: 7)

To be selected according to major instrument:

MUS 101 Grand Valley Singers
MUS 102 Grand Valley Concert Band
MUS 103 Grand Valley Symphony Orchestra
MUS 107 Grand Valley Marching Band
MUS 112 Symphonic Wind Ensemble
MUS 117 Grand Valley University Arts Chorale

Instrumental Emphasis

Students (excluding string musicians) *must* complete two hours of:

MUS 107 Grand Valley Marching Band

Applied Music (Hours: 14)

MUS 141 Private Instruction in Voice and Instruments— Freshman
MUS 142 Private Instruction in Voice and Instruments— Freshman
MUS 241 Private Instruction in Voice and Instruments— Sophomore
MUS 242 Private Instruction in Voice and Instruments— Sophomore
MUS 341 Private Instruction in Voice and Instruments— Junior
MUS 342 Private Instruction in Voice and Instruments— Junior
MUS 441 Private Instruction in Voice and Instruments— Senior

Half Recital (Hours: 0)

Conducting and Repertory (Hours: 5)

Instrumental Emphasis:

MUS 320 Introduction to Conducting
MUS 321 Instrumental Conducting

Vocal/Choral Emphasis:

MUS 320 Introduction to Conducting
 MUS 322 Choral Conducting

Music Education (Hours: 7)**Instrumental Emphasis:**

MUS 200 Introduction to Music Education
 MUS 362 Marching Band Techniques
 MUS 456 Teaching Music in the Elementary School
 MUS 461 Instrumental Music Methods and Materials

Vocal/Choral Emphasis:

MUS 200 Introduction to Music Education
 MUS 354 Teaching the Developing Voice
 MUS 456 Teaching Music in the Elementary School
 MUS 465 Choral/General Music in the Secondary School

Secondary Instruments (Hours: 4-12)**Instrumental Emphasis (Hours: 8)**

MUS 250 Class Voice
 MUS 253 Single Reeds
 MUS 254 Double Reeds and Flute
 MUS 255 High Brass
 MUS 256 Low Brass
 MUS 257 Class Percussion
 MUS 258 High Strings
 MUS 259 Low Strings

Vocal/Choral Emphasis with voice as major instrument (Hours: 4)

MUS 253 Single Reeds
 MUS 255 High Brass
 MUS 257 Class Percussion
 MUS 258 High Strings

Vocal/Choral Emphasis with piano as major instrument (Hours: 10-12)

(Class Voice)

MUS 250 Class Voice
 MUS 253 Single Reeds
 MUS 255 High Brass
 MUS 257 Class Percussion
 MUS 258 High Strings

And (2 semesters of applied voice)

MUS 141 Private Instruction in Voice and Instruments— Freshman
 MUS 142 Private Instruction in Voice and Instruments— Freshman

Or (4 semesters of applied voice)

MUS 141 Private Instruction in Voice and Instruments— Freshman
 MUS 142 Private Instruction in Voice and Instruments— Freshman
 MUS 241 Private Instruction in Voice and Instruments— Sophomore
 MUS 242 Private Instruction in Voice and Instruments— Sophomore

Music

Additional Requirements:

Professional Education (Hours: 39)

ED 200 Introduction to Education
ED 205 Computers in Education
ED 225 Diversity in Education
ED 310 Organizing and Managing Classroom Environments
ED 321 Content Area Literacy
ED 331 Methods and Strategies of Secondary Teaching
ED 431 Student Teaching, Secondary
PSY 301 Child Development
PSY 325 Educational Psychology

Sample Curricula

Sample curricula for all degree programs can be found in the *Music Department Handbook*.

Requirements for a Minor in Music

A student choosing to minor in music must complete at least 28 hours in the field. A minor program should include eight hours of applied music, three hours of major ensemble, eight hours of theory and sight-singing, Music 119 and 120, and with the assistance of an assigned music advisor, an appropriate elective such as an additional semester of ensemble participation or applied lessons or courses such as MUS 218, 219, or 300. Conducting 320 is a highly recommended addition to this program. Music minors are required to complete Keyboard Musicianship I and II (MUS 263 and 264).

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.

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.

Degree Requirements

MUS 651 Measurement and Evaluation in Music Education
MUS 655 Foundations and Principles of Music Education
MUS 656 Introduction to Research in Music Education

Plus an additional 6 credit hours chosen from:

MUS 621 Advanced Instrumental Conducting and Literature
MUS 622 Advanced Choral Conducting and Literature
MUS 643 Applied Music
MUS 658 Applications of Technology in Music Education
MUS 680 Special Topics in Music

Courses of Instruction

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. 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. Two credits.

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. Three credits.

MUS 101 Grand Valley Singers. The principal university choir. Fulfills degree requirements for major ensemble participation. Prerequisite: Successful audition and permission of instructor. One credit.

MUS 102 Grand Valley Concert Band. Fulfills degree requirements for major ensemble participation. Offered winter semester. One credit.

MUS 103 Grand Valley Symphony Orchestra. Fulfills degree requirements for major ensemble participation. Prerequisite: Successful audition or permission of instructor. One credit.

MUS 104 Chamber Music Ensembles. Chamber music groups such as string quartet, woodwind quintet, vocal ensembles, or brass quartet. Corequisite: MUS 101, MUS 102, MUS 103, or MUS 109. One credit.

MUS 105 Grand Valley Jazz Ensemble. Big jazz band. Prerequisite: Permission of instructor. One credit.

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. Prerequisite: Permission of instructor. One credit.

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. Prerequisite: Successful audition at band camp. One credit.

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. Audition and/or the permission of instructor. One credit.

MUS 109 Festival Chorale. 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. One credit.

MUS 110 Collegium Musicum. Performance of older music (mainly before 1700) by students, either singing or playing on period instruments. Prerequisite: Permission of instructor. One credit.

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. One credit.

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. Prerequisite: Audition and permission of instructor. One credit.

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. One credit.

MUS 114 Grand Valley Cello Ensemble. A chamber music experience for cellists that develop skills necessary for ensemble performance. Prerequisite: Prior approval of the instructor. One credit.

Music

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: Prior approval of the instructor. One credit.

MUS 116 Grand Valley Madrigal Ensemble. Sixteen-voice SATB ensemble performing a cappella madrigals and motets of the early periods of music. One credit.

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. One credit.

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. One credit.

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. Two credits.

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. Prerequisite: MUS 119. Two credits.

MUS 122 Non-Major Piano 1. 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. One credit.

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. MUS 122 or permission of instructor. One credit.

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. Three credits.

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. Co-requisite: MUS 133. Three credits.

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. Prerequisite: MUS 130 or permission of instructor. Corequisite: MUS 134. Three credits.

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. Corequisite: MUS 130. One credit.

MUS 134 Aural Perception and Sight-Singing II. Continuing development of musicianship through intervallic drill, dictation and singing exercises with subdivision of the beat and syncopation. Aural recognition of cadence types, melodic techniques, and tonal forms as studied in

MUS 131. Sing and play exercises with chordal accompaniment. Required of music majors. Offered winter semester. Prerequisite: MUS 133 or permission of instructor. Corequisite: MUS 131. One credit.

MUS 141 Private Instruction in Voice and Instruments— Freshman. The course number indicates a one half-hour lesson per week and is offered for two hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Two credits.

MUS 142 Private Instruction in Voice and Instruments— Freshman. The course number indicates a one half-hour lesson per week and is offered for two hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Two credits.

MUS 144 Private Instruction in Voice and Instruments— Freshman. The course number indicates a one-hour lesson per week and is offered for four hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Four credits.

MUS 145 Private Instruction in Voice and Instruments— Freshman. The course number indicates a one-hour lesson per week and is offered for four hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Four credits.

MUS 180 Arts at Noon. An exploration of theatre, dance, and musical arts through lectures and attendance of professional performances. Offered fall and winter semesters. One credit.

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. Prerequisite: MUS 131. One credit.

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. One credit.

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. Prerequisite: MUS 100 or MUS 120 or permission of instructor. Three credits.

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

Music background is helpful but not mandatory. Fulfills U.S. Diversity requirements. Offered fall semester. Prerequisite: WRT 150. General education requirement CUL/USD. Three credits.

MUS 230 Music Theory III. A study of nineteenth-century harmonic, melodic, and formal techniques, including alternate resolutions of diatonic and chromatic seventh chords, altered and expanded tertian harmonies. Analyses of works in a variety of mediums. Introduction to species and harmonically governed counterpoint. Required of music majors. Offered fall semester. Prerequisite: MUS 131. Three credits.

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 selected jazz improvisation. Required of music majors. Offered winter semester. Prerequisite: MUS 230. Three credits.

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 bicinea 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. Prerequisites: MUS 133 and MUS 134 with grade of C or better. One credit.

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. Prerequisite: MUS 233 with grade of C or better. Co-requisite: MUS 231. One credit.

MUS 236 Accompanying and Sight-Reading. A skill-development course for pianists covering vocal and instrumental accompaniments. Offered fall semester. Prerequisite: MUS 142 or permission of instructor. Two credits.

MUS 241 Private Instruction in Voice and Instruments—Sophomore. The course number indicates a one half-hour lesson per week and is offered for two hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Two credits.

MUS 242 Private Instruction in Voice and Instruments—Sophomore. The course number indicates a one half-hour lesson per week and is offered for two hours credit per semester. The student identifies the appropriate instrument at the time of registration. Students may repeat Music 242 or 245 with credit until able to pass on to the junior level, with the understanding that the entire applied music course series through Music 442 or 445 must be completed. 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. 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. Two credits.

MUS 244 Private Instruction in Voice and Instruments—Sophomore. The course number indicates a one-hour lesson per week and is offered for four hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Four credits.

MUS 245 Private Instruction in Voice and Instruments—Sophomore. The course number indicates a one-hour lesson per week and is offered for four hours credit per semester. The

student identifies the appropriate instrument at the time of registration. Students may repeat Music 242 or 245 with credit until able to pass on to the junior level, with the understanding that the entire applied music course series through Music 442 or 445 must be completed. 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. 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. Four credits.

MUS 246 Private Instruction in Voice and Instruments Jazz—Sophomore. The course number indicates a one-hour lesson per week and is offered for three hours credit per semester. Registration in this applied music course is limited to those students who have been admitted to the B.M. in Jazz Performance. 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. 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. Three credits.

MUS 247 Private Instruction in Voice and Instruments Jazz—Sophomore. The course number indicates a one-hour lesson per week and is offered for three hours credit per semester. Registration in this applied music course is limited to those students who have been admitted to the B.M. in Jazz Performance. 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. 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. Three credits.

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. One credit.

MUS 263 Keyboard Musicianship I. Introductory keyboard skills, scales, chords, easy pieces, transpositions, improvisations, basic theory at the keyboard. Offered fall semester. Prerequisite or corequisite: MUS 130. One credit.

MUS 264 Keyboard Musicianship II. A continuation of MUS 263. Offered winter semester. Prerequisite: MUS 263 or permission of instructor. One credit.

MUS 281 Introduction to Music Technology I. A broad introduction to the current state of the art of music technology. Topics covered include the principles of digital audio, MIDI sequencing, music notation software, and an introduction to algorithmic composition. Offered fall semester. Prerequisites: MUS 129 or concurrent enrollment in MUS 130. Three credits.

MUS 282 Introduction to Music Technology II. A continuation of MUS 281. Focuses on digital signal processing, the interactive programming language MAX, audio for multimedia and the Internet, and a historical overview of the growth of music technology in the 20th century. Offered winter semester. Prerequisite: MUS 281. Three credits.

MUS 283 Keyboard Musicianship III. Intermediate keyboard skills, accompaniments to melodies, sequential and free transposition, improvisation, open-score reading, and other creative skills at the keyboard. Required of all majors. Offered fall and winter semesters. Prerequisite: MUS 264. One credit.

MUS 284 Keyboard Musicianship IV. A continuation of MUS 283. Required of all music majors whose primary instrument is voice. Offered fall and winter semesters. Prerequisite: MUS 283 or permission of instructor. One credit.

MUS 290 Composition Seminar. Original composition projects. Individual tutorials devoted to discussion of works in progress and group sessions devoted to exploring various topics of mutual concern to composers. Offered fall and winter semesters. Prerequisite: MUS 131 or permission of instructor. Interview with the instructor required before registering for this seminar. Any level may be repeated for credit. Three credits.

Music

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. 3 credits. Three credits.

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. Prerequisite: MUS 120. Two credits.

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 in weekly labs. Offered fall semester on sufficient demand of even-numbered years. Prerequisite: MUS 120. Two credits.

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. Development of listening skills in weekly labs. Offered winter semester of even-numbered years. Prerequisite: MUS 120. Two credits.

MUS 305 Music: Nineteenth Century. A study of nineteenth-century music by men and women composers of Europe and North America, considering representative examples of symphonic poem, lied, character pieces, chamber music, and nationalistic music. Study of "classical" forms as altered in opera and symphonic music. Development of listening skills in weekly labs. Offered winter semester of odd-numbered years. Prerequisite: MUS 120. Two credits.

MUS 306 Music after 1900. A study of literature and developments in Western music after 1900 with a broadening of horizons through the study of selected musical cultures of the world's peoples. Required of music majors. Offered fall semester. Prerequisite: MUS 120. Two credits.

MUS 310 Piano Literature. A study of music written for the keyboard from the Renaissance to the present time. Offered on sufficient demand. Prerequisite: MUS 242. Two credits.

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. Prerequisite: Permission of instructor. Two credits.

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. Prerequisite: Permission of department. Two credits.

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. Prerequisites: MUS 221 and MUS 320. Three credits.

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. Prerequisites: MUS 222 and MUS 320. Three credits.

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. Prerequisite: MUS 231. Three credits.

MUS 335 Counterpoint. Analysis and composition based on sixteenth-century contrapuntal practices. Offered fall semester in even numbered years. Prerequisite: MUS 231. Three credits.

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. Prerequisite: MUS 231 or permission of instructor. Two credits.

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. Prerequisite: MUS 337. Three credits.

MUS 341 Private Instruction in Voice and Instruments—Junior. The course number indicates a one half-hour lesson per week and is offered for two hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. 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. Two credits.

MUS 342 Private Instruction in Voice and Instruments—Junior. The course number indicates a one half-hour lesson per week and is offered for two hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Two credits.

MUS 343 Half Recital. Preparation for half recital. Prerequisite: Permission of instructor. One credit.

MUS 344 Private Instruction in Voice and Instruments—Junior. The course number indicates a one-hour lesson per week and is offered for four hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Four credits.

MUS 345 Private Instruction in Voice and Instruments—Junior. The course number indicates a one-hour lesson per week and is offered for four hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Four credits.

MUS 346 Private Instruction in Voice and Instruments Jazz—Junior. The course number indicates a one-hour lesson per week and is offered for three hours credit per semester. Registration in this applied music course is limited to those students who have been admitted to the B.M. in Jazz Performance. 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. 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. Three credits.

MUS 347 Private Instruction in Voice and Instruments Jazz—Junior. The course number indicates a one-hour lesson per week and is offered for three hours credit per semester. Registration in this applied music course is limited to those students who have been admitted to the

Music

B.M. in Jazz Performance. 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. 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. Three credits.

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. Three credits.

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. Prerequisites: MUS 242 or MUS 245. Required of all B.M.E. vocal/choral students. Two credits.

MUS 357 Opera Theatre. An ensemble course for voice students who have been assigned major roles in Opera Theatre mainstage productions. Emphasis on practical aspects of studio voice work, acting, and movement classes. Offered every semester. Prerequisite: Permission of instructor. One credit.

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. Two credits.

MUS 359 Diction for Singers. Develops a basis for proper pronunciation and understanding of foreign language songs. Offered fall semester. Prerequisite: FRE 101 and GER 101. Two credits.

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. Prerequisite: MUS 242 or MUS 245. Three credits.

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. Two credits.

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. Two credits.

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. Prerequisite: MUS 361. Three credits.

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. Prerequisite: MUS 337. Two credits.

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. Prerequisites: MUS 361. One credit.

MUS 380 Special Topics. The opportunity to develop certain advanced skills or study material not regularly offered as part of the music curriculum. Prerequisite: Permission of instructor. One to four credits.

MUS 390 Composition Seminar. Continuation of MUS 290. Interview with instructor required before registering. May be repeated for credit. Offered fall and winter semesters. Three credits.

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. One to four credits.

MUS 441 Private Instruction in Voice and Instruments—Senior. The course number indicates a one half-hour lesson per week and is offered for two hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Two credits.

MUS 442 Private Instruction in Voice and Instruments—Senior. The course number indicates a one half-hour lesson per week and is offered for two hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Two credits.

MUS 443 Full Recital. Preparation for full recital. Prerequisite: Permission of instructor. Two credits.

MUS 444 Private Instruction in Voice and Instruments—Senior. The course number indicates a one-hour lesson per week and is offered for four hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Four credits.

MUS 445 Private Instruction in Voice and Instruments—Senior. The course number indicates a one-hour lesson per week and is offered for four hours credit per semester. The student identifies the appropriate instrument at the time of registration. 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. 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. Four credits.

MUS 446 Private Instruction in Voice and Instruments Jazz—Senior. The course number indicates a one-hour lesson per week and is offered for three hours credit per semester. Registration in this applied music course is limited to those students who have been admitted to the B.M. in Jazz Performance. 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. 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. Three credits.

MUS 447 Private Instruction in Voice and Instruments Jazz—Senior. The course number indicates a one-hour lesson per week and is offered for three hours credit per semester. Registration in this applied music course is limited to those students who have been admitted to the B.M. in Jazz Performance. 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. 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. Three credits.

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. Two credits.

Music

MUS 460 Composition Seminar. Continuation of MUS 390. Interview with instructor required before registering. May be repeated for credit. Offered fall and winter semesters. Three credits.

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. Two credits.

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. Two credits.

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. Three credits.

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. One to four credits.

Graduate Courses

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. Three credits.

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. Three credits.

MUS 643 Applied Music. Private instruction on one's principal performing instrument. Offered fall and winter semester. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

MUS 680 Special Topics in Music. Specialized topics ranging from specific genres of music to specific pedagogical issues in teaching. Offered on demand. One to three credits.

Class Instruction in Voice and Instruments

The classes listed below are designed to provide teaching and performance skills in the medium indicated.

MUS 250 Class Voice. Offered winter semester. One credit.

MUS 253 Single Reeds. Offered fall semester. One credit.

MUS 254 Double Reeds and Flute. Offered winter semester. One credit.

MUS 255 High Brass. Offered fall semester. One credit.

MUS 256 Low Brass. Offered winter semester. One credit.

MUS 257 Class Percussion. Offered winter semester. One credit.

MUS 258 High Strings. Offered fall semester. One credit.

MUS 259 Low Strings. Offered winter semester. One credit.

MUS 260 Classical Guitar I. One credit.

MUS 261 Classical Guitar II. Prerequisite: MUS 260. One credit.

Natural Resources Management (NRM)

Chair: Menon. Assistant Chair: Keenlance; Professor: Northup; Associate Professors: Griffin, MacDonald, Menon; Assistant Professors: Aschenbach, Nordman, Rueth.

Degree offered: B.S. in Natural Resources Management.

The curriculum is designed to provide students with the skills to promote the intelligent use and preservation of natural resources in professional as well as volunteer service and advocate capacities. With guidance from their advisor, students may develop customized programs.

Workers in the complex field of resource management need to understand local, state, and national economic and environmental values, priorities, and policies. Graduates of the NRM program will be prepared to assume responsibility for the management of natural resources on private or public lands. They will have a firm foundation in both theoretical concepts and practical applications related to the restoration, management, and protection of soils, watershed, fish and wildlife populations, and a range of natural ecosystems including wetlands and forests. They will be sensitive to the need for maintaining environmental quality and ecosystem integrity while dealing with policy issues related to balancing resource utilization with aesthetic values, recreational uses, and the changing needs of a dynamic society.

The NRM program offers students scientific skills training with quantitative and qualitative decision-making techniques. The Bachelor of Science degree program requires a core of science courses from biology, chemistry, geology, mathematics, and statistics. On this foundation, interdisciplinary courses in natural resource management are designed to integrate theoretical systems concepts with practical applications.

Students in natural resource management may gain practical work experience through internships with nonprofit organizations, government, and industry. In addition, they can arrange special studies or research with faculty on a variety of natural resource topics of current concern. Select project opportunities are available.

Requirements for a Major

Natural resources management majors must fulfill the requirements below. Emphases are optional.

Natural Resources Management

1. General University Degree Requirements

As identified in the General Academic Policies section of the Grand Valley State University Undergraduate and Graduate Catalog.

2. Completion of B.S. Degree Cognates, including:

BIO 460 Terrestrial Ecosystem Ecology
MTH 122 College Algebra
NRM 320 Introduction to Resource Systems

3. Completion of 33 Additional Hours of NRM Courses, including:

NRM 150 Introduction to Natural Resources
NRM 495 Trends in Natural Resource Management (capstone)

4. Completion of Natural Resources Management Cognate Courses

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
GEO 111 Exploring the Earth
STA 215 Introductory Applied Statistics

5. Additional Semester Hours

These courses must be selected in consultation with and approved by the student's faculty advisor.

Thirteen additional semester hours of cognates selected from:

BIO 222 Natural History of Vertebrates (and above)
CHM 116 Principles of Chemistry II (and above)
CS 150 Introduction to Computing (and above)
GEO 112 Earth History (and above)
GPY 307 Introduction to Computer Mapping/Geographic Information Systems
 or GPY 407 Advanced GIS
MTH 123 Trigonometry (and above)
STA 216 Intermediate Applied Statistics (and above)

Sample Curriculum

First Year

- General education courses

BIO 120 General Biology I
BIO 121 General Biology II
CHM 109 Introductory Chemistry
 or CHM 115 Principles of Chemistry I*
GEO 111 Exploring the Earth
MTH 110 Algebra
MTH 122 College Algebra
NRM 150 Introduction to Natural Resources
WRT 150 Strategies in Writing

Second Year

- General education courses

BIO 215 General Ecology
NRM 250 Resource Measurement and Maps
NRM 281 Principles of Soil Science
NRM 350 Aerial Photography and Remote
 Sensing of the Environment
STA 215 Introductory Applied Statistics

*Only students who plan to take additional chemistry courses as cognates should take CHM 115.

Third Year

- General education courses
- Cognate courses
- Elective

NRM 295 GIS Applications in Resource Management

NRM 320 Introduction to Resource Systems

NRM 395 GIS Applications in Resource Management

NRM 451 Natural Resource Policy

NRM 452 Watershed and Wetland Management

NRM 462 Forest Ecosystem Management

Fourth Year

- Electives
- Cognate courses

BIO 460 Terrestrial Ecosystem Ecology

NRM 495 Trends in Natural Resource Management (capstone)

Emphases (optional):**1. Ecosystem Science and Management:**

Completion of this emphasis does not require any credits in addition to those required for the general NRM degree program.

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. In order to complete the requirements for this optional emphasis, students must select:

As part of their Hours of NRM Electives (see #3 under Degree Requirements)

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

As part of their Cognate Electives (See #5 under Degree Requirements)

BIO 333 Systematic Botany

BIO 362 Fisheries Biology

BIO 408 Wildlife Management

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. Students selecting this emphasis are required to take the following set of courses as part of their NRM and cognate courses:

(CHM 109 does not count for the emphasis)

CHM 115 Principles of Chemistry I

and CHM 116 Principles of Chemistry II

Natural Resources Management

NRM 250 Resource Measurement and Maps
NRM 281 Principles of Soil Science
NRM 330 Environmental Pollution
NRM 451 Natural Resource Policy
NRM 452 Watershed and Wetland Management

And at least eight credits from:

BIO 338 Environmental Ethics
BIO 357 Environmental Microbiology
BIO 440 Limnology
BIO 450 Stream Ecology
BIO 470 Conservation Biology
CHM 221 Survey of Analytical Chemistry
CHM 222 Quantitative Analysis
CHM 231 Introductory Organic Chemistry
CHM 232 Biological Chemistry
CHM 321 Environmental Chemistry
CHM 322 Environmental Chemical Analysis
GEO 112 Earth History
GEO 320 Geomorphology (Earth Science Capstone)
GEO 430 Oceanography
GEO 440 Geohydrology
GEO 445 Introduction to Geochemistry
GPY 307 Introduction to Computer Mapping/Geographic Information Systems
OSH 414 Environmental Safety and Health Regulations
PHY 200 Physics for the Life Sciences

In Addition

At least seven credits from other NRM courses are required to provide a minimum of 40 hours of NRM and 40 hours of cognate coursework each, as required for the NRM B.S. degree. Completion of this optional emphasis does not require any credits above the general NRM degree.

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. In addition to courses required for the general NRM degree, students are required to take:

CS 150 Introduction to Computing
or CS 160 Programming with Visual Basic
CS 231 Problem Solving Using Spreadsheets
CS 233 Concepts of Database Systems
and GPY 307 Introduction to Computer Mapping/Geographic Information Systems
NRM 250 Resource Measurement and Maps
NRM 350 Aerial Photography and Remote Sensing of the Environment
NRM 395 GIS Applications in Resource Management

In Addition

To the specifically required NRM and cognate courses, students must select at least 15 credits from other NRM courses to provide a minimum of 40 hours of NRM coursework as required for the NRM B.S. degree. Completion of this emphasis does not require any additional credits over those required for the general NRM degree program.

Requirements for a Minor

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
- No more than three credits of 490 and 499

NRM 150 Introduction to Natural Resources

Courses of Instruction

Lecture, discussion, and laboratory hours are given in parentheses at the end of each course description. Courses may be offered during the spring/summer session depending on student demand and/or faculty availability.

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. Four credits.

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. Three credits.

NRM 180 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. One to four credits.

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). Prerequisite: One course in natural science. Four credits.

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. Four credits.

NRM 280 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisite: variable. One to four credits.

NRM 281 Principles of Soil Science. Aspects of the physical, chemical, and biological properties of soils. (3-0-3) Offered fall semester. Prerequisites: High school chemistry or CHM 109 and GEO 111. Four credits.

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. Prerequisite: BIO 215 and MTH 122. Three credits.

NRM 330 Environmental Pollution. Investigation of causes and effects of water, soil and air pollution. Prevention and management of pollution will be discussed and examined from natural and social science perspectives. Design of impact assessment studies, data interpretation and laboratory methods. Topics may include waste disposal, acid deposition, climate change,

Natural Resources Management

toxicology, and risk assessment. (2-0-3) Offered winter semester. Prerequisites: CHM 109 or 116; BIO 215 (recommended). Three credits.

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, GEO 111, or permission of the instructor. Four credits.

NRM 380 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. Prerequisite: Junior or senior status in biology, geology, resource management, or permission of instructor. One to four credits.

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 and NRM 250 or permission of instructor. Three credits.

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. One to three credits.

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. Prerequisites: Junior standing and completion of the General Education Life Science requirement. Three credits.

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. Prerequisite: Junior standing. Four credits.

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 or 125, NRM 281. Four credits.

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. Prerequisites: BIO 215 and junior or senior standing in biology or natural resources management, or permission of instructor. Four credits.

NRM 480 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. One to four credits. One to four credits.

NRM 481 Soilscales and Soil Classification. Processes of soil formation, the occurrence of soils of the landscape, and soil classification. (3-0-3). Prerequisite: NRM 281. Four credits.

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). Prerequisites: NRM 281 and BIO 215. Four credits.

NRM 490 Internship in Resource Management. Internships are available in all areas of specialization. Location of placement and credit must be arranged with the appropriate faculty before registration. (no more than five credits in 490 and 499 can be applied to the major; three to the minor). Offered each semester. Prerequisite: Junior or senior status in resource management. One to five credits.

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. Four credits.

NRM 499 Research in Resource Management. Research conducted individually with faculty supervision and/or in cooperation with other majors in resource management. Research projects and credit hours must be approved by the appropriate faculty before registration. Limits: Three credits toward major or minor; five credits of NRM 490 plus NRM 499 toward major or three toward minor. Prerequisite: Junior or senior status in resource management. One to three credits.

NRM 580 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. One to four credits. One to four credits.

NRM 680 Special Topics. Lecture, discussion, laboratory, or field experience (or any combination of the preceding) in specific areas of resource management. One to four credits. One to four credits.

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. Three to nine credits.

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. Three to nine credits.

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. Three to nine credits.

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. One to three credits.

Kirkhof College of Nursing (NUR)

Dean: Gendler. Professors: Grinstead, Kline; Associate Professors: Barry, Beel-Bates, Bostrom, Coviak, Droste-Bielak, Jewell, Leder, Martin, Mupepi, Schafer, Schoofs, Scott, Van Doran; Assistant Professors: Bambini, Brintnall, Britton, Davis, Jensen, Reick, Ryan,

Nursing

Steele, VanderWerf, Washburn; Learning Laboratory Coordinator: Perkins, Schollmeyer; Student Support Services: Alt, Brown-Bayus, Carter-Pugh, Moerland; Coordinator of Standardized Patient Program: Ronning.

The Kirkhof College of Nursing (KCON) at Grand Valley is accredited by the Commission on Collegiate Nursing Education 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 Kirkhof College of Nursing offers admission to qualified undergraduate students through its traditional prenursing, freshman, transfer, second degree, and RN to BSN entry points. Admission to the undergraduate nursing major is selective and highly competitive. The Kirkhof College of Nursing offers admission to qualified graduate students. Admission to the graduate nursing program is selective and highly competitive.

Degrees Offered

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.; an M.S.N. option for Registered Nurses with degrees in other disciplines; and a combined Master of Science in Nursing and Master of Business Administration, M.S.N./M.B.A.

Accreditation

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 Commission on Collegiate Nursing Education.

The Kirkhof College of Nursing offers educational opportunities to men and women who wish to prepare themselves for the responsibilities of professional nursing practice in a dynamic and changing health care system.

Continuing education courses and workshops are also offered to assist nurses in updating their knowledge and in learning new roles and functions.

Mission Statement and Philosophy

Mission

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

Vision

The Kirkhof College of Nursing will be a regional, national, and international leader in:

- educating individuals at the undergraduate and graduate levels for professional nursing practice, leadership, and scholarship
- developing creative partnerships with communities, and
- providing innovative research-based practice models to address the health needs of diverse populations.

Philosophy

The Kirkhof College of Nursing, as an academic unit of Grand Valley State University, supports the University's goals of education, research, and public service. The curricula

provide educational experiences that encourage intellectual achievement, critical thinking, and self-expression while maintaining emphasis on the importance of human values and cultures. The college initiates and maintains relations with West Michigan, national, and global communities to share resources and knowledge in approaches to health care. The faculty role is to educate nurses who promote health and wellness and diagnose and treat a wide range of human responses to actual and potential health problems while holding the highest regard for those in their care.

The baccalaureate degree provides the base for professional practice. Graduates of this program function as generalists and provide comprehensive care to individuals, families, groups, and communities. The master's degree provides nurses with advanced knowledge for roles in education, administration, case management, or clinical practice.

The faculty subscribe to the following beliefs about persons, environment, health, nursing, and nursing education. These beliefs evolve in response to the changing needs of society and the profession.

Persons

The faculty believe in the innate worth and dignity of individuals. Individuals have a uniqueness that is the product of genetic heritage and dynamic interaction with the environment across the lifespan. As integrated physiological, psychological, socio-cultural, spiritual beings, they exhibit a propensity for holistic growth. Individuals form familiar attachments in which certain thoughts, feelings, and actions are shared and valued in common. These attachments are manifested as families, groups, and communities, collectively known as society. The family and community are primary social systems essential for the fulfillment of basic needs and personal goals. Parameters for human relationships, behaviors, and modes of action are socially constructed and develop over time.

Environment

Environment is a dynamic milieu that includes elements within and external to persons. Environments exhibit cycles whose elements are multifaceted and complex. The interaction of these elements creates a dynamic context in which health care occurs.

Health

Health is the ability to function at optimal capacity across the lifespan as perceived by the individual, group, or community. Health is a complex phenomenon influenced by such factors as age, development, gender, culture, ethnicity, spirituality, global interaction, and lifestyle. When limitations in functional capacity are perceived, health is compromised.

Nursing

Nursing is a profession and a discipline. It is the application of critical thinking, effective communication, comprehensive assessment and clinical skills within ethical and legal parameters. Within a holistic perspective, the professional nurse acts independently and collaboratively to promote health, reduce health risk, maintain optimal capacity to function, and maximize the quality of life throughout the lifespan. Nursing actively influences policy making on local, national, and global levels to promote health across populations. Active participation in professional organizations is the cornerstone to enhancement of high quality, cost-effective health care, and advancement of the profession.

Nursing Education

The aim of nursing education is to facilitate the acquisition of knowledge, attitudes, values, and skills for the development of critical thinking, creativity, leadership, and autonomy inherent in the practice of professional nursing. The faculty believe that nursing education is based on a solid foundation from nursing, the liberal arts, humanities, and sciences. The

Nursing

faculty believe that adult learning is a self-directed, lifelong process of intellectual curiosity that is the result of informed choice. Within this dynamic process, faculty and learners negotiate desired goals through a variety of structured and unstructured learning experiences to develop the roles of provider of care, coordinator of care, and member of the profession.

Career Opportunities

Professional nurses perform a wide variety of functions, including direct patient care, health care counseling, and leadership in providing and managing care both for individuals and groups of clients. Nurses are members of health care teams that also include physicians, physical and occupational therapists, respiratory therapists, social workers, psychologists, dietitians, and others. They may work as hospital nurses, home nurses, office nurses, community health nurses, school nurses, nurse educators, and occupational or industrial nurses.

Undergraduate Program

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 baccalaureate curriculum provides learning experiences 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 practitioner 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.

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.

Upon graduation, KCON graduates will

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]

Evidence of the following items are required before the student begins NUR 315:

1. Health and immunization reports.
2. Certification in cardiopulmonary resuscitation (CPR) for health professionals.
3. Health insurance.
4. Students must have their own transportation for clinical experiences.

Students should be aware that the State Board of Nursing reviews the records of all graduates who have completed a nursing program to determine eligibility to write the National Council Licensure Examination (NCLEX). The State Board of Nursing retains the right to deny a graduate permission to write the licensure examination if he or she has been convicted of a crime. Clinical facilities may require a criminal background check and/or drug screening prior to allowing a student to practice at the site.

Undergraduate Nursing Admission

Freshman Nursing Majors

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. To enter the nursing major as a freshman, a new student must be admitted to Grand Valley and have a high school grade point average of at least 3.75 and an ACT composite score of at least 28. Students eligible for direct admission must declare a nursing major by the end of the first week of classes their first semester. To continue as a nursing major, a student must maintain a minimum overall grade point average of 3.0 each semester and a 3.0 grade point average on decision courses prior to entry into the first clinical course (NUR 315). None of the prerequisites or decision courses may be repeated more than once. See sample curriculum in the following section.

Freshman Prenursing Majors

Students who are admitted to the university but do not immediately qualify for direct admission to the nursing major enroll as pre-nursing majors and must complete a secondary application. In the semester that students are completing the Prerequisite and Decision courses noted below, they can apply for admission to the nursing major. Students must complete the Prerequisite and Decision Courses and have a minimum overall GPA of 2.8. Admission GPA is based on *all* post-secondary coursework. None of the Prerequisite or Decision courses may be repeated more than once. Students must earn a minimum of C (2.0) in each Prerequisite and Decision course. Students interested in majoring in nursing must submit their application by March 1 for fall or winter admission and November 1 for spring /summer admission. The number of pre-nursing students admitted to the nursing curriculum varies from semester to semester.

Procedures for admission to the nursing major are available on our Web site 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:

- 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;

Nursing

- 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 cardiopulmonary resuscitation (CPR) for health professionals.
3. Health insurance.
4. Students must have their own 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 corequisite 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
BMS 213 Laboratory in Microbiology
BMS 291 Laboratory in Human Physiology
BMS 309 Laboratory in Human Anatomy
CHM 109 Introductory Chemistry
CHM 231 Introductory Organic Chemistry
MTH 110 Algebra
NUR 120 Explorations in Nursing
NUR 220 Self-Health and Wellness
PSY 101 Introductory Psychology
WRT 150 Strategies in Writing

Decision courses

BIO 355 Human Genetics
BMS 208 Human Anatomy
BMS 212 Introductory Microbiology
BMS 290 Human Physiology
CHM 232 Biological Chemistry
PSY 364 Life Span Developmental Psychology

Corequisites

BMS 305 Clinical Nutrition
BMS 310 Basic Pathophysiology
BMS 311 Pharmacological Aspects of Biomedical Sciences.
STA 215 Introductory Applied Statistics
WRT 305 Writing in the Disciplines

Transfer Students

Students planning to transfer to Grand Valley 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 Grand Valley 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.

Multiple selection criteria are used to determine admission to the nursing major. These criteria include but are not limited to:

In order to progress in the nursing program a minimum grade of C (2.0) is required in the

1. prerequisite,
 2. decision,
 3. 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.

- a completed application by March 1 for admission fall or winter semester; students will be notified by early May;
- 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 cardiopulmonary resuscitation (CPR) for health professionals.
3. Health insurance.
4. Students must have their own transportation for clinical experiences.

Sample Curriculum

First Semester Credits: 16

BIO 120 General Biology I (FC/Life Sci)¹
 CHM 109 Introductory Chemistry
 (FC/Phy Sci)¹
 MTH 110 Algebra (BSK) (Placement
 examination is required.)¹
 PSY 101 Introductory Psychology (FC/SS)¹

Third Semester Credits: 17

- General Education (FC/Arts)
- General Education (FC/SS)

BMS 290 Human Physiology²
 BMS 291 Laboratory in Human Physiology¹
 CHM 232 Biological Chemistry²
 PSY 364 Life Span Developmental
 Psychology (theme)²

Fifth Semester Credits: 15

- General Education (C/Hst)

BMS 305 Clinical Nutrition (C/Hst)³
 BMS 310 Basic Pathophysiology³
 NUR 315 Nursing Health Assessment
 WRT 305 Writing in the Disciplines (BSK)
 (Placement examination is required.)³

In order to progress in the nursing program a minimum grade of C (2.0) is required in the

1. prerequisite,
 2. decision,
 3. 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.

Second Semester Credits: 13

BMS 208 Human Anatomy (Biomedical
 Sciences requires a B- as a prerequisite
 to BMS 309.)²
 CHM 231 Introductory Organic Chemistry¹
 NUR 120 Explorations in Nursing¹
 WRT 150 Strategies in Writing¹

Fourth Semester Credits: 13

- General Education (FC/Philosophy or Lit)

BIO 355 Human Genetics²
 BMS 212 Introductory Microbiology²
 BMS 213 Laboratory in Microbiology¹
 BMS 309 Laboratory in Human Anatomy¹
 NUR 220 Self-Health and Wellness
 (FC/Philosophy or Lit)¹

Sixth Semester Credits: 16

- General Education (US Diversity)

BMS 311 Pharmacological Aspects of
 Biomedical Sciences.³
 NUR 320 Theoretical Nursing I

Nursing

Seventh Semester Credits: 16

- General Education course (World Persp)

NUR 350 Theoretical Nursing II

NUR 351 Clinical Practice II Credits: 7

NUR 435 Research Application in Nursing
Practice Credits: 2

Ninth Semester Credits: 14

- General Education (Theme)

NUR 450 Theoretical Nursing IV (Capstone)

NUR 451 Clinical Practice IV Credits: 7

Total Credits: 133

Second Degree Students

The Kirkhof College of Nursing offers a B.S.N. and an articulated B.S.N./M.S.N. option 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.

Second degree students must be admitted to Grand Valley State University before they can be considered for admission to the prenursing major. Students must be admitted to the nursing major. Admission GPA is based on all post-secondary coursework. Students must also have a minimum of C (2.0) in the following decision courses (none of which may be repeated more than once):

BIO 355 Human Genetics

BMS 208 Human Anatomy

BMS 212 Introductory Microbiology

BMS 290 Human Physiology

CHM 230 Introduction to Organic and Biochemistry

PSY 364 Life Span Developmental Psychology

Admission

Multiple selection criteria are used to determine admission to the nursing major. These include but are not limited to

- 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 cardiopulmonary resuscitation (CPR) for health professionals.
3. Health insurance.
4. Students must have their own transportation for clinical experiences.

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:

NUR 321 Clinical Practice I

STA 215 Introductory Applied Statistics
(FC/Mth)³

Eighth Semester Credits: 13

- General Education (Theme)

NUR 420 Theoretical Nursing III

NUR 421 Clinical Practice III

BMS 305 Clinical Nutrition (2)
 BMS 310 Basic Pathophysiology (2)
 BMS 311 Pharmacological Aspects of
 Biomedical Sciences (2)
 NUR 220 Self-Health and Wellness
 NUR 315 Nursing Health Assessment
 NUR 320 Theoretical Nursing I
 NUR 321 Clinical Practice I
 NUR 350 Theoretical Nursing II

NUR 351 Clinical Practice II Credits: 7
 NUR 420 Theoretical Nursing III
 NUR 421 Clinical Practice III
 NUR 435 Research Application in Nursing
 Practice Credits: 2
 NUR 450 Theoretical Nursing IV (Capstone)
 NUR 451 Clinical Practice IV Credits: 7
 STA 215 Introductory Applied Statistics (2)

Additional Admission Information

Students who plan an M.S.N. exit must apply to the M.S.N. program and obtain preliminary admission to the program prior to taking graduate level courses and:

1. Achieve a scholastic GPA of 3.0 or higher in upper-division baccalaureate coursework.
2. Satisfactorily complete (minimum score of 400 each on the qualitative and quantitative scales, and 4 on analytical writing) the Graduate Record Exam's (GRE) general test.
3. Submit a 300–500 word essay describing professional and educational goals.

Full admission to the M.S.N. program is contingent upon:

1. Maintaining a GPA of 3.0 or higher in upper division coursework.
2. Satisfactory completion of the National Council Licensure Examination for RNs (NCLEX-RN) and documentation of current licensure as an RN in the State of Michigan.
3. Professional competence as documented by three academic and/or professional references.
4. A personal interview may be required.

Second-degree students who elect the B.S.N./M.S.N. option may enroll in a selected number of graduate courses while completing the B.S.N.

NUR 529 Health Care System, Policy, and Finance
 NUR 690 Research Development in Nursing

Plus

BMS 608 Pathologic Physiology
 or NUR 622 Advanced Pathophysiology I
 and NUR 623 Advanced Pathophysiology II

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 *all* post-secondary coursework. 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.

Nursing

- National certification.
3. Evidence of the following are required before the student begins NUR 410:
- Health and immunization reports.
 - Certification in cardiopulmonary resuscitation (CPR) for health professionals.
 - Health insurance.
 - RN licensure.

Major Requirements

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

BMS 208 Human Anatomy (See footnote below)

BMS 212 Introductory Microbiology (See footnote below)

BMS 213 Laboratory in Microbiology

BMS 290 Human Physiology

BMS 291 Laboratory in Human Physiology

BMS 305 Clinical Nutrition (See footnote below)

BMS 309 Laboratory in Human Anatomy

BMS 310 Basic Pathophysiology

BMS 311 Pharmacological Aspects of Biomedical Sciences. (See footnote below)

CHM 109 Introductory Chemistry

MTH 110 Algebra

PSY 101 Introductory Psychology

PSY 364 Life Span Developmental Psychology (See footnote below)

STA 215 Introductory Applied Statistics

WRT 150 Strategies in Writing

WRT 305 Writing in the Disciplines (or exam)

Footnote: 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 220 Self-Health and Wellness (See footnote below)

NUR 310 Professional Nursing Seminar

NUR 320 Theoretical Nursing I (See footnote below)

NUR 321 Clinical Practice I (See footnote below)

NUR 350 Theoretical Nursing II (See footnote below)

NUR 351 Clinical Practice II Credits: 7 (See footnote below)

NUR 400 Health Assessment Skills for Nurses

NUR 410 Professional Role Transition

NUR 420 Theoretical Nursing III (See footnote below)

NUR 421 Clinical Practice III (See footnote below)

NUR 425 Care of Clients with Chronic Conditions (SWS)

NUR 426 Health in Diverse Communities

NUR 435 Research Application in Nursing Practice Credits: 2 or 3

NUR 455 Leadership and Nursing Care Management (capstone)

Footnote: Upon completion of NUR 410 students will receive 30 upper division University credits for these courses. All prerequisite courses taken at another university must have a grade of C (2.0) or better.

Sample Curriculum

Summer

NUR 400 Health Assessment Skills for Nurses (1st half)

NUR 410 Professional Role Transition (2nd half)

Fall

NUR 425 Care of Clients with Chronic Conditions

NUR 435 Research Application in Nursing Practice

Winter

NUR 426 Health in Diverse Communities

NUR 455 Leadership and Nursing Care Management (capstone)

Senior Year

Registered nurses may enroll in a selected number of graduate courses during the senior year of their BSN:

NUR 529 Health Care System, Policy, and Finance

and Either

BMS 608 Pathologic Physiology

or NUR 622 Advanced Pathophysiology I

and NUR 623 Advanced Pathophysiology II

R.N. to M.S.N. Option for Nurses with Non-Nursing Bachelor's Degrees

The College of Nursing offers an M.S.N. option for registered nurses with a non-nursing baccalaureate degree. This program option is designed for part-time or full-time study. The required plan of study can be shortened by transfer of credits.

Students in this program option must be admitted to Grand Valley State University before seeking admission to the College of Nursing. Students are accepted on the basis of GPA and completion of required undergraduate courses in the Kirkhof College of Nursing R.N./B.S.N. program. Admission to the program is selective and highly competitive.

Evidence of the following is required before the student begins NUR 410:

- Health and immunization reports
- Certification in cardiopulmonary resuscitation for health professionals (CPR)
- Health insurance
- R.N. licensure

Required Cognate Courses

Nursing and cognate courses required for application to the M.S.N. program must be completed with a C (2.0) or better. (Please note M.S.N. GPA Admission Requirements stated below.)

BMS 310 Basic Pathophysiology

NUR 400 Health Assessment Skills for Nurses

NUR 410 Professional Role Transition

NUR 426 Health in Diverse Communities

STA 215 Introductory Applied Statistics

M.S.N. Requirements

Students who plan an M.S.N. must apply to the M.S.N. program and obtain preliminary admission to the program and meet the following criteria:

1. Achieve an undergraduate scholastic GPA of 3.0 or higher in upper-division coursework.

Nursing

2. Satisfactory performance (minimum score of 400 each on the qualitative and quantitative scales, and 4 on analytical writing) on the Graduate Record Examination (GRE) general test.
3. Current licensure as a Registered Nurse in the State of Michigan.
4. Professional competence as documented by three academic and/or employment references.
5. A 300–500 word essay describing professional and educational goals.
6. A personal interview may be required.

M.S.N. Prerequisites

Registered nurses with a non-nursing baccalaureate degree who elect the M.S.N. option may enroll in a selected number of graduate courses while completing the M.S.N. prerequisites. These courses must be completed with a B (3.0) or better.

BMS 608 Pathologic Physiology

NUR 529 Health Care System, Policy, and Finance

NUR 622 Advanced Pathophysiology I

and NUR 623 Advanced Pathophysiology II

NUR 690 Research Development in Nursing

Graduate Program

The Kirkhof College of Nursing offers a program of graduate study leading to a master of science in nursing degree (M.S.N.). Five areas of clinical emphasis are offered: Adult/Elderly, Child, Family, Women, and Mental Health (some on a rotating basis). The program also prepares students for roles in nursing administration, case management, nursing education, or advanced practice nursing. A combination M.S.N./M.B.A. is offered in conjunction with the Seidman College of Business.

The advanced practice nurse (APN) option prepares students for a blended role that incorporates nurse practitioner and clinical nurse specialist roles. All students must complete a scholarly project (thesis, nursing protocol, research practicum, or comprehensive examination).

The curriculum provides learning in three components: nursing theory and research, clinical emphasis, and functional role preparation. Learning takes place in the classroom and in supervised practica that encourage individuality, critical analysis, and collaboration with other members of the health care team.

Within the functional roles of education, case management, administration, and advanced practice, graduates of the master's program are prepared to:

1. Provide nursing care in a specialty 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

1. Baccalaureate degree from a nationally accredited program or option for nurses with non-nursing baccalaureate degrees.
2. Undergraduate scholastic GPA of 3.0 or higher in upper-division coursework.
3. Satisfactory performance (minimum scores of 400 verbal, 400 quantitative, and 4 on analytical writing) on the Graduate Record Examination (GRE) General Test.
4. Current licensure as a registered nurse in the State of Michigan.

5. Professional competence as documented by three academic and/or employment references.
6. Submission of a 300–500 word essay describing professional and educational goals.
7. A personal interview may be required.

Evidence of the following items are required before the student begins NUR 530.

1. Health and immunization reports.
2. Current valid license to practice as a registered nurse in the State of Michigan.
3. Certification in cardiopulmonary resuscitation (CPR) for health professionals.
4. Health insurance.
5. Documentation of HIPAA training.

Career Opportunities

The M.S.N. program is designed to prepare nurses for advanced clinical practice and entry level leadership roles in nursing education, nursing administration, and case management. The overall goal of the program is to improve the practice and delivery of health care to individuals and families. The atmosphere of the program encourages a free and stimulating exchange of ideas, fosters research attitudes and skills, and enhances the development of innovative professional roles.

Major Requirements

M.S.N. students must complete the following coursework with a grade of B (3.0) or better:

Research — Theory

- NUR 521 Theoretical Perspectives in Nursing I
- NUR 522 Theoretical Perspectives of Nursing II
- NUR 529 Health Care System, Policy, and Finance
- NUR 530 Advanced Nursing Strategies
- NUR 400 Health Assessment Skills for Nurses, must be completed before NUR 530.
- NUR 531 Professional Role Development
- NUR 622 Advanced Pathophysiology I—BMS 608 may be taken in place of NUR 622 and NUR 623
- NUR 623 Advanced Pathophysiology II—BMS 608 may be taken in place of NUR 622 and NUR 623
- NUR 690 Research Development in Nursing
- STA 610 Applied Statistics for Health Professions

Scholarly Project Options

- NUR 692 Nursing Protocol Exploration
and NUR 693 Nursing Protocol Development
- NUR 694 Thesis Preparation
and NUR 695 Master's Thesis
- NUR 696 Nursing Research Practicum (four credits or two credits plus related elective)
- NUR 697 Nursing Comprehensive Examination (two credits plus one elective)

Functional Role Component

All courses must be completed with a grade of B (3.0) or better.

- Advanced Practice Nursing (APN) (21-26 credits)
- NUR 646 Nursing Administration and Health Care Systems I
- NUR 647 NUR Administration & Health Care Sys II
- NUR 648 Administrative Practicum I
- NUR 649 Administration Practicum II

Nursing

Directed Electives

Take one 3-credit directed elective from the following:

CS 661 Introduction to Medical and Bioinformatics

PA 634 Health Care Law and Ethics

PA 640 Marketing Health and Human Services

PA 643 Strategic Management and Planning

Clinical Emphasis

Adult/Elderly

NUR 610 Advanced Assessment

NUR 620 Clinical Pharmacology

NUR 654 Practicum I: Adult/Elderly

NUR 655 Practicum II: Adult/Elderly

NUR 656 Practicum III: Adult/Elderly

Child

NUR 610 Advanced Assessment

NUR 620 Clinical Pharmacology

NUR 629 Developmental Health Management: Child

NUR 684 Advanced Pediatric Nursing: Theory I

NUR 685 Advanced Pediatric Clinical Practice I

NUR 686 Advanced Pediatric Nursing: Theory II

NUR 687 Advanced Pediatric Clinical Practice II

NUR 688 Advanced Pediatric Nursing: Theory III

NUR 689 Advanced Pediatric Clinical Practice III

Family

NUR 610 Advanced Assessment

NUR 620 Clinical Pharmacology

NUR 670 Practicum I: Family

NUR 671 Practicum II: Family

NUR 672 Practicum III: Family

Women

NUR 610 Advanced Assessment

NUR 620 Clinical Pharmacology

NUR 673 Practicum I: Women

NUR 674 Practicum II: Women

NUR 675 Practicum III: Women

Mental Health

BMS 528 Neuropathology

NUR 610 Advanced Assessment

NUR 620 Clinical Pharmacology

NUR 628 Nursing Therapeutics: Mental Health

NUR 676 Health Perspectives: Mental Health

NUR 677 Practicum I: Mental Health

NUR 678 Practicum II: Mental Health

NUR 679 Practicum III: Mental Health

Nursing Education

- Educational Cognate

NUR 620 Clinical Pharmacology

NUR 640 Nursing Education Program Development
 NUR 642 Teaching Health Professionals
 NUR 644 Teaching Practicum

Nursing Administration

- Elective

NUR 646 Nursing Administration
 NUR 648 Administrative Practicum
 PA 614 Organization Theory
 PA 632 Health Services Financial Management

Case Management

NUR 660 Case Management Foundations I
 NUR 661 Case Management Foundations II
 NUR 662 Case Management Skills
 NUR 663 Resource Management
 NUR 664 Case Management Practicum

Combined M.S.N./M.B.A.

The Kirkhof College of Nursing and Seidman College of Business offer a combined Master of Science in Nursing and Master of Business Administration (M.S.N./M.B.A.). Persons wishing this degree must meet the admission requirements of both Colleges with the exception that satisfactory performance (minimum score of 400 each on the qualitative and quantitative scales, and 4 on analytical writing) on only the Graduate Record Exam (GRE), rather than the GMAT, is required. Applicants for the MSN/MBA may be admitted to the joint program or to either the M.S.N. or the M.B.A., depending on each division's admission committee review and decision. The combined M.S.N./M.B.A. is designed to prepare graduate nurses for professional opportunities in health care delivery systems.

Requirements

All M.S.N./M.B.A. candidates must complete the M.B.A. background requirements listed below except FIN 521.

Also Required

Are the following four three credit courses:

BUS 610 Management Information Systems and Org. Processes
 BUS 631 Leadership and Organizational Dynamics
 BUS 671 Global Competitiveness
 BUS 681 Strategy

Candidates must also complete:

At least three of the following four three-credit M.B.A. courses:

ACC 611 Contemporary Managerial Accounting
 ECO 641 Business Economics and Strategy
 FIN 621 Financial Policy for Managers
 MGT 667 Service Management
 MKT 651 Marketing Management

Candidates must complete the following M.S.N. courses:

NUR 521 Theoretical Perspectives in Nursing I
 NUR 522 Theoretical Perspectives of Nursing II
 NUR 529 Health Care System, Policy, and Finance

Nursing

NUR 530 Advanced Nursing Strategies
NUR 531 Professional Role Development
NUR 648 Administrative Practicum
NUR 648 Administrative Practicum I
NUR 649 Administrative Practicum II
NUR 690 Research Development in Nursing
STA 610 Applied Statistics for Health Professions

Directed Elective:

NUR 646 Nursing Administration and Health Care Systems I

Scholarly Project Options (candidates select one)

NUR 692 Nursing Protocol Exploration
and NUR 693 Nursing Protocol Development
NUR 694 Thesis Preparation
and NUR 695 Master's Thesis
NUR 696 Nursing Research Practicum (four credits or two credits plus related elective)
NUR 697 Nursing Comprehensive Examination (one credit plus two electives)

Advanced Practice Nurse Specialty

Candidates may choose to earn the Advanced Practice Nurse in addition to the M.S.N./M.B.A. Completion of the following additional courses is required for this specialty. Candidates selecting this option are not required to complete NUR 648.

Select one of the following

Descriptions of the M.S.N. courses are contained in the nursing section of the catalog.

Adult/Elderly

NUR 610 Advanced Assessment
NUR 620 Clinical Pharmacology
NUR 654 Practicum I: Adult/Elderly
NUR 655 Practicum II: Adult/Elderly
NUR 656 Practicum III: Adult/Elderly

Child

NUR 610 Advanced Assessment
NUR 620 Clinical Pharmacology
NUR 629 Developmental Health Management: Child
NUR 684 Advanced Pediatric Nursing: Theory I
NUR 685 Advanced Pediatric Clinical Practice I
NUR 686 Advanced Pediatric Nursing: Theory II
NUR 687 Advanced Pediatric Clinical Practice II
NUR 688 Advanced Pediatric Nursing: Theory III
NUR 689 Advanced Pediatric Clinical Practice III

Family

NUR 610 Advanced Assessment
NUR 620 Clinical Pharmacology
NUR 670 Practicum I: Family
NUR 671 Practicum II: Family
NUR 672 Practicum III: Family

Women

NUR 610 Advanced Assessment
 NUR 620 Clinical Pharmacology
 NUR 673 Practicum I: Women
 NUR 674 Practicum II: Women
 NUR 675 Practicum III: Women

Mental Health

BMS 528 Neuropathology
 NUR 610 Advanced Assessment
 NUR 620 Clinical Pharmacology
 NUR 628 Nursing Therapeutics: Mental Health
 NUR 676 Health Perspectives: Mental Health
 NUR 677 Practicum I: Mental Health
 NUR 678 Practicum II: Mental Health
 NUR 679 Practicum III: Mental Health

M.S.N. Completion Program for Advanced Practice Nurses

Nurses certified as NP, CNM, or CRNA can obtain didactic and clinical work needed to earn a master's degree in nursing. Advanced practice nurses will be granted nursing credit that will substitute for part of the clinical emphasis requirement in the M.S.N. program. The program can be completed in two years of part-time study. Applicants to the program must meet Kirkhof College of Nursing admission criteria.

Summary of Requirements

Nineteen credits granted for advanced clinical practice as validated by current specialty nursing certification.

Research-Theory (Credits: 20–24)

NUR 521 Theoretical Perspectives in Nursing I
 NUR 522 Theoretical Perspectives of Nursing II
 NUR 529 Health Care System, Policy, and Finance
 NUR 530 Advanced Nursing Strategies
 NUR 531 Professional Role Development
 NUR 690 Research Development in Nursing
 STA 610 Applied Statistics for Health Professions

Scholarly Project Options

NUR 692 Nursing Protocol Exploration Credits: 1 to 2
 and NUR 693 Nursing Protocol Development
 NUR 694 Thesis Preparation
 and NUR 695 Master's Thesis
 NUR 696 Nursing Research Practicum (four credits or two credits plus related elective)
 NUR 697 Nursing Comprehensive Examination (one credit plus two electives)

Post Master for Nurse Practitioner Certificate

Master's prepared nurses can obtain the clinical and didactic experiences necessary to meet the eligibility requirements for nurse practitioner certification within a blended advanced practice nursing role. The program will provide the opportunity to prepare for the certification examination for Adult, Gerontological, Family, Pediatrics, or Women's Health Nurse Practitioner.

Nursing

Evidence of the following items are required before the student begins NUR 530.

1. Health and immunization reports.
2. Current valid license to practice as a registered nurse in the State of Michigan.
3. Certification in cardiopulmonary resuscitation (CPR) for health professionals.
4. Health insurance.
5. Documentation of HIPAA training.

The program of study includes the following courses:

And the designated specialty courses in selected clinical emphases.

NUR 530 Advanced Nursing Strategies

NUR 531 Professional Role Development

NUR 610 Advanced Assessment

Additional Information

Graduate level pathophysiology and pharmacology are prerequisites to the clinical courses. Consideration will be given to opportunities to complete clinical practice hours in the student's home community. Master's prepared nurses may obtain the certification in a four- or five-semester program.

Post Master in Nursing Education Certificate Program

Masters prepared nurses can obtain the necessary theory courses and practicum experience for entry into leadership roles in nursing education. The program includes the following courses:

- An educational cognate.

NUR 620 Clinical Pharmacology

NUR 640 Nursing Education Program Development

NUR 642 Teaching Health Professionals

NUR 644 Teaching Practicum

Post Master in Nursing Administration Certificate Program

Masters prepared nurses can obtain the necessary theory courses and practicum experience for entry into leadership roles in nursing administration. The program includes the following courses:

NUR 646 Nursing Administration and Health Care Systems I

NUR 648 Administrative Practicum

PA 614 Organization Theory

PA 632 Health Services Financial Management

Certificate Program in Case Management

The Kirkhof College of Nursing offers a certificate program in case management (post baccalaureate or post masters). This program is designed to develop advanced skills and knowledge, preparing healthcare professionals for case management positions in multiple venues within the health care industry. The program is open to students with varying backgrounds in the health care industry. All courses in the case management certificate program are courses in the Master of Science in Nursing program. Requirements for the Certificate in Case Management are:

1. A baccalaureate degree with an undergraduate GPA of 3.0 or higher in upper division coursework.
2. Students must receive a grade of B (3.0) or higher in each course for the certificate to be awarded.

3. All courses must be completed at Grand Valley.
4. Students who are officially admitted to the Master of Science in Nursing (M.S.N.) program may apply the credits toward the M.S.N. degree functional role of Case Management.

Certificate Requirements

Courses for the Certificate in Case Management are offered on demand.

- NUR 660 Case Management Foundations I
- NUR 661 Case Management Foundations II
- NUR 662 Case Management Skills
- NUR 663 Resource Management
- NUR 664 Case Management Practicum

Courses of Instruction

Numbers in parentheses at the end of course descriptions indicate the number of classroom, seminar, skills laboratory, and clinical laboratory hours per week.

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) Offered every semester. Two credits.

NUR 180 Special Topics in Nursing. Readings, lecture, discussion, or lab in specific nursing topics. One to three credits.

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) Offered every semester. Two credits.

NUR 280 Special Topics in Nursing. Readings, lecture, discussion, or lab in specific nursing topics. One to three credits.

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. Two credits.

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) Offered every semester. Prerequisite: Admission to the School of Nursing; Pre- or Corequisites BMS 305 and BMS 310. Three credits.

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) Offered every semester. Prerequisite: NUR 315, BMS 305 and BMS 310; Pre- or corequisite BMS 311. Three credits.

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) Offered every semester. Prerequisites: NUR 315; NUR 320 corequisite. Four credits.

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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) Offered every semester. Prerequisites: NUR 321, BMS 311; Pre- or corequisite NUR 435 and WRT 305. Four credits.

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) Offered every semester. Prerequisites: NUR 350 (may be corequisite). Seven credits.

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. Three credits.

NUR 380 Special Topics in Nursing. Readings, lecture, discussion, or lab in specific nursing topics. One to four credits.

NUR 399 Readings in Nursing. Independent supervised readings on selected topics. Credits and topic must be prearranged with faculty sponsor(s). One to four credits.

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) Offered every semester. Prerequisite: R.N. status. Three credits.

NUR 410 Professional Role Transition. Assists R.N. 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) . Prerequisites: R.N. status; admission to the School of Nursing; NUR 400 and WRT 305. Four credits.

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) Offered every semester. Prerequisites: NUR 351, NUR 435 and WRT 305. Four credits.

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) Offered every semester. Prerequisites: NUR 420 (can be corequisite). Six credits.

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 hbox classroom/clinical experiences with individuals and families dealing with chronic conditions (3-2-0-3) Offered fall semester. Prerequisites: NUR 410. Pre- or corequisite: NUR 435. Five credits.

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). Offered winter semester. Prerequisite: NUR 425. Five credits.

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) Offered every semester. Prerequisites: STA 215. Two credits.

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) Offered every semester. Prerequisites: NUR 421. Four credits.

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) Offered every semester. Prerequisites: NUR 450 (may be corequisite). Seven credits.

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) Offered winter semester. Pre- or corequisite: NUR 426. Three credits.

NUR 460 Critical Care Nursing. This course is designed to assist the critical care nurse in preparation for the AACN nursing certification examination. The focus is on the nursing process as it relates to care of the acutely ill client. Emphasis is placed on psychosocial and behavioral responses and legal and ethical ramifications. (3-0-0-0) Offered winter semester upon sufficient demand. Prerequisites: R.N. status or permission of instructor. Three credits.

NUR 461 Rehabilitation Nursing. Rehabilitation nursing as a specialty practice. Pathology, particularly of the nervous system, is reviewed as it relates to a variety of rehabilitation patients. Content is designed to provide a deeper understanding of rehabilitation nursing. Emphasis is on preparation for the rehabilitation nursing certification examination. (3-0-0-0) Offered fall semester upon sufficient demand. Prerequisite: R.N. status or permission of instructor. Three credits.

NUR 480 Special Topics. 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. One to four credits.

NUR 499 Research in Nursing. Independent supervised research in special areas of nursing. Credits and topics must be prearranged with faculty sponsor(s). One to four credits.

NUR 521 Theoretical Perspectives in Nursing I. Exploration of various frameworks for nursing practice. This course focuses on concept and theory development. (2-0-0-0) Offered fall and winter semesters. Prerequisites: Admitted to the M.S.N. program or permission of instructor. Two credits.

NUR 522 Theoretical Perspectives of Nursing II. Exploration of various frameworks for the discipline of nursing. This course focuses on critique and utilization of theory in practice and research. (2-0-0-0) Offered winter and spring/summer semesters. Prerequisites: NUR 521; admission to graduate program. Two credits.

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NUR 529 Health Care System, Policy, and Finance. Analysis of U.S. health care system, related social policy and pertinent political processes. Emphasis is on understanding components of the health care system including structure and organization, cost factors, provider-consumer roles, and cultural/economic impact on health care delivery. Policy and decision making procedures are explored. (2-0-0-0) Offered fall and winter semesters. Prerequisites: Graduate standing or permission of instructor. Two credits.

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) Offered fall and winter semesters. Three credits.

NUR 531 Professional Role Development. Provides the forum for examination of the characteristics, values, and expectations of advanced nursing roles to enhance the outcomes of professional nursing practice and promote the profession. (3-0-0-0) Offered every semester. Prerequisites: NUR 530. Prerequisites: NUR 521, NUR 522; and NUR 400, NUR 622, and NUR 623 or permission of instructor. Three credits.

NUR 580 Special Topics in Nursing. Readings, lecture, discussion, or lab in specific nursing topics. One to three credits.

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 Permit. Three credits.

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 preempted demonstration and use of the Model Patient Program. (1-0-3-0) Offered winter semester. Prerequisites: NUR 400 and NUR 530; Graduate standing or permission of the instructor. Two credits.

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) Offered spring/summer semester. Prerequisites: NUR 622 and NUR 623 or BMS 608. Three credits.

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) Offered fall and winter semesters. Prerequisites: Graduate standing or permission of instructor. Two credits.

NUR 623 Advanced Pathophysiology II. This course is the second in a two-course series that describes the scientific concepts in understanding the biology of disease processes. Content areas to be addressed include disease processes in the following systems: hematology, respiratory, renal, nervous, gastrointestinal, central nervous system, and reproductive. (2-0-0-0) Offered winter and spring/summer semesters. Prerequisites: NUR 622 or permission of instructor. Two credits.

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) Offered spring/summer semester upon demand. Prerequisites: BMS 528. Three credits.

NUR 629 Developmental Health Management: Child. 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) Offered winter semester every third year. Prerequisites: NUR 531, NUR 610, and NUR 620. Three credits.

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) Offered fall semester odd years. Prerequisite: Official admission to the graduate program. Three credits.

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) Offered fall semester. Prerequisite: NUR 640 or permission of instructor. Three credits.

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) Offered winter semester (even years). Prerequisites: NUR 531, NUR 620, NUR 640 and NUR 642. Three credits.

NUR 646 Nursing Administration and Health Care Systems I. Application of theory to nursing administration: Includes theory, process, planning, directing, and monitoring health care, and financial and personnel management with emphasis on administrative strategies appropriate to the health care setting. (3-0-0-0) Offered fall semester. Pre- or corequisites: PA 614 and PA 632 or approval of instructor. Three credits.

NUR 647 NUR 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; PA 614; PA 632 (prerequisite or corequisite) or Prior Approval of the Instructor. Three credits.

NUR 648 Administrative Practicum I. Supervised field experience. Students apply theory to nursing administration in an agency setting. Students analyze an organization within the context of the health care system and make recommendation for change. (3-0-0-8) Offered fall semester (even years). Prerequisites: NUR 647, or permission of the instructor. Three credits.

NUR 649 Administration Practicum II. Students complete a perceived experience with a nurse executive at a health care organization or system. Students utilize advanced administrative strategies with the guidance of a nurse executive. During this experience students master the competencies essential to the practice of nursing administration. (3-0-0-8) Numbers in parentheses indicate the number of classroom-seminar-skills laboratory-clinical laboratory hours per week. Prerequisite: NUR 648. Three credits.

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) Offered fall semester of every third year. Prerequisites: NUR 531, NUR 610, and NUR 620. Six credits.

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) Offered winter semester every third year. Prerequisites: NUR 654. Six credits.

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) Offered spring/summer semester every third year. (First time offered: Spring/Summer 2006). Prerequisites: NUR 655. Seven credits.

Nursing

NUR 660 Case Management Foundations I. Explores core elements of Case Management, including the principles, functions, rationale, models, and roles in a variety of health related settings. The evolution of Case Management will be examined with emphasis on the fit between the model and the environment. Various models will be compared and contrasted. (3-0-0-0) Offered on demand. Prerequisites: Official acceptance into the graduate program or permission of the instructor. Three credits.

NUR 661 Case Management Foundations II. Course builds on Case Management Foundations I and explores the relationship between Case Management and related care management strategies and processes. Case management specific topics such as ethical-legal concerns, technology, evaluation, and management will be discussed and analyzed. (3-0-0-0) Offered on demand. Prerequisites: NUR 660. Three credits.

NUR 662 Case Management Skills. Successful Case Managers possess a wide variety of skills and knowledge. This course will provide a theoretical and practical foundation for acquiring and enhancing many of those skills for use in diverse populations and situations. Class exercises and assignments will provide opportunities for application and synthesis of knowledge. (2-0-0-0) Offered on demand. Prerequisites: Official admission to the graduate program or permission of the instructor. Two credits.

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) Offered on demand. Prerequisites: Official admission to the graduate program or permission of the instructor. Three credits.

NUR 664 Case Management Practicum. Supervised field experience. Students apply theories of Case Management in an agency setting. Students analyze a Case Management structure and make recommendations for change. (0-1-0-8) Offered on demand. Prerequisites: NUR 660, NUR 661, and NUR 663. Three credits.

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) Offered fall semester. Prerequisites: NUR 531, NUR 610, and NUR 620. Six credits.

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) Offered winter semester. Prerequisites: NUR 670. Six credits.

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) Offered spring/summer semester. Prerequisites: NUR 671. Seven credits.

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) Offered fall semester every third year. Prerequisites: NUR 531, NUR 610, and NUR 620. Six credits.

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) Offered winter semester every third year. Prerequisites: NUR 673. Five credits.

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) Offered spring/summer semester every third year. Prerequisites: NUR 674. Five credits.

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) Offered winter semester every third year. Prerequisites: NUR 520 and official admission to the graduate program. Two credits.

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. (1-0-0-9) Offered fall semester of every third year. Prerequisites: NUR 610, NUR 628 and NUR 676. Four credits.

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. (2-0-0-9) Offered winter semester every third year. Prerequisite: NUR 677. Five credits.

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. (2-0-0-9) Offered spring/summer semester every third year. Prerequisites: NUR 678. Four credits.

NUR 680 Special Topics in Nursing. Lecture, discussion, and/or clinical laboratory course on topics of special interest to graduate nursing students. One to six credits.

NUR 684 Advanced Pediatric Nursing: Theory I. 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 populations. (2-0-0-0) Offered fall semester every third year. Prerequisite: NUR 531, NUR 610, and NUR 620. Pre- or corequisite: NUR 629. Two credits.

NUR 685 Advanced Pediatric Clinical Practice I. 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, prevention and management of selected common pediatric health problems. Case presentations focus on enactment of APN roles in primary health care. (0-0-0-16) Offered fall semester every third year. Prerequisites: NUR 531, NUR 610, NUR 620; NUR 629 and NUR 684 pre- or corequisites. Four credits.

NUR 686 Advanced Pediatric Nursing: Theory II. Expands the theoretical foundations for management of primary health care for infants, children, adolescents and families across the health care continuum. (2-0-0-0) Offered winter semester every third year. Prerequisites: NUR 684, NUR 685. Two credits.

NUR 687 Advanced Pediatric Clinical Practice II. Clinical application of knowledge and advanced nursing strategies for management of primary care needs of infants, children, adolescents and families with manifestations of chronic illness and long-term alterations in functional health patterns. (0-0-0-16) Offered winter semester every third year. Prerequisites: NUR 684, NUR 685. Prerequisite or corequisite: NUR 686. Four credits.

NUR 688 Advanced Pediatric Nursing: Theory III. Intensive study of the enactment of the APN roles in managing the health care of infants, children, adolescents and families throughout

Occupational Safety and Health

the health care system. Management of children/families with complex behavioral issues is addressed. The impact of health care systems, policies, and health innovations in selecting appropriate nursing strategies is emphasized. (2-0-0-0) Offered spring/summer semester every third year. Prerequisites: NUR 686, NUR 687. Two credits.

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) Offered spring/summer every third year. Prerequisites: NUR 686, NUR 687. Pre- or corequisite: NUR 688. Four credits.

NUR 690 Research Development in Nursing. Introduction to the process of research design. Includes research methodology, identification of a research problem, ethics, human subjects protection, and legal informed consent. (2-0-0-0) Offered fall and winter semester. Prerequisites: NUR 521 and official admission to the graduate program. Two credits.

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. Prerequisite: NUR 690. Prerequisite or corequisite: STA 610. One to two credits.

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. Prerequisite: NUR 692; permission of instructor. One credit.

NUR 694 Thesis Preparation. Focus on research that students design, implement, and analyze in preparation for completion of a formal thesis. Students must register each semester while designing and initiating their research, completing a minimum of two credits. A maximum of two credits will count toward program requirements. Offered every semester. Prerequisite: NUR 690. Prerequisite or corequisite: STA 610. One credit.

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. Two credits.

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: Completion of the required research (NUR 690, STA 610); Prior approval of instructor. Two credits.

NUR 697 Nursing Comprehensive Examination. Mechanism to demonstrate comprehension and synthesis of concepts central to the advanced practice of nursing. Offered every semester. Prerequisite: Completion of required M.S.N. coursework, or in final semester of graduate program; Prior approval of instructor. Two credits.

NUR 699 Readings in Nursing. Independent supervised reading on selected topics. Credits and topic must be prearranged with faculty. One to three credits.

Occupational Safety and Health (OSH)

Director: VanFleet. Intern Coordinator: Green; Professor: VanFleet. Associate Professor: Green; Adjunct Faculty: Cox, Huizen, Krieger, Longman, McKinley.

Degree offered: B.S. in Occupational Safety and Health Management.

The B.S. in Occupational Safety and Health Management and the B.S. in Health Professions degrees are housed within the Occupational Safety and Health program. 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 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 occupational safety and health management graduates continues to be strong. Most employers with 200 or more employees have one or more full-time persons 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 hospitals, municipalities, manufacturing, retail, wholesale, construction, transportation, consulting, and insurance, to name a few.

Major Requirements

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

OSH 310 Hazard Control

OSH 316 Health and Safety Techniques

OSH 324 Principles of Industrial Hygiene

OSH 326 Principles of Industrial Hygiene

OSH 330 Principles of Loss Control

OSH 350 Behavioral Aspects of Safety

OSH 400 Critical Incident Analysis

OSH 410 Ergonomic Safety Engineering

Occupational Safety and Health

OSH 414 Environmental Safety and Health Regulations
OSH 424 Fire Science
OSH 440 Safety and Health Program Development
OSH 490 Internship in Occupational Safety and Health Management
OSH 495 Safety and Health Administration

3. OSH Electives:

In addition to the above, students must take nine hours of electives. The following OSH elective courses satisfy the elective requirement:

OSH 360 Motor Fleet Safety
OSH 370 Product Safety and Liability
OSH 416 Advanced Industrial Hygiene
OSH 420 Health Care Facility Safety
OSH 430 Construction Safety

Non-OSH electives must be approved by the OSH advisor.

4. Students must select one:

Twenty-four semester hours to include: One year of chemistry (to include onelab course), PHY 200, and electives from the behavioral or natural sciences with OSH advisor approval.

5. OSH Science Cognate:

Students must take the following courses:

MTH 110 Algebra
MTH 125 Survey of Calculus
or STA 215 Introductory Applied Statistics
PHY 20 Physics for the Life Sciences

Minor Requirements

A minor in Occupational Safety and Health consists of 21 credits chosen with the consent of the OSH director.

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.

Courses of Instruction

OSH 180 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

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). Prerequisite: Admission to program or instructor approval. Three credits.

OSH 310 Hazard Control. A study of general and mechanical hazards found in the workplace and methods of controlling them to limit employee exposure. (3-0-0). Prerequisite: Admission to program or instructor approval. Three credits.

OSH 314 Toxicological Hazards. A study of chemical hazards found in the workplace, their toxicological influence, and methods of controlling them to limit employee exposure. (2-0-2). Prerequisite: CHM 231 and OSH 316 or permission of instructor. Three credits.

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). Prerequisite: Admission to program or instructor approval. Three credits.

OSH 324 Principles of Industrial Hygiene. A study of industrial hygiene methods, measurement, and equipment. (2-0-2). Prerequisite: Successful completion of one course in chemistry. Three credits.

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. Three credits.

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). Prerequisites: Admission to program or instructor approval. Three credits.

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). Prerequisites: Admission to program or instructor approval. Three credits.

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). Admission to program or instructor approval. Three credits.

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. Admission to program or instructor approval. Three credits.

OSH 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

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). Prerequisites: Admission to program or instructor approval. Three credits.

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). Prerequisite: Admission to program or instructor approval. Three credits.

OSH 414 Environmental Safety and Health Regulations. A study of laws addressing environmental pollution and hazardous waste management. (3-0-0). Prerequisites: Admission to program or instructor approval. Three credits.

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. OSH major, minor, or approval by instructor. Three credits.

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). Prerequisites: Admission to program or instructor approval. Three credits.

Occupational Therapy

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. Admission to program or instructor approval. Three credits.

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). Prerequisites: Admission to program or instructor approval. Three credits.

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. Permission of OSH advisor. One to three credits.

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. Prerequisite: Permission of instructor. Three to six credits.

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: Admission to program or instructor approval and senior-level status. Three credits.

OSH 499 Independent Study in Occupational Safety and Health. An individually designed learning project in the field of occupational safety and health. Prerequisite: Permission of instructor. One to three credits.

Occupational Therapy (OT)

Director and Associate Professor: Powell; Assistant Professors: Biese, Grapczynski, Sisco; Adjunct Faculty: Meier.

Degree offered: Master of Science in Occupational Therapy.

Accreditation Status

The occupational therapy program is 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 School 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. Our statement regarding professional conduct, found in the College of Health Professions section of this Grand Valley State University Undergraduate and Graduate Catalog, reflects this philosophy.

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 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 program is a two-year curriculum leading to an entry-level master of science degree. Candidates for the Occupational Therapy program must have an undergraduate degree, and have completed all of the required preprofessional coursework, including courses in the natural, health, and social sciences. The Occupational Therapy curriculum is built around the concept of occupation as the core knowledge base in the field, and the base upon which all occupational therapy intervention is developed. 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.

Undergraduate work at Grand Valley State University may take many forms. Suggested majors include psychology, specifically the preprofessional major, the behavioral science major, or the biopsychology major. Other undergraduate majors may also be appropriate, such as those in anthropology, sociology, and fine arts. While these majors are noted for providing a well-rounded background for the student, any undergraduate major may be selected, as long as the required occupational therapy preprofessional courses can be completed along

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with the undergraduate degree before beginning the professional program. Working with an advisor from the major department is important because the requirements to enter the Occupational Therapy program may be different from those required for the major. These requirements need to be incorporated into undergraduate studies in order to be completed before the first semester of the Occupational Therapy program. All of these required preprofessional courses must be taken for a letter grade. Completion of some majors may require additional summer work.

Admission to the Occupational Therapy program is competitive. Maximum class size is 25. Candidates may submit applications to the Occupational Therapy program in the year that they attain senior status. Admission decisions will be made in the first and second semester 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 three level I fieldwork and assignments (60–80 hours each), and two full-time level II fieldwork assignments (480 hours each), as well as completion of a thesis or research project. The location of the Level II fieldwork assignments is determined in discussion between the fieldwork coordinator and the students, to ensure a good fit for the needs of both the students and the facility of placement. All level II fieldwork must be completed within 24 months of completion of the didactic curriculum.

Application Procedures

High school seniors interested in occupational therapy must first complete an undergraduate degree in a major other than occupational therapy. This may be done at Grand Valley State University or any accredited four year higher education institution.

Transfer students from community or four-year colleges must complete an undergraduate application to Grand Valley State University, and identify an appropriate major at that time. Students are strongly encouraged to transfer to Grand Valley State University at the beginning of their junior year to ensure completion of the undergraduate degree and preprofessional requirements. Transfer students should consult with advisors from both the major and the Occupational Therapy program to ensure they are on the right track.

Potential candidates to the occupational therapy program coming from other educational institutions who wish to complete a required preprofessional course at Grand Valley State University may apply for non-degree-seeking status, using an undergraduate application. Once all preprofessional requirements have been completed, then the student will need to submit a graduate application.

Admission to the Occupational Therapy program first requires completion of the Grand Valley State University graduate application, regardless of previous college attended. Candidates must expect to complete all preprofessional and undergraduate work prior to entering the program. Applications may be obtained from the admissions office on the Allendale campus or from the College of Health Professions' office at room 200 in the Cook-Devos Center for the Health Sciences in downtown Grand Rapids, or online. The program requires that all application materials be fully completed including: a) the volunteer experience form(s); b) the prerequisite completion form; c) the two letters of recommendation forms; d) the achievement summary form; and e) official transcripts from all

college attended. The completed application materials must be admitted to the Admissions Office no later than January 15 of the calendar year of desired admission. After January 15, applications will be accepted on a first-come, first-served basis, according to postmark date. Candidates will then be considered and accepted, on a rolling basis, until the prospective class is filled.

Professional Program Admission Criteria

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 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, (for current full-time undergraduate students), and one professor, 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 the achievement summary form, 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).
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 includes:

Natural Sciences (taken within 5 years prior to entering program)

Life Sciences — minimum 10 credits

- Introductory human physiology (BMS 202 or 290)
- Human anatomy (with lab) (BMS 208 and BMS 309)
- Kinesiology (MOV 300)
- Neuroscience (one of the following): BMS 427, PSY 430 or PSY 431

Social Sciences — minimum 9 credits

- Life-span human development (PSY 364)
- Abnormal Psychology or Psychopathology (PSY 303)
- Any 3 credit upper division course from Sociology, Psychology, Cultural Anthropology, Public Health or a related field.

Statistics — one undergraduate course highly recommended

Degree Requirements

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.

Occupational Therapy

Professional Program Requirements

The program requires that students attain a minimum of 80% 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

or HPR 690 Master's Thesis Proposal

HPR 689 Health Professions Research II

or HPR 695 Master's Thesis

OT 550 Foundational Perspectives in OT

OT 551 Meaningful Living Through Occupation

OT 552 Meaningful Living Laboratory

OT 560 Foundations of Child & Adolescent Practice

OT 561 Child & Adolescent Practice

OT 562 Child and Adolescent Laboratory

OT 563 Level I Fieldwork (Part 2)

OT 564 Occupational Therapy Research Methods

OT 570 Foundations of Adult Practice

OT 571 Adult Practice

OT 572 Adult Laboratory

OT 573 Level I Fieldwork (Part 3)

OT 650 Foundations of Older Adult Practice

OT 651 Older Adult Practice

OT 652 Older Adult Laboratory

OT 653 Level I Fieldwork (Part 4)

OT 660 Level II Fieldwork (Part 1)

OT 661 Level II Fieldwork (Part 2)

PA 535 Grant Writing

STA 610 Applied Statistics for Health Professions and three electives (2 to 3 credits each)

Note: Level II fieldwork must be completed within 24 months of completion of academic program.

Sample Curriculum for Professional Program

This is a sample schedule

Fall I

OT 550 Foundational Perspectives in OT

OT 551 Meaningful Living Through Occupation

OT 552 Meaningful Living Laboratory

OT 553 Level I Fieldwork (Part 1)

STA 610 Applied Statistics for Health Professions

Winter II

- Elective

OT 560 Foundations of Child & Adolescent Practice

OT 561 Child & Adolescent Practice

OT 562 Child and Adolescent Laboratory

OT 563 Level I Fieldwork (Part 2)

OT 564 Occupational Therapy Research Methods

Spring/Summer I

- Elective

HPR 688 Health Professions Research I
or HPR 690 Master's Thesis Proposal
OT 570 Foundations of Adult Practice
OT 571 Adult Practice
OT 572 Adult Laboratory
OT 573 Level I Fieldwork (Part 3)

Fall II

- Elective

HPR 689 Health Professions Research II
or HPR 695 Master's Thesis
OT 650 Foundations of Older Adult Practice
OT 651 Older Adult Practice
OT 652 Older Adult Laboratory
OT 653 Level I Fieldwork (Part 4)

Winter II

OT 660 Level II Fieldwork (Part 1)

Spring/Summer II

OT 661 Level II Fieldwork (Part 2)

Note: Level II fieldwork must be completed within 24 months of completion of academic program.

Courses of Instruction

Numbers in parentheses at the end of the course descriptions indicate the number of lecture, discussion, and laboratory hours per week.

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. Three credits.

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. Three credits.

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. Four credits.

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. Four credits.

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. Prerequisite: OT 400 and OT 401. Four credits.

Occupational Therapy

OT 410 Professional Competencies—Play/Leisure. First in a series designed to develop the technical skills that constitute occupational therapy practice. Focuses on the skills necessary to apply media and leisure occupations with clients. Includes the rationale for the use of media, the therapeutic value of play, laboratory practice, and appropriate documentation. (2-0-2) Offered winter semester. Corequisite: OT 415 and OT 420. Three credits.

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. Three credits.

OT 415 Interventions Using Play Occupations. The first course in the intervention series. Course focuses on the development of comprehensive intervention planning skills using play occupations. Includes regular laboratory practice and practice with appropriate documentation. (3-0-2) Offered winter semester. Corequisite: OT 410 and OT 420. Four credits.

OT 420 Clinical Reasoning I—Level I Fieldwork. Helps students develop professional judgment and clinical decision-making skills. Discussion includes the art and science of professional practice, the evaluation of interventions, and theory—practice integration to maximize therapeutic outcomes. Fieldwork experiences provide the background for analysis and class discussion. (0-2-8) Offered winter semester. Co-requisite: OT 410 and OT 415. Two credits.

OT 510 Professional Competencies—Assessment. Second in a series designed to develop the technical skills that constitute occupational therapy practice. Focuses on the skills necessary for completing effective assessments with clients. Includes an introduction to standardized and nonstandardized assessments, developing the skill of observation, laboratory application of occupational performance and its components, and appropriate documentation. (2-0-2) Offered fall semester. Corequisite: OT 515 and OT 520; Prerequisite: OT 410. Three credits.

OT 515 Interventions Using Self-Care Occupations. The second course in the intervention series. Continued focus on development and refinement of comprehensive intervention planning skills using self-care occupations (ADL and IADL). Includes regular laboratory practice and practice with appropriate documentation. (3-0-2) Offered fall semester. Corequisite: OT 510 and OT 520; Prerequisite: OT 410. Four credits.

OT 520 Clinical Reasoning II/Level I Fieldwork. Helps students develop professional judgment and clinical decision-making skills. Discussion includes problem solving, goal setting, and development and use of clinical reasoning skills. Fieldwork experiences provide background for analysis and class discussion. (0-2-8) Offered fall semester. Corequisite: OT 510 and OT 515; Prerequisite: OT 415. Two credits.

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. Three credits.

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. Reviews knowledge required for recognizing gaps and creating new opportunities for service. (0-2-0) Offered fall semester. Two credits.

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. Corequisite: OT 552 and OT 553. Three credits.

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. Corequisite: OT 551 and OT 553. Two credits.

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. Corequisite: OT 551 and OT 552. Two credits.

OT 560 Foundations of Child and 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. Prerequisite: OT 553. Two credits.

OT 561 Child and Adolescent Practice. Theoretical and practice concepts, assessment and intervention methods are developed for OT services at individual, group, and population levels for children and adolescents. Students learn to identify barriers to occupational performance at all levels and address barriers through selecting and conducting assessments, designing interventions, conducting advocacy, research, education and documentation (0-3-0) Offered winter semester. Corequisite: OT 562 and OT 563; Prerequisite: OT 553. Three credits.

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. Corequisite: OT 561 and OT 563; Prerequisite: OT 553. Two credits.

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. Corequisite: OT 561 and OT 562; Prerequisite: OT 553. Two credits.

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. Prerequisite: STA 610. Four credits.

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. Prerequisite: OT 563. Three credits.

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. Corequisite: OT 572 and OT 573; Prerequisite: OT 563. Three credits.

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. Corequisite: OT 571 and OT 573; Prerequisite: OT 563. Two credits.

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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. Corequisite: OT 571 and OT 572; Prerequisite: OT 563. Two credits.

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. Corequisite: OT 615 and OT 620; Prerequisite: OT 510. Three credits.

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. Corequisite: OT 610 and OT 620; Prerequisite: OT 515. Four credits.

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. Corequisite: OT 610 or OT 615; Prerequisite: OT 520. Two credits.

OT 630 Level II Fieldwork (Part I). 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. Field study. Offered spring/summer semester. Six credits.

OT 631 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. Field study. Offered fall semester. Six credits.

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. Prerequisite: OT 573. Three credits.

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. Corequisite: OT 652 and OT 653; Prerequisite: OT 573. Three credits.

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. Corequisite: OT 651 and OT 653; Prerequisite: OT 573. Two credits.

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. Co-requisite: OT 651 and OT 652; Prerequisite: OT 573. Two credits.

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. Nine credits.

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. Nine credits.

OT 680 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Admitted to OT. One to six credits.

Philosophy (PHI)

Chair: Parker. Professors: Castelhão-Lawless, Kindschi, Ni, Rowe; Associate Professors: Cimitile, Parker, Pestana, Whipp; Assistant Professors: DeWilde, Fitzpatrick, Loeffler, Moes, Shang, Sweet, Uglietta, Vandenberg.

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.

Requirements for Major

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.

Students majoring in philosophy must complete a minimum of 30 hours in the department, including PHI 103, 495, a 3 credit course in non-Western philosophy (PHI 210,

Philosophy

240, or 306), and any four out of the following five courses: PHI 311, 312, 313, 314, and 315.

Special Programs

Study abroad programs directed by philosophy faculty are especially beneficial for philosophy students. The China program represents a rare opportunity to study many aspects of Chinese culture, including Eastern philosophy, in China.

Community Working Classics (PHI 375 and 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 their “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.

The study of Philosophy is an excellent preparation for law school. Interested students should contact Professor John Uglietta, the department’s pre-law advisor.

Requirements for Minor

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.

Courses numbered PHI 301, 302, 303, 304, 306, and 380 may be repeated for credit when, as is usual, their content varies. Each philosophy course is designed to benefit students who, whatever their fields of concentration, are reasonably prepared and interested in its topic.

Courses numbered PHI 306, 311, 312, 313, 314, 315, and 380 may be repeated for credit when their content varies

Career Opportunities

The vocational value of philosophy depends largely on its connection with other fields. For example, formal logic is close to mathematics; ethics is important for medicine, business, teaching, and counseling; legal and political philosophy are essential to law and public service; philosophy of science has a bearing on the social and natural sciences; and aesthetics and the history of philosophy are useful to students in literature and the arts. Schools of law, theology, and religious studies are enthusiastic about philosophy as an undergraduate major. Almost any graduate, professional, or career program depending on a liberal arts curriculum welcomes work done in philosophy.

Courses of Instruction

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. Three credits.

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 contempo-

rary moral problems? This course considers the answers philosophers give to these and related questions. Fulfills Philosophy and Literature Foundation. Offered fall and winter semesters. Three credits.

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. Three credits.

PHI 203 Intermediate Logic. A thorough introduction to classical quantification 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 CS 160, or CS 162, or MTH 110. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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: Previous work in Philosophy. Three credits.

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. Prerequisites: Junior standing. Three credits.

PHI 301 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. Offered fall semester. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

PHI 302 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. Offered winter semester. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

PHI 303 Modern Great Philosophers. A study of one or several modern great philosophers, such as Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant, Hegel. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. Offered fall semester. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

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PHI 304 Recent Great Philosophers. A study of one or several recent great philosophers, such as Kierkegaard, Marx, 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. Offered winter semester. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

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 Yang-ming. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. Offered Winter semester. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

PHI 310 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. Offered fall and winter semesters. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

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 the instructor. Three credits.

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. Three credits.

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, 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. Three credits.

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. Course may be repeated if content differs. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

PHI 315 Recent Great Philosophers. A study of one or several recent great philosophers, such as James, Wittgenstein, Heidegger, Dewey, Arendt, Merleau-Ponty, Pierce, 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. Three credits.

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. Prerequisite: Prior work in philosophy or political science or permission of instructor. Three credits.

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 pro-

fessions. Also seeks to foster mutual understanding across professional lines. Part of Ethics theme. Offered fall and winter semesters. Three credits.

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. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

PHI 345 Mind, Brain and Consciousness. 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. Three credits.

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. Three credits.

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. Three credits.

PHI 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 Human Journey theme. Offered winter semester. PSY 101 or PHY 101. Three credits.

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. Prerequisite: PHI 101 or PHI 102. Three credits.

Physical Therapy

PHI 375 Community Working Classics I. A political philosophy/service learning seminar that involves students in community organizing and teaching as well as the study of classic texts in philosophy. Careful analysis of the relationship between theory and practice in a philosophical education. Offered fall semester. Prerequisite: Permission of instructor. Four credits.

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. Prerequisite: Permission of instructor. Three credits.

PHI 380 Topics in Philosophy. A variable topics course on a problem, theme, or figure of importance to the practice of philosophy in the present. Offered as needed. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

PHI 399 Independent Readings. Reading on a topic or a philosopher, arranged both as to credit and content with a member of the department. Offered fall and winter semesters. Prerequisite: Prior work in philosophy or permission of instructor. One to four credits.

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 Human Journey theme. Offered winter semester. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

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. Prerequisite: Prior work in philosophy or permission of instructor. Three credits.

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. Three credits.

PHI 480 Advanced Study. 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. Three credits.

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. Three credits.

Physical Therapy (PT)

Director: Peck. Professors: Peck, Toot; Associate Professors: Alderink, Hoogenboom, Stevenson, Vaughn; Assistant Professors: Allaben, Baker, Green, Harro, Ozga; Affiliate Faculty: Shoemaker, D.P.T., G.C.S.; Research Assistant Professor: Hadley; Clinical Faculty: Barr, M.P.T.; Chapin, Ph.D., Uglietta, M.P.T.; Adjunct Faculty: Bennett, M.A., P.T., O.C.S., A.T.C.; Bourque, M.H.S., P.T., P.C.S.; Canos-Torres, M.O.M.T., P.T.; Gilbert, M.S., P.T.; Granger, P.T.; Grill-Ewing, M.H.S., P.T.; Hartlein, D.P.T., C.M.D.T., A.T.C.; Hall, M.S., P.T.; Hunter, M.S., P.T.; Keeter, M.S., P.T.; Kleiman, M.S., P.T.; Lesch, P.T.; Lomonaco, M.H.S., P.T., O.C.S.; May, M.S., P.T.; McGee, P.T.; Oakes, M.S., P.T.; Owens, M.S., P.T.;

Potgeter, M.S., P.T.; Rector, M.P.T.; Riemersma, M.P.T.; Schmitz, M.S., P.T.; Smith, M.S., P.T.; Stickler, M.S., P.T.; Sytsema, P.T., O.M.P.T.; Vaqndel, M.S., P.T.

Degree offered: Doctor of Physical Therapy (DPT).

Accreditation: The Physical Therapy curriculum is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

Physical therapy is the care and services provided by or under the direction and supervision of a physical therapist, including (1) examining clients with physical impairments, functional limitations, and disabilities or other health-related conditions in order to determine a diagnosis, prognosis, and intervention; (2) 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 good 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 science, biology, biomedical science, biopsychology, movement science, and athletic training. All of the physical therapy preprofessional curriculum course requirements must be taken for a letter grade.

Application Procedures

Physical therapy applicants: Applications to the Doctor of Physical Therapy program may be obtained from the Admissions Office of Grand Valley State University. Upon return of the completed graduate application the Admissions office will mail supplementary materials, including recommendation forms (also available from the Web site www.gvsu.edu/pt). For first consideration for admission, the application and supplementary materials must be returned to the Admissions office by January 15 of the calendar year in which the student wishes to begin the professional curriculum. Later applications also will be considered if the prospective class is not full.

Professional Program Admission Criteria

Admission to the Doctor of Physical Therapy program is competitive. The criteria for acceptance include the following:

1. Completion or written plan for completion of prerequisite coursework:
 - One course that includes cellular structure and function, with lab. BIO 120.

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- Chemistry that is prerequisite to physiology. CHM 109, 231, and 232.
 - One course in physiology with lab. BMS 290 and 291.
 - One course in anatomy with lab. BMS 208 and 309.
 - One course in exercise physiology. BMS 365 or MOV 365.
 - 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.
2. Academic achievement. All applicants must have a minimum cumulative GPA of 3.0 overall and in prerequisite course requirements to be considered for admission.
 3. Acceptable GRE scores.
 4. Communication and interpersonal skills. On-site interviewing and essay writing are required. Practice interviews are available by contacting Career Services.
 5. Recommendations. Two recommendations must be submitted on university forms. One must be from a licensed physical therapist. These forms may be printed from the Web site www.gvsu.edu/pt.
 6. Observational experience. A minimum of 50 hours of observational experience of physical therapy is required. The experience may be on a volunteer or paid basis. Observational experiences in a variety of clinical settings are valued.
 7. Additional activities. Additional educational, professional, leadership, scholarly, and volunteer activities are valued and must be documented on university forms. This form may be printed from the Web site www.gvsu.edu/pt.
 8. Technical standards. Individuals must be able to perform all technical standards of the Physical Therapy program. This is available for view on the Web site www.gvsu.edu/pt.
 9. 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.
 10. An annual class of 40 students is admitted. Students are accepted for fall entrance only and will be informed of the Admission Committee's decision by a mailing.

Early Admission Criteria

Applicants for early admission must have a minimum cumulative GPA of 3.5 overall and in prerequisite course requirements at the time of application. The remaining criteria are the same as for regular admission. All application materials must be received by October 15th for a mid-December decision. If an applicant is not selected for early admission, the application will be held for evaluation during the regular admission process.

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 checks may be required prior to participation in certain clinical experiences. The cost of this evaluation may be the responsibility of the student.

DPT Requirements

Demonstration of completion of the 121 credits in the professional curriculum is required for completion of the Doctor of Physical Therapy.

Professional Program Requirements for the DPT

BMS 427 Neuroanatomy
BMS 428 Neurosciences
BMS 461 Prosected Regional Anatomy
HPR 510 Introduction to Health Professions Research
HPR 610 Research in the Health Professions
HPR 657 Role of Education in Health Professions
HPR 688 Health Professions Research I
HPR 689 Health Professions Research II
PSY 668 Health Profession Disability Psychology
PT 510 Motor Learning & Development
PT 511 Foundations in Physical Therapy Examination
PT 513 Clinical Science I
PT 515 Professional Topics I
PT 517 Clinical Kinesiology
PT 521 Musculoskeletal Examination
PT 522 Musculoskeletal Interventions
PT 523 Clinical Science II
PT 526 Clinical Seminar I
PT 528 Clinical Biomechanics
PT 631 Cardiopulmonary Physical Therapy I
PT 632 Integumentary Practice Management
PT 634 Clinical Seminar II
PT 636 Clinical Education I
PT 641 Neuromuscular Examination
PT 642 Interventions in Neuromuscular Physical Therapy
PT 643 Clinical Science III
PT 644 Clinical Seminar III
PT 647 Cardiopulmonary Physical Therapy II
PT 651 Spinal Exam and Intervention
PT 652 Geriatric Practice Management
PT 655 Professional Topics II
PT 656 Clinical Education II
PT 661 Exam and Intervention for Rehabilitation

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PT 662 Pediatric Practice Management
PT 665 Professional Topics III
PT 675 Clinical Education III
PT 677 Clinical Education IV
PT 681 Advanced Clinical Decision Making
PT 682 Health and Wellness
PT 684 Advanced Topics: Sports Physical Therapy
PT 685 Professional Topics IV
PT 687 Advanced Topics: Spinal Manual Therapy
PT 688 Advanced Topics: Neurologic Physical Therapy
PT 696 Clinical Education V
STA 610 Applied Statistics for Health Professions

Curriculum for Doctor of Physical Therapy

First Year

Fall

BMS 427 Neuroanatomy
BMS 461 Prosected Regional Anatomy
PT 510 Motor Learning & Development
PT 511 Foundations in Physical Therapy
Examination
PT 513 Clinical Science I
PT 515 Professional Topics I
PT 517 Clinical Kinesiology

Winter

PT 521 Musculoskeletal Examination
PT 522 Musculoskeletal Interventions
PT 523 Clinical Science II
PT 526 Clinical Seminar I
PT 528 Clinical Biomechanics

Second Year

Fall

HPR 610 Research in the Health Professions
PT 641 Neuromuscular Examination
PT 642 Interventions in Neuromuscular
Physical Therapy
PT 643 Clinical Science III
PT 644 Clinical Seminar III
PT 647 Cardiopulmonary Physical Therapy II

Spring/Summer

HPR 688 Health Professions Research I
PSY 668 Health Profession Disability Psychology
PT 661 Exam and Intervention for
Rehabilitation
PT 662 Pediatric Practice Management
PT 665 Professional Topics III

Spring/Summer

First five weeks:

PT 636 Clinical Education I

Next eight weeks:

BMS 428 Neurosciences
HPR 510 Introduction to Health Professions
Research
PT 631 Cardiopulmonary Physical Therapy I
PT 632 Integumentary Practice Management
PT 634 Clinical Seminar II
STA 610 Applied Statistics for Health
Professions

Winter

First six weeks:

PT 656 Clinical Education II

Next eight weeks:

HPR 657 Role of Education in Health
Professions
HPR 688 Health Professions Research I
PT 651 Spinal Exam and Intervention
PT 652 Geriatric Practice Management
PT 655 Professional Topics II

Third Year

Fall

PT 675 Clinical Education III
PT 677 Clinical Education IV

Winter

HPR 689 Health Professions Research II
PT 681 Advanced Clinical Decision Making
PT 682 Health and Wellness
PT 685 Professional Topics IV

Winter—Optional

PT 684 Advanced Topics: Sports Physical Therapy
PT 687 Advanced Topics: Spinal Manual Therapy
PT 688 Advanced Topics: Neurologic Physical Therapy

Spring/Summer—Required

PT 696 Clinical Education V

Courses of Instruction

PT 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Three credits.

PT 418 Physical Therapy Procedures I. Students learn basic techniques needed in patient management, including vital signs, basic first aid, patient positioning, transfers, gait training. Develops theoretical understanding and clinical skills for using various modalities, including superficial and deep heat, cryotherapy, hydrotherapy, sterile techniques, electrical modalities, and massage. Provides an introduction to wound care. (3-0-3) Offered fall semester. Prerequisite: Admission to physical therapy program. Four credits.

PT 421 Clinical Education I. An exposure to various clinical practice situations. Simulated clinical experience integrates all of the didactic material, patient care skills, and physical therapy techniques students have learned. Problem solving will be emphasized. Lecture, laboratory, and fieldwork. (1-0-3) Offered winter semester. Prerequisite: Admission to physical therapy program. Graded credit/no credit. Two credits.

PT 430 Introduction to Sports Physical Therapy. Applies fundamental knowledge and skills acquired in orthopedic physical therapy and exercise science to the evaluation and treatment of sports injuries. Clinical problem solving and referral strategies are presented using simulated case histories. (15-0-3) Offered summer semester. Prerequisite: Admission to the physical therapy program. Two credits.

PT 510 Motor Learning & Development. A lifespan view of motor learning and motor development. Included will be basic principles of motor control and in-depth coverage of motor learning and its relationship to development. Each body system's development (e.g., neurological, cardiopulmonary) will be related to function throughout the lifespan. Offered fall semester. Prerequisite: Admission to physical therapy program. Three credits.

PT 511 Foundations in Physical Therapy Examination. Introduction to clinical measurement theory, basic examination techniques, interviewing, chart review, clinical documentation, and systems review in physical therapy. Addresses basic examination techniques for the musculoskeletal, neuromuscular, cardiopulmonary, and integumentary systems. Incorporates simulated clinical experiences. Offered fall semester. Prerequisite: Admission to physical therapy program. Three credits.

PT 513 Clinical Science I. Study of physiological responses to pathology of the endocrine, hepatic, immune, integumentary, gastrointestinal, renal, and reproductive systems, including mechanisms basic to inflammation, neoplasia, tissue repair and regeneration, and pain across the four major systems of PT practice. Systems screening, physical therapy practice patterns, and medical management, including pharmacotherapy is emphasized. Offered fall semester. Prerequisite: Admission to physical therapy program. Two credits.

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PT 514 Rehabilitation for Chronic Conditions. Review of interdisciplinary practice procedures, clinical problem solving and referral strategies and complementary therapies used in the following areas: OB-GYN, burn management, industrial injuries, chronic pain, and chronic disease. Drug implications for selected systemic and musculoskeletal disorders will also be discussed. (3-0-0) Offered summer session. Prerequisite: Admission to the physical therapy program. Three credits.

PT 515 Professional Topics I. Introduces the roles of physical therapists in a changing health care system, and the following professional topics: APTA; Guide to PT Practice; ethics, conduct and informed consent; communication; diversity; involvement of the patient; systems perspectives; documentation; reimbursement; and literature. Offered fall semester. Prerequisite: Admission to physical therapy program. One credit.

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. Prerequisite: Admission to physical therapy program. Three credits.

PT 521 Musculoskeletal Examination. Diagnostic procedures for patients with a variety of musculoskeletal conditions that affect the upper and lower extremities, and spine. Includes: patient screening for medical disease, physical examination for impairments and functional limitations, clinical decision making, and referral strategies. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Four credits.

PT 522 Musculoskeletal Interventions. Students will learn the basic, evidence-based intervention and establishment of prognosis skills for musculoskeletal extremity and spinal pathologies. An eclectic approach to patient management is presented so that manual and therapeutic exercise techniques may be applied clinically. Basic issues of injury prevention and wellness will be addressed. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Four credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Three credits.

PT 526 Clinical Seminar I. Students will be exposed to an array of clinical issues associated with decision-making on patients with primary musculoskeletal disorders. Issues such as reimbursement, access to the clinician, effective communication, confidentiality, cultural diversity, and effective utilization of community resources will be explored as the student becomes involved in total case management. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Two credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Three credits.

PT 631 Cardiopulmonary Physical Therapy I. The physiologic and pathophysiologic basis for physical therapy management of individuals with secondary cardiovascular and pulmonary dysfunction as seen in general physical therapy practice. Emphasis is placed on assessment and

interpretation of physiologic responses during therapeutic activities and on associated clinical decision making. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Two credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Two credits.

PT 634 Clinical Seminar II. Clinical issues pertaining to physical therapy management of medically complex patients and clients are introduced through case-oriented presentations and advanced study. Students explore treatment strategies in response to changes in physiology, and consider the broader perspectives of the family, the health care system and the community. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. One credit.

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. Prerequisite: PT Faculty recommendation. Graded credit/no credit. Four credits.

PT 641 Neuromuscular Examination. Addresses examination procedures used by physical therapists in managing neuromuscular dysfunction resulting from injury to the nervous system. The evidence supporting examination procedures is addressed. Evaluation of examination findings and differential diagnosis are emphasized. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Four credits.

PT 642 Interventions in Neuromuscular Physical Therapy. This course provides foundation in theoretical basis and techniques of neurologic rehabilitation, based on principles of motor control and learning and evidence-based practice. Students learn to design a comprehensive plan of care and apply interventions targeted to the remediation of disabilities, functional limitations, and impairments in clients with neurologic diagnoses. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Four credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Three credits.

PT 644 Clinical Seminar III. Provides students insight into complex case management issues in neurologic physical therapy practice. Case-based discussion and active clinical experiences facilitate students to analyze from a system-based perspective factors that influence the development of a plan of care for neurologic patients. Emphasis on effective advocacy for clients and health promotion behaviors. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Two credits.

PT 647 Cardiopulmonary Physical Therapy II. Students integrate physiologic and pathophysiologic principles in physical therapy management of individuals with primary cardiovascular and pulmonary dysfunction seen in specific practice settings. Knowledge of medical and surgical interventions, diagnostic testing, and cardiopulmonary physical therapy tests and measures are applied to clinical decision making. Offered fall semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Two credits.

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

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therapeutic approaches may be applied clinically. Issues of injury prevention, including basic workplace and ergonomic issues will be addressed. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Four credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Two credits.

PT 655 Professional Topics II. Introduces students to the health care delivery system including managed care, government funded and private insurance, and basic reimbursement methods utilized in each system. Examination of the American Physical Therapy Association Guide for Professional Conduct with clinical application to bioethics and research. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. One credit.

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. Prerequisite: PT Faculty recommendation. Course is graded credit/no credit. Five credits.

PT 661 Exam and Intervention for Rehabilitation. This course deals with the long-term physical therapy examination and intervention for the rehabilitation patient. Areas discussed include: adaptive equipment, recreation, wheelchairs, architectural barriers, orthotics, prosthetics, and spinal cord injuries. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Four credits.

PT 662 Pediatric Practice Management. In-depth study of pediatric physical therapy. PT management, including diagnosis, prognosis, intervention, and medical/pharmacological management, will be explored. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Three credits.

PT 665 Professional Topics III. Students will be exposed to laws related to the practice of physical therapy. Analysis will include concepts of licensure, disciplinary action and professional liability. Students will be introduced to concepts of social responsibility, citizenship and advocacy available in the legislative process. Offered spring/summer semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Two credits.

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. Prerequisite: PT 656 and PT faculty recommendation. Graded credit/no credit. Six credits.

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. Prerequisite: PT 675 and PT faculty recommendation. Graded credit/no credit. Six credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Course is graded credit/no credit. Two credits.

PT 682 Health and Wellness. This course provides a framework and principles for health promotion and wellness across the lifespan. Students will learn to screen and evaluate clients/patients to provide primary, secondary and tertiary prevention services. Through application of the disablement model students learn strategies to prevent disease, injury, impairment, functional limitation and disability. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Three credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence or licensed physical therapist. Course is graded credit/no credit. Three credits.

PT 685 Professional Topics IV. The emphasis is on practice management and professional development. Addresses human resource management, facility planning, marketing, quality measures, and financial management as related to the role of the physical therapist. Offered winter semester. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence. Two credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence or licensed physical therapist. Course is graded credit/no credit. Three credits.

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. Prerequisite: Successful completion of all previously required courses in the DPT curricular sequence or licensed physical therapist. Course is graded credit/no credit. Three credits.

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. Prerequisite: PT 677 and PT Faculty recommendation. Course is graded credit/no credit. Six credits.

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: Completion of first four semesters of professional program and permission of program. One to three credits.

Physician Assistant Studies (PAS)

Program Director: Boeve. Medical Director: Libra; Associate Professor: Bacon-Baguley; Assistant Professors: DuBose, Libra, VanRyn; Adjunct Faculty: Byker, Dernocoeur, Gonzalez, Norris, Piper, Robinson, Woolsey.

Degree offered: M.P.A.S. (Master's in Physician Assistant Studies).

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 and treat illnesses, provides patient education and medical advice, counsels patients, assists in surgery, dictates proper treatment orders, and interprets laboratory and other diagnostic studies. In 49 of the 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 narcotics. Because of the close working relationship PAs have with supervising physicians, PAs are educated in the medical model to expand the capabilities of physicians. As such, PAs see many of the same types of patients and perform many of the same tasks as physicians, leaving the supervising physician to deal with more challenging cases. The responsibilities of the PA depend upon a number of factors, including state laws and regulations, years of experience and training, and the setting in which the PAs practice, which all comprises the PA'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, especially in rural and inner city locations. The National Industry–Occupation Employment Outlook published by the Bureau of Labor Statistics of the U.S. Department of Labor predicts an increase in physician assistant employment from 2004–2014 and lists the physician assistant currently as the fourth fastest growing profession in the United States. Physician assistants are employed in a wide variety of health care facilities from academic to administrative to hospitals, clinics, and private practice settings. They work in HMOs, clinics, nursing homes, emergency departments, practice offices, industrial and occupational medicine, research, correctional medicine, and Veteran's Administration and Public Health Service 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 32-month curriculum of professional studies. The curriculum is linked with the undergraduate programs at Grand Valley in a “3+3” curriculum design that allows undergraduate students at Grand Valley to prepare for application to the PA Studies program. During their first three years of collegiate education, such students typically take coursework in the natural, health, and social sciences as well as general education courses, including the arts and humanities. By so doing, this group of students are able to meet the prerequisites for application to the PAS program. For this particular group of students it is possible to earn a bachelor's degree in health sciences during the first year of the professional curriculum of the PAS program.

An equal number of applicants to the program are derived from those who already possess a baccalaureate degree from either Grand Valley or another institution of higher learning and/or those who have pursued careers other than physician assistant. Although this group must also meet the prerequisites and criteria for application to the program, they 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 like human anatomy, clinical pathophysiology, neuroanatomy, clinical medicine, neuropathology, pharmacology, laboratory medicine, 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 upon graduation. Students will also spend four semesters completing various clinical specialties, working in, clinics, emergency departments, and hospitals throughout Western Michigan and other Michigan communities. As part of the master's curriculum, students also complete a research project or thesis.

Accreditation Statement

ARC-PA. The Grand Valley State University Physician Assistant program is fully accredited by the Accreditation Review Commission on Education for the Physician Assistant. This allows program graduates to take the required certification examination after graduation.

PAEA. The Grand Valley State University Physician Assistant Studies program is a member of the Physician Assistant Education Association programs, the national organization representing educational programs for physician assistants.

AAPA. The American Academy of Physician Assistants recognizes the Grand Valley State University Physician Assistant Studies program, its students, and its graduates.

Application Procedures

Admission to the PAS program is competitive. Please contact the program at (616) 331-3356 to obtain an application or visit our Web site at www.gvsu.edu/pa for additional information. Students must be in the process of completing all of their preprofessional and undergraduate degree requirements to be considered.

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 sciences 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 Physician Assistant program or the Grand Valley SMART Center before entering Grand Valley or very soon thereafter, in addition to their undergraduate advisor.

Students who have completed or are near completion of a B.S. 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 preprofessional coursework must complete a graduate application. Students should meet with a faculty member of the PAS program 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 must be completed by 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

Physician Assistant Studies

plan to complete the preprofessional courses prior to their enrollment in PAS program. Application information may be obtained by calling the College of Health Professions office at (616) 331-3356. The application deadline is **October 1** for early admission cycle or **November 1** for regular 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 this date for the application to be considered for the class to enter in 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. Positions in the program will be offered to applicants the committee deems exceptional candidates beginning in December. The new PAS class should be filled after January 31 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 and in their last 60 hours of coursework to be considered for admission. A bachelor’s degree is required before beginning clinical rotations in the professional curriculum.
2. Two formal letters of recommendation from health professionals—submitted on university forms is required. We recommend, not require, that at least one letter be from a practicing physician assistant.
3. Satisfactory individual and group interviews, which are granted at the discretion of the admissions committee.
4. Writing samples, required as a portion of the interview process, providing one is granted.
5. Experience. Applicants should show evidence of 250-plus hours of significant volunteer, work, or observational experience in a health care environment. This experience must be hands on patient care activities.
6. Foreign-born applicants should be able to communicate well in English. Minimal scores of TOEFL 600 or equivalent computer-based TOEFL are expected.

The rare student who feels they have unusual circumstances that impact their ability to meet the above criteria must appeal in writing to the 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 by **February 28**. Applicants may be placed on an alternate list to be offered positions in the entering class should a vacancy occur.

Selection Factors

Applicants are considered without regard to age, gender, sexual orientation, race, color, national origin, religion, political beliefs, or disability. 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 Web site, www.gvsu.edu/pa.

Early Admission Criteria

Applicants for early admission must have a minimum average GPA of 3.5 overall, in the last 60 hours, and in prerequisite course requirements at the time of application. The remaining criteria are the same as for regular admission. The application and supplementary materials must be received and dated by the admissions office before October 1st for a mid-December decision. If an applicant is not selected for early admission, the application will be held for evaluation during the regular admission process.

Degree Requirements

Demonstration of completion of the 109 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 the Grand Valley State University Undergraduate and Graduate Catalog.

In addition, for each course or module of a course identified by the program faculty as a discrete unit of instruction in the professional curriculum, a minimum proficiency level of 80 percent on all evaluations as described in course syllabi 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 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 Web site, www.gvsu.edu/pa.

All students in the program are expected to comply with the ethical principles that embody the practice of medicine and the physician assistant profession.

Criminal background checks and/or drug screens may be required prior to admission into the PA Studies program or after enrollment for certain clinical placements during the second phase of the program. The cost of these evaluations are the responsibility of the applicant or student. Additionally, criminal background checks are performed by the Michigan State Licensing Board after graduation.

Preprofessional Curriculum Course Requirements

- One course in introductory biology.
- One course in human genetics.
- One course in introductory chemistry.
- One course in introductory organic chemistry.
- One course in biological chemistry*.
- One course in human anatomy (including cadaver laboratory)*.
- One course in human physiology (including laboratory)*.
- One course in statistics.
- One course in introductory psychology.
- One course in introductory microbiology (including laboratory)*.
- One course in physics.
- One course in medical ethics.
- One course in clinical nutrition.
- One course in basic pathophysiology*.

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- One course in introductory pharmacology*.
- One course in sociology.
- One course in introductory health care research.
- One course in medical terminology.

*These courses 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 Requirements for the M.P.A.S. degree

- BMS 410 Immunology
- BMS 412 Medical Bacteriology
- BMS 427 Neuroanatomy
- BMS 461 Prosected Regional Anatomy
- BMS 475 The Pathology of Aging
- BMS 523 Epidemiology
- BMS 528 Neuropathology
- HPR 340 Health Care Management
- HPR 510 Introduction to Health Professions Research
- HPR 610 Research in the Health Professions
- HPR 688 Health Professions Research I
- HPR 689 Health Professions Research II
- NUR 620 Clinical Pharmacology
- PAS 451 Physician Assistant Seminar I
- PAS 452 Physician Assistant Seminar II
- PAS 453 Physician Assistant Seminar III
- PAS 454 Physician Assistant Seminar IV
- PAS 500 Clinical Medicine I
- PAS 501 Patient Evaluation I
- PAS 502 Patient Evaluation II
- PAS 505 Clinical Medicine II
- PAS 510 Clinical Pathophysiology
- PAS 511 Clinical Laboratory Medicine
- PAS 514 Clinical Modality Skills
- PAS 515 Clinical Medicine III
- PAS 610 Clinical Rotations I
- PAS 620 Clinical Rotations II
- PAS 630 Clinical Rotations III
- PAS 640 Clinical Practicum
- STA 610 Applied Statistics for Health Professions

Professional Level Curriculum

First Professional Year

Fall—Semester One Credits: 14

- BMS 410 Immunology
or BMS 510
- BMS 427 Neuroanatomy
- BMS 461 Prosected Regional Anatomy
- HPR 340 Health Care Management
- HPR 510 Introduction to Health Professions
Research

Winter—Semester Two Credits: 17

- BMS 412 Medical Bacteriology
- BMS 475 The Pathology of Aging
- BMS 528 Neuropathology
- HPR 610 Research in the Health Professions
- PAS 452 Physician Assistant Seminar II
- PAS 500 Clinical Medicine I
- PAS 502 Patient Evaluation II

PAS 451 Physician Assistant Seminar I
 PAS 501 Patient Evaluation I

Spring/Summer—Semester Three Credits: 13

NUR 620 Clinical Pharmacology
 PAS 453 Physician Assistant Seminar III
 PAS 505 Clinical Medicine II
 STA 610 Applied Statistics for Health Professions

Second Professional Year

Fall—Semester Four Credits: 14

BMS 523 Epidemiology
 HPR 688 Health Professions Research I
 PAS 454 Physician Assistant Seminar IV
 PAS 510 Clinical Pathophysiology
 PAS 511 Clinical Laboratory Medicine
 PAS 514 Clinical Modality Skills
 PAS 515 Clinical Medicine III

Winter—Semester Five Credits: 12

PAS 610 Clinical Rotations I

Spring/Summer—Semester Six Credits: 12

PAS 620 Clinical Rotations II

Third Professional Year

Fall—Semester Seven Credits: 12

PAS 630 Clinical Rotations III

Winter—Semester Eight Credits: 15

HPR 689 Health Professions Research II
 PAS 640 Clinical Practicum

Total professional curriculum Credits: 109

Courses of Instruction

PAS 451 Physician Assistant Seminar I. Designed for first year Physician Assistant (PA) students, this introductory course is the first in a seminar series to develop PA students' awareness of their profession. Professional history, ethics, PA programs and organizations, and health delivery will be discussed. This course will be developed and expanded upon in subsequent semesters. (1-0-0) Offered fall semester. Prerequisite: Admission into the PAS Program. One credit.

PAS 452 Physician Assistant Seminar II. Designed for first year Physician Assistant (PA) students, this course is the second in a seminar series to develop PA students' awareness of their profession. Health management, ethics, multicultural issues, and stressors in the PA profession will be discussed. Course issues will develop and expand upon previous semesters. (1-0-0) Offered winter semester. Prerequisite: PAS 451. One credit.

PAS 453 Physician Assistant Seminar III. Designed for first year Physician Assistant (PA) students, this course is the third in a seminar series to develop PA students' awareness of their profession. Patient counseling, family planning, child development, medico/legal issues, and evidence-based practice in the PA profession will be discussed. Course issues will further develop previous semesters. (1-0-0) Offered spring/summer semester. Prerequisite: PAS 452. One credit.

PAS 454 Physician Assistant Seminar IV. Designed for second year Physician Assistant (PA) students, this course is the fourth in a seminar series to develop PA students' awareness of their profession. Socioeconomic issues, billing and coding, risk management, and team relations in the PA profession will be discussed. Course issues will be finalized from previous semesters. (1-0-0) Offered fall semester. Prerequisite: PAS 453. One credit.

PAS 500 Clinical Medicine I. Designed for first-year (professional) Physician Assistant students. Symptom complexes are reviewed to demonstrate how anatomic, biochemical, or physiological abnormalities induce symptoms, signs, and laboratory findings. (Lecture presentations of a preclinical base are included in related medical specialties.) A component of the clinical

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medicine series will include Problem Based Learning (PBL) using small group instruction techniques. (3-0-3) Offered winter semester. Prerequisite: BMS 461. Three credits.

PAS 501 Patient Evaluation I. Designed for first professional semester PAS students. Focuses upon acquisition of foundation knowledge required for patient evaluation. Communication and interviewing skills are acquired, as are rudimentary physical examination skills. The student will demonstrate capability to perform complete histories and physicals. Practical experience with actual or simulated patients is utilized. (1-0-3) Offered fall semester. Prerequisite: Admission to the Physician Assistant Studies program. Two credits.

PAS 502 Patient Evaluation II. The second sequential course for PAS students. Detailed knowledge of physical signs and symptoms for major body systems is acquired, correlated with PAS 500 modules as appropriate. Communication skills dealing with sensitive issues are acquired. Demonstration of competency using simulated and actual patients is required. Introduces EKGs and spirometry. (1-0-3) Offered winter semester. Prerequisites: PAS 501; PAS 500 must be taken concurrently. Two credits.

PAS 505 Clinical Medicine II. Continuation of Clinical Medicine I for first-year (professional) Physician Assistant students. Symptom complexes are again reviewed to provide knowledge concerning the diverse areas of clinical medicine and the comprehensive diagnostic skills needed to function as practicing clinicians. (Lecture presentations of a preclinical base are included in related medical specialties.) A component of the clinical medicine series will include Problem Based Learning (PBL) using small group instruction techniques (6-0-6) Offered spring/summer session. Prerequisites: PAS 500, PAS 501, PAS 502. Six credits.

PAS 510 Clinical Pathophysiology. Interpretation of laboratory tests used in common clinical disorders, including normal functioning of the body's system. Major primary disease processes and organ system pathology regarding disease effects will be emphasized. Integration of laboratory medicine and pathophysiology is accomplished through studies of multisystem diseases. (3-0-0) Offered fall semester. Prerequisites: Admission into PAS program; BMS 310; BMS 410; PAS 500/505; Permission of instructor. Three credits.

PAS 511 Clinical Laboratory Medicine. Interpretation of laboratory tests used in common clinical disorders. Specimen collection procedures will be performed. The clinical significance diagnostic laboratory procedures and the principles, limitations, and applications of clinical procedures will be addressed. Integration of laboratory clinical testing and pathophysiology of disease states accomplished through studies of multisystem diseases. (1-0-1) Offered fall semester. Prerequisite: PAS 500/505. One credit.

PAS 514 Clinical Modality Skills. Transition course between the basic science courses and the clinical rotations. Emphasis on the development of skills necessary to perform routine clinical procedures such as suturing, casting, splinting, orthopedic immobilization, injections, venipuncture, and intravenous therapy. (1-0-2) Offered fall semester. Prerequisite: PAS 500, PAS 501, PAS 502, PAS 505. Two credits.

PAS 515 Clinical Medicine III. Final course of clinical medicine series designed for second-year (professional) Physician Assistant students. Students integrate foundational skills developed in PAS 500 and 505 to explore clinical specialty areas. Focus is on various aspects of disease processes, differential diagnoses, and clinical thinking/reasoning skills. (Lecture presentations of a preclinical base are included in related clinical medical specialties.) A component of the clinical medicine series will include Problem Based Learning (PBL) using small group instruction techniques. (4-0-4) Offered fall semester. Prerequisites: PAS 500, PAS 505. Four credits.

PAS 601 Family Medicine. Clinical rotation that provides instruction in the basic knowledge, attitudes, and skills essential to primary care physician assistants. Students study comprehensive primary health care in a variety of clinical situations, primarily in ambulatory settings. Learning will also take place through discussions, readings, seminars, and ward rounds. Completion of all professional didactic coursework. Four credits.

PAS 602 Internal Medicine. Clinical rotation focusing upon application of basic medical knowledge to medical problems and patient care situations. Students develop methods of collection and analysis of clinical information and actively participate in patient care. Students will have opportunities to evaluate patients and develop proper clinical management skills. Completion of all professional didactic coursework. Three credits.

PAS 603 Obstetrics & Gynecology. Clinical rotation designed to provide students with knowledge and skills required to address women's health needs. Students rotate through traditional inpatient/outpatient services with emphasis on prenatal monitoring and care, recognition of complications of pregnancy, common gynecological problems, and management of normal labor and delivery. Completion of all professional didactic coursework. Three credits.

PAS 604 Geriatric Medicine. Clinical rotation focusing upon common acute and chronic health problems of elderly patients. Evaluation will take place in both inpatient and outpatient settings. Clinical problem solving will be emphasized and skills in disease prevention, compliance issues, and communication will be stressed. Completion of all professional didactic coursework. Three credits.

PAS 605 Pediatrics. Clinical rotation designed to provide students with experience in the treatment of hospitalized children, well-child care, and acute minor illnesses. Throughout the rotation, the pediatric history and physical exam are stressed, as are normal and abnormal child growth and development, communication, and other pediatric medical needs. Completion of all professional didactic coursework. Three credits.

PAS 606 Psychological/Mental Health. Clinical rotation which emphasizes the behavioral and biopsychosocial aspects of common mental disorders. Inpatient and outpatient settings allow students to participate in practical clinical work, seminars, and case presentations. The development of clinical interviewing, diagnostic, and treatment planning skills are stressed. Completion of all professional didactic coursework. Three credits.

PAS 607 Emergency Medicine. Clinical rotation that provides an opportunity to participate in the delivery of urgent and emergent patient care. Focus is on triage, evaluation, and management of injury and acute illness in emergency settings. Students learn to evaluate and manage patients from presentation to disposition. Completion of all professional didactic coursework. Four credits.

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. Completion of all professional didactic coursework. Three credits.

PAS 610 Clinical Rotations I. First course to transition students from didactic to clinical training. Students will be assigned to a combination of clinical rotations selected from: Family Practice, Internal Medicine, OB/GYN, Geriatric Medicine, Pediatrics, Psychiatric Medicine, Emergency Medicine, Surgery, Rural Medicine, Underserved Medicine, and clinical electives. (4-3-45) Offered winter semester, other semesters with director approval. Prerequisite: Successful completion of all professional didactic coursework. Twelve credits.

PAS 612 Rural Medicine. Clinical rotation focusing upon common acute and chronic health problems encountered in rural medicine. Evaluation will take place in a variety of inpatient and outpatient settings. Clinical problem solving will be emphasized and skills in disease prevention, compliance issues, and communication will be stressed. Completion of all professional didactic coursework. Three credits.

PAS 614 Underserved Medicine. Clinical rotation focusing upon acute and chronic health problems that are commonly found in underserved populations. Evaluation will take place in outpatient settings. Clinical problem solving will be emphasized and skills in disease prevention,

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compliance issues, and communication will be stressed. Completion of all professional didactic coursework. Three credits.

PAS 620 Clinical Rotations II. Second course to transition students from didactic to clinical training. Students will be assigned to a combination of clinical rotations selected from: Family Practice, Internal Medicine, OB/GYN, Geriatric Medicine, Pediatrics, Psychiatric Medicine, Emergency Medicine, Surgery, Rural Medicine, Underserved Medicine, and clinical electives. (4-3-45) Offered spring/summer semester, other semesters with director approval. Prerequisite: Successful completion of all professional didactic coursework. Twelve credits.

PAS 630 Clinical Rotations III. Third course to transition students from didactic to clinical training. Students will be assigned to a combination of clinical rotations selected from: Family Practice, Internal Medicine, OB/GYN, Geriatric Medicine, Pediatrics, Psychiatric Medicine, Emergency Medicine, Surgery, Rural Medicine, Underserved Medicine, and clinical electives. (4-3-45) Offered fall semester, other semesters with director approval. Prerequisite: Successful completion of all professional didactic coursework. Twelve credits.

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. Prerequisite: Completion of all didactic coursework and required clinical rotations. Twelve credits.

Physics (PHY)

Chair: Furton. Professor: Estrada, Reynolds; Associate Professors: Ambrose, Furton, Gipson; Assistant Professors: Lenters, Oliver, Rakovic, Schnyders; Laboratory Coordinator: Beyer.

Degrees offered: B.S. in physics; minor in physics; major or minor for physics secondary teacher certification. Physics concentration in Masters of Education.

Physicists are explorers of the physical universe. They seek to know and understand the fundamental behavior of nature, from elementary particles to the galaxies. Physicists must develop both experimental and analytical skills to carry out their search for a detailed description of the behavior of matter and energy.

The physics Department offers a bachelor's degree with a major in physics. This is a well-defined program of observation, experimentation, and theoretical study of the various phenomena of nature. The department also offers a minor in physics and the option for secondary teacher certification with the major 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 chemistry, mathematics and physics can be taken only in sequence. Students who expect to major or minor in physics should consult a faculty member of the Physics Department to plan their programs at the earliest opportunity, preferably before registration for their first term. It is especially important that transfer students meet with a department faculty advisor to evaluate previous work and plan an appropriate program of study.

Career Opportunities

Problem-solving skills mastered by the physics major make physics an excellent background for many professions. Employment opportunities exist in education, industry, and research. In particular, there is an enormous need for properly prepared secondary school physics teachers.

Physicists are commonly employed in industry, private institutions and government, normally working as part of a team of scientists and engineers. With an advanced degree, more responsible positions in research are available, as are teaching opportunities in colleges and universities.

A physics degree is also an excellent background for positions or further education in engineering and 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 medical physics, both of which offer excellent employment opportunities.

Major Requirements: B.S. in Physics

Completion of a major in physics requires the following:

1. General University Degree Requirements

As identified in the General Academic Policies section of the catalog.

2. Required Courses

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*

PHY 231 Principles of Physics II

PHY 302 Introduction to Modern Physics

PHY 309 Experimental Methods in Physics

PHY 311 Advanced Laboratory II

PHY 330 Intermediate Mechanics

PHY 340 Electromagnetic Fields

PHY 350 Intermediate Modern Physics

PHY 360 Statistical Thermodynamics

PHY 485 Senior Physics Project (Capstone sequence)

PHY 486 Senior Physics Project (Capstone sequence)

3. Required Cognate Courses

Thirty-six semester credit hours of required cognate courses with a minimum grade of C (2.0) in each course.

CHM 115 Principles of Chemistry I

CHM 116 Principles of Chemistry II

CS 162 Computer Science I

MTH 201 Calculus I*

MTH 202 Calculus II*

MTH 203 Calculus III

MTH 227 Linear Algebra I

MTH 300 Applied Analysis I

MTH 302 Linear Algebra and Differential Equations Credits: 4

or MTH 304 Analysis of Differential Equations

Note: Physics majors intending to go to graduate school should take MTH 227 and MTH 304 rather than the MTH 302 option.

*Completion of MTH 201, MTH 202, and PHY 230 satisfies the B.S. degree cognate for the physics major.

Certification for Secondary Teaching

All students seeking certification to teach at the secondary level with a major in physics must complete the following requirements:

1. Requirements

The major requirements for a physics degree as noted above. A minimum GPA of 2.7 in the major is required to be recommended for teacher certification.

2. Admission

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.

3. Four additional courses:

BIO 120 General Biology I

A History of Science course

Choose from:

HSC 201 The Scientific Revolution
or HSC 202 The Technological Revolution
PHY 105 Descriptive Astronomy

A course in ethics in Science:

For example:

BIO 328 Biomedical Ethics
BIO 338 Environmental Ethics

4. Experience

All students seeking teacher certification are 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. Required reading and experience in laboratory safety will be part of this laboratory setting.

Minor Requirements

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
PHY 231 Principles of Physics II
PHY 302 Introduction to Modern Physics

The remaining 10 hours in Physics must be selected from the following courses:

PHY 309 Experimental Methods in Physics
PHY 311 Advanced Laboratory II
PHY 320 Optics
PHY 330 Intermediate Mechanics
PHY 340 Electromagnetic Fields
PHY 350 Intermediate Modern Physics
PHY 360 Statistical Thermodynamics
and PHY 370 Solid State Physics

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.

Sample Curriculum

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

- General Education course (recommended life science)

CHM 115 Principles of Chemistry I (NS/A) (F)

CHM 116 Principles of Chemistry II (W)

MTH 201 Calculus I (F)

MTH 202 Calculus II (W)

PHY 230 Principles of Physics I (W)

WRT 150 Strategies in Writing

Second Year

- Two general education courses

CS 162 Computer Science I

MTH 203 Calculus III (F)

MTH 227 Linear Algebra I (F)

MTH 302 Linear Algebra and Differential Equations (W)

or MTH 304 Analysis of Differential Equations (W)

PHY 231 Principles of Physics II (F)

PHY 302 Introduction to Modern Physics (W)

Third Year

- Four general education courses (Begin Theme)
- Electives

MTH 300 Applied Analysis I (F)

PHY 309 Experimental Methods in Physics (F)

PHY 311 Advanced Laboratory II (W)

PHY 330 Intermediate Mechanics (F)

PHY 340 Electromagnetic Fields (W)

Fourth Year

- Two general education courses (Finish Theme)
- Electives

PHY 350 Intermediate Modern Physics (W)

PHY 360 Statistical Thermodynamics (F)

PHY 485 Senior Physics Project (capstone) (F)

PHY 486 Senior Physics Project (capstone) (W)

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

Physics

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.

Master of Education Degree

The M.Ed. 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 group 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, 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 description in this catalog.

Upon admission to the program, the students and an advisor from the Department of Physics 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

PHY 601 Physics by Inquiry I

PHY 605 General Astronomy

PHY 610 Measurement and Instrumentation in the Physics Lab

PHY 620 Methods and Materials for Physics Demonstrations

PHY 630 Teaching Conceptual Physics

PHY 650 Software and Interactive Physics

PHY 660 Readings in Physics Education Research

PHY 670 Modern Physics with Computer Visualization

PHY 680 Selected Topics in Physics

Courses of Instruction

Numbers in parentheses at the end of course descriptions indicate the number of lecture, discussion, and laboratory hours per week.

PHY 105 Descriptive Astronomy. Nonmathematical consideration of the solar system, star clusters, nebulae, pulsars, the Milky Way galaxy, extra-galactic objects, and recent discoveries. Astronomical instruments and their uses are studied. Laboratory and night observations are included. Fulfills Physical Sciences Foundation. (2-0-3) Normally offered spring and fall semesters. Three credits.

PHY 106 Science, Technology, and Society. Study of the role of physical science in shaping solutions to contemporary problems of society. Recent studies have included such topics as the

U.S. energy outlook, the use of computers, the natural limits of energy conversion, and hazards of nuclear reactors. (3-0-0). Three credits.

PHY 108 Science and Science Fiction. An examination of the interrelation between various scientific fields and their science fiction counterparts. An exploration of the frontiers of science and the challenges of the future as described by science fiction literature and films. Topics include general relativity and black holes, quantum uncertainty, and the possibility of time travel. (3-0-0). Three credits.

PHY 180 Selected Topics in Physics. Exploration at the introductory level of topics not addressed at the same level in other physics courses. One to four credits.

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. Prerequisite: MTH 110. Three credits.

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. Four credits.

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. Four credits.

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. Two credits.

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. Prerequisite: PHY 220 and MTH 201 (MTH 202 recommended as a corequisite). One credit.

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. One credit.

PHY 220 General Physics I. The first half of a standard one-year non-calculus sequence with a laboratory; recommended for life science majors. Kinematics, vectors, Newtonian mechanics, gravity, work, conservation of energy and momentum, properties of matter, heat, wave motion, sound, special relativity. (2-2-3) Offered fall and winter semesters. Prerequisites: MTH 122 and MTH 123. Five credits.

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

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electrical circuits, light and optics, introduction to quantum and nuclear phenomena. (2-2-3) Offered fall and winter semesters. Prerequisite: PHY 220. Five credits.

PHY 226 Digital Electronics. An elementary introduction to digital integrated circuits and microprocessors. Topics include digital gates, counters, decoders, multiplexers, demultiplexers, sequencers, latches, flip-flops, displays, memories, and microprocessors. Laboratory oriented. No previous exposure to electronics is assumed. (2-0-3). Prerequisite: MTH 110. Three credits.

PHY 227 Microcomputers. The application of digital electronics to the design and construction of microcomputers and microprocessors or systems. Topics in high-level and assembly language programming are included. Laboratory oriented. (1-0-3). Prerequisite: PHY 226. Two credits.

PHY 229 Linear Electronics. An introduction to linear integrated circuits commonly used in scientific instrumentation. Topics include operational amplifiers, power amplifiers, function generators, timers, digital-to-analog and analog-to-digital converters. Laboratory oriented. (1-0-3). Prerequisite: PHY 226. Two credits.

PHY 230 Principles of Physics I. The first course in a two-semester sequence for students of science and engineering, with a laboratory. Vectors, kinematics, dynamics, work, conservation of energy, linear and angular momentum, gravitation, mechanical waves and oscillations, sound and heat; computer applications included. (3-2-3) Offered fall and winter semesters. Prerequisite: MTH 201 (MTH 202 is recommended as a corequisite). Five credits.

PHY 231 Principles of Physics II. The second course in a two-semester sequence for students of science and engineering, with a laboratory. Thermodynamics, Coulomb's law, electric fields and potential energy, Gauss's law, circuits, electrical waves and oscillations, Maxwell's equations, and optics. Computer applications included. (3-2-3) Offered fall and winter semesters. Prerequisites: PHY 230 and MTH 202. Five credits.

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. Four credits.

PHY 280 Selected Topics in Physics. Exploration at a moderate level of topics not addressed at the same level in other physics courses. One to four credits.

PHY 301 Experimental Support Skills. A first course in experimental design and the implementation skills needed by physicists. Topics include CAD design tools, an introduction to machining, soldering and welding, applications electronics and wiring. Safety procedures are stressed. Open to physics majors and minors only. (0-0-2) Offered fall semester. Prerequisites: PHY 230, PHY 231 as a corequisite. One credit.

PHY 302 Introduction to Modern Physics. A course in modern physics for students of science and engineering, with a laboratory. Special relativity, kinetic theory, photoelectric and Compton effects. Bohr atomic models, Schrodinger's equation, introduction to wave mechanics, the Heisenberg uncertainty principle, the hydrogen atom, and the Pauli exclusion principle. (3-0-3) Offered winter semester. Prerequisites: PHY 231 and MTH 302 or MTH 304 as a corequisite. Four credits.

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. Part of the Changing Ideas: Changing Worlds theme. 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. Three credits.

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. Three credits.

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. Three credits.

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, MTH 302, or MTH 304, and a supplemental writing skills course. Four credits.

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. Prerequisite: PHY 309 or PHY 310 and a supplemental writing skills course. Both written and oral reports. Two credits.

PHY 320 Optics. Geometrical and physical optics, interference and diffraction. Propagation of light in material media. (4-0-0) Offered winter semesters of even-numbered years. Prerequisite: PHY 231. Four credits.

PHY 330 Intermediate Mechanics. An intermediate-level study of classical mechanics for students of applied and theoretical physics. Use of vector methods. Kinematics and dynamics of particles and rigid bodies. Coordinate transformations, central forces, and the harmonic oscillator. Computer applications are included. (4-0-0) Offered fall semester. Prerequisites: PHY 230, or permission of instructor and MTH 302 or MTH 304. Four credits.

PHY 340 Electromagnetic Fields. An intermediate-level study of electricity and magnetism for students of applied and theoretical physics. Vector analysis, electric and magnetic fields and forces, Maxwell's equations for time independent and dependent fields, electromagnetic field waves in free space, waveguides, and transmission lines. Computer applications are included. (4-0-0) Offered winter semester. Prerequisites: PHY 231 and MTH 302 or MTH 304. Four credits.

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). Four credits.

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. Prerequisite: PHY 231. Four credits.

PHY 370 Solid State Physics. A first course on the physics of solids. Covers methods of determining properties of materials as well as mathematical treatment of theories explaining these properties. Topics include x-ray structure determination, crystal forms, bonding, conductivity, vibration spectra, electronic properties, semiconductors, and superconductivity. Offered winter semester of odd-numbered years. Prerequisites: PHY 302 and MTH 302 or MTH 304. Four credits.

Physics

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. Prerequisites depend on the nature of the topic. One to four credits.

PHY 399 Readings in Physics. Independent supervised readings on selected topics. Offered fall and winter semesters. Prerequisite: Permission of instructor. One to four credits.

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 400. Three credits.

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 400. Three credits.

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 400. Three credits.

PHY 480 Selected Topics in Physics. Exploration at the advanced undergraduate level of topics not addressed at the same level in other physics courses. One to four credits.

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. One credit.

PHY 486 Senior Physics Project (capstone). Continuation of student's work in PHY 485. Both an oral report and a final written technical report are required. (1-0-8) Offered winter semester. Prerequisite: PHY 485. Two credits.

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. One to four credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

PHY 680 Selected Topics in Physics. Exploration at the advanced level of topics not addressed at the same level in other physics courses. One to four credits.

Political Science (PLS)

Chair: Richards. Professors: Kieh, King; Associate Professors: Constantelos, Diven, Richards; Assistant Professors: Cornish, den Dulk, Kilburn, Mangala, Miller-Adams, Stewart-Ingersoll, Tafel, Walhof, Zhao, Zinman.

The central aim of the political science program is to achieve a well-rounded undergraduate knowledge of the discipline. The program offers a solid academic foundation for students whose career goals include a profession directly related to government and politics; graduate and professional study in political science and/or related areas, including law; teaching political science and government at all levels of institutions; positions in public and private sectors; leadership in advocacy on public and common-good issues; leadership in mass communication and public opinion.

Requirements for a Major

Students seeking the B.A. or B.S. degree are required to take at least 33 credits in political science, including PLS 102, 103, 495, and eight additional courses, two of which must be in American politics, one in comparative politics, one in political thought, and one in international relations. At least three of these courses must be at the 300 level; independent studies, internships, PLS 495 and the B.S. cognate courses do not count toward this 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. 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 33 required credits for the major.

Requirements for a Minor

Students minoring in political science are required to complete at least 21 hours in political science, including PLS 102 and 103. Of the remaining 15 credits, one course must be in American politics, one in comparative politics or international relations, and one in political thought. At least nine credit hours must be at the 300 level. No more than six credits of internship or independent study may count toward the minor. PA 307 may count as an American politics elective.

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)

PLS 102 American Government and Politics
and PLS 103 Issues in World Politics

Third Year

- Three political science courses at 200–300 level
- Completion of general education courses
- Electives
- Political science internship

PLS 315 International Political Economy
or PLS 341 Elections and Voting Behavior
(B.S. Majors)

Second Year

- Three political science courses at 200–300 level
- One or two general education courses
- Electives (or foreign language)
- Additional writing skills if needed

PLS 300 Political Analysis
and STA 215 Introductory Applied Statistics
(B.S. Majors)

Fourth Year

- Political science capstone
- Political science internship
- Electives

Career Opportunities

Students with a B.A. or B.S. degree with a major or minor in political science find positions in a wide variety of fields, including business, law, and communications. The major and minor also lead to careers more closely identified with political science itself. Some of these careers include government work in administration, foreign service, and specialized overseas assignments. Teaching positions at all levels can be pursued with a political science major or minor. There are also many careers in public action and interest groups for which it is advantageous to have a political science degree.

Legal Education Admission Program (LEAP)

The Legal Education Admission Program (LEAP) provides an opportunity for Grand Valley's political science undergraduate students to earn both a bachelor's degree and a Juris Doctor (J.D.) degree in about six years of full-time study (three years of political science studies plus three years of legal studies). The program was developed by Grand Valley State University's Political Science department and Michigan State University College of Law (MSU Law).

Students accepted into the program may combine their last year of political science undergraduate work at Grand Valley 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 GVSU. 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 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.

LEAP Admissions Requirements

- Matriculate as a first-year student at GVSU
- Political Science Major
(There are other LEAP programs for Legal Studies and Business Majors.)
- Accumulate at least 30 credits
- GPA of 3.5 or above
- To apply, send an e-mail to Professor Richards (richardm@gvsu.edu) with your: name, major(s), current GPA and number of credits, email address, and phone number

MSU Law Requirements for LEAP with Political Science

- Complete at least 91 credits at GVSU
- Complete all GVSU university-level requirements
- Complete all GVSU PLS major and cognate requirements
- GPA of 3.5 or above
- LSAT score of 156 or above
- Any other current MSU Law requirements

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
and PLS 103 Issues in World Politics

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
SS 300 Research Methods in the Social Sciences
and STA 215 Introductory Applied Statistics
(B.S. Majors)

Political Science

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
or PLS 341 Elections and Voting Behavior (B.S. Majors)

Internships

The political science department offers students a unique opportunity to study the political process in action through its internship program. The number and variety of internships differ with the interests of students, the need of public officials, and other factors. For example, we have had students serve internships in political campaigns, local governmental agencies, the Michigan state government, the local and Washington offices of area members of Congress, and in foreign countries. 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.

Courses of Instruction

Introduction to the Study of Political Science

PLS 102 American Government and Politics. A prerequisite to all courses listed in the sub-field of American Government and Politics. Examines American political values, governmental functions, political processes, policy issues, and decision-making processes. Fulfills Social Sciences Foundation. Offered every semester. Three credits.

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 and international relations, including power, sovereignty, ideology, and morality in world affairs. Students will gain basic familiarity with the institutions and actors that influence world politics. Fulfills Social Sciences Foundation. Offered every semester. Three credits.

PLS 180 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Three credits.

American Government and Politics

PLS 202 American Election Campaigns. An examination of the strategies and tactics of American election campaigns. Particular focus on the role of the mass media and computer technology as instruments of campaign communication and persuasion. Offered fall semester of even-numbered years. Prerequisite: PLS 102. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

PLS 307 American Constitutional Law II. Civil liberties and civil rights. Constitutional principles, theories of constitutional interpretation, Supreme Court rulings, political consequences of rulings, and political and legal factors that influence Supreme Court decisions, especially civil rights decisions. Offered winter semester. Prerequisite: PLS 102 or junior standing. Part of Civil Rights theme. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

International Relations

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,

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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 Making War and Peace theme. Offered every semester. Three credits.

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. Three credits.

PLS 311 International Conflict and Conflict Resolution. Analysis of the causes of war and conditions for peace. Topics also include peacekeeping operations and the outcomes and ethics of war. Offered fall and winter semesters. Prerequisites: PLS 103 or PLS 211 or junior standing. Part of Making War and Peace theme. Three credits.

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 103 or junior standing. Three credits.

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. Prerequisite: PLS 103 or PLS 211 or junior standing. Three credits.

PLS 314 International Law. A study of the general principles of international law with emphasis on the role of law in political and economic relations of nations. Offered winter semester of odd-numbered years. Prerequisite: PLS 103 or PLS 211 or junior standing. Three credits.

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. Students taking the course as part of the B.S. cognate must also have completed STA 215 and PLS 300. Part of Global Change theme. Offered fall and winter semesters. Prerequisite: PLS 103 or PLS 211 or ECO 210 or ECO 211. Three credits.

PLS 321 The European Union. An examination of politics and policies in the European Union that includes participation in an international political simulation. Students spend three days in Indianapolis in April to take part in the Midwest Model EU. Topics include: integration theory, institutional reform, enlargement, and economic, social, environmental, and security policies. Offered winter semester of odd-numbered years. Prerequisite: PLS 221 (or concurrent enrollment). Three credits.

Comparative Politics

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

PLS 327 Politics of Developing Countries. An examination of government and political economy in developing countries. Topics include nation and state building, authoritarianism and democratization, and contemporary policy issues, including population growth, urbanization, hunger, and economic structural adjustment. Offered winter semester. Prerequisite: PLS 103 or PLS 211 or junior standing. Three credits.

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. Prerequisite: PLS 103, any comparative politics course or junior standing. Part of Democracy theme. Three credits.

Political Thought

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. Three credits.

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. Three credits.

PLS 233 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. Three credits.

PLS 295 Contemporary Political Thought. An examination of political thought from roughly the beginning of the twentieth century to the present. Schools of thought under study may include pragmatism, neo-conservatism, critical theory, post-structuralism, philosophical hermeneutics, feminism, neo-liberalism, and communitarianism. Three credits.

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 or permission of instructor. Three credits.

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 or consent of instructor. Three credits.

Other Courses

PLS 300 Political Analysis. Empirical analysis of domestic and international political issues. Topics include data collection strategies and problems, statistical techniques for analyzing small and large data sets, as well as other formal methods of political analysis. Offered fall and winter semesters. Prerequisite: STA 215. Three credits.

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. Prerequisites: PLS 103 or PLS 211 or junior standing. Three credits.

PLS 380 Special Topics in Politics. The study of special and interesting problems, domestic and/or international, will be scheduled from time to time. Offered on sufficient demand. Three credits.

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 winter semester of odd years. PLS 103 or junior standing. Three credits.

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. Offered winter semester of even years. PLS 103 or junior standing. Three credits.

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. One to three credits.

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. Two to six credits.

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. Prerequisite: Senior standing in political science. Three credits.

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 maxi-

mum 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. Two to six credits.

Pre-law

Grand Valley State University's Pre-law program, in keeping with the recommendations of U.S. law schools, is not a single major that is defined as pre-law. As law school officials point out, students will learn the law in great detail once they attend law school. Grand Valley's approach to pre-law 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 in order to understand if they are suited for a career in law. 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. Pre-law students are also encouraged to join the Law Society.

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.

For more information, please contact Dr. Mark J. Richards (Political Science), Kristine Mullendore, J.D. (Criminal Justice/Legal Studies), or Dr. John Uglietta (Philosophy), Star Swift (Business), Richard Harris (Accounting & Tax), or Tami Passeno (Law School Admissions Counselor), refer to <http://faculty.gvsu.edu/richardm/html/prelaw.htm>.

Premedical and Predental Studies

Program Advisor: D. Gerbens

Allopathic medical (M.D.), osteopathic medical (D.O.), pharmacy, and dental schools seek students who are not only prepared for the rigors of the professional school classroom, but who are also able to interact with patients in a sincere and understanding manner. Most schools require a relatively common core of science courses (one year of biology and/or biomedical sciences, one year each of inorganic and organic chemistry, biochemistry, and one year of physics). Because these courses are part of the requirements for a number of majors at Grand Valley, no one specific major is recommended for premedical, predental, and prepharmacy students. Most premedical students at Grand Valley since 1980

Prehealth Curriculum

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 S.M.A.R.T. Center at (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.

Prehealth Curriculum

Advising: Science and Mathematics Advising, Resource, and Transition (S.M.A.R.T.) Center
Freshman students intending to major in biomedical sciences, health professions, therapeutic recreation, occupational safety and health, and athletic training, or students who have interest in a preprofessional area, including premedical, pre-dental, pre-pharmacy, pre-occupational therapy, pre-physical therapy, pre-physician assistant studies, or preveterinary medicine, are encouraged to seek initial academic advising from the S.M.A.R.T. Center (377 Padnos Hall). A program of first-year study will be configured for each student to support optimal progression and potential mobility between programs of study.

Professional Science Masters (PSM)

Coordinator: Elrod. Biostatistics Program Director: Downer; CMB Biotech Program Director: Staves; Medical and Bioinformatics Program Director: Leidig. Faculty drawn from Departments of Biology, Biomedical Sciences, Statistics, and Chemistry, School of Computing and Information Systems, School of Communications, and Seidman College of Business.

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 111 PSM degree programs exist at 45 universities in the United States and Canada (www.sciencemasters.com).

The professional science master's degree is a newly developed type of graduate program that 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.

The graduates of these programs will help fill the need for highly qualified, technically trained scientists and leaders as West Michigan continues to develop as a center of bio-

medical research and development. Grand Valley's seven existing graduate programs in the sciences and health professions prepare leaders and professionals by actively integrating graduate education with extensive "hands-on" experiences in the community. This long-standing "hands-on" and "partnership" culture and orientation of science programming at Grand Valley make it an ideal environment for the PSM degrees.

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 program 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 or a satisfactory score on the GRE or GMAT.
- Resume detailing work experiences and accomplishments.
- Personal statement of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.

Professional Science

- 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

CS 661 Introduction to Medical & BioInformatics

PSM 650 Ethics and Professionalism in Applied Science

Introduction to Biostatistics. Choose one of the following:

STA 610 Applied Statistics for Health Professions

STA 622 Statistical Methods for Biologists

Two common seminar courses Credits: 2

PSM 661 Seminar in Professional Science Practice I

PSM 662 Seminar in Professional Science Practice II

Internship Credits: 4

PSM 691 Internship

Courses of Instruction

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. Prerequisites: Admission to a professional science masters (PSM) program. Three credits.

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. One credit.

PSM 662 Seminar in Professional Science Practice II. Seminar course designed to enhance students' internship experiences. Offered spring/summer semester. Corequisite or prerequisite: PSM 691. One credit.

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. One to nine credits.

Psychology (PSY)

Chair: Hendersen. Professors: Adamopoulos, Hendersen, Herzog, Lakey, O'Connor, Portko, Xu; Associate Professors: Bower Russa, Burns, Chen, Friedlmeier, Galen, Gross, D. Henderson-King, E. Henderson-King, Matthews, McGhee, Paszek, Rodriguez-Charbonier, Rogers, Shupe, Smith; Assistant Professors: Bowdle, Cornelius, Dueker, Lou, Morris, Nichols-Whitehead, Owen-DeSchryver, Rotzien, Sá, Valdez, Wolfe, Yaras. Student Services Coordinator: Caroline Cascini.

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.

Requirements for the Psychology Major

Requirements

The department offers the B.A. and B.S. degrees. Requirements include a minimum of 12 courses in psychology totaling 36 hours of credit, including:

PSY 101 Introductory Psychology
 PSY 300 Research Methods in Psychology
 PSY 400 Advanced Research in Psychology
 PSY 492 Advanced General (capstone)

Category Requirements

In addition, one course must be taken from each of the six following categories:

1. Biological:

PSY 375 Comparative Psychology
 PSY 430 Physiological Psychology
 PSY 431 Introduction to Neuropsychology
 PSY 432 Psychopharmacology

2. Developmental:

PSY 301 Child Development
 PSY 305 Infant and Early Childhood Development
 PSY 331 Adolescent Development
 PSY 332 Adult Development and Aging
 PSY 364 Life Span Developmental Psychology

3. Personality/Clinical:

PSY 303 Psychopathology
 PSY 324 Developmental Psychopathology

Psychology

PSY 420 Theories of Personality
PSY 452 Counseling: Theories and Applications

4. Social Context:

PSY 355 Psychology and Culture
PSY 360 Social Psychology: Psychology's View
PSY 381 Group Dynamics
PSY 445 Industrial/Organizational Psychology

5. Cognitive:

PSY 357 Psychology of Language
PSY 361 Perception
PSY 363 Learning
PSY 365 Cognition

6. General:

PSY 311 Controversial Issues in Psychology
PSY 362 Environmental Psychology
PSY 405 History and Systems
PSY 410 Tests and Measurements

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
SS 381 Death and Dying

Psychology Credits

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.

B.A.

The B.A. requires third-semester proficiency in a foreign language.

B.S.

The B.S. degree cognate sequence requirement is:

PSY 300 Research Methods in Psychology
PSY 400 Advanced Research in Psychology
STA 215 Introductory Applied Statistics

Psychology Minor

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.

1. Biological:

PSY 375 Comparative Psychology

PSY 430 Physiological Psychology
 PSY 431 Introduction to Neuropsychology
 PSY 432 Psychopharmacology

2. Developmental:

PSY 301 Child Development
 PSY 305 Infant and Early Childhood Development
 PSY 331 Adolescent Development
 PSY 332 Adult Development and Aging
 PSY 364 Life Span Developmental Psychology

3. Personality/Clinical:

PSY 303 Psychopathology
 PSY 324 Developmental Psychopathology
 PSY 420 Theories of Personality
 PSY 452 Counseling: Theories and Applications

4. Social Context:

PSY 355 Psychology and Culture
 PSY 360 Social Psychology: Psychology's View
 PSY 381 Group Dynamics
 PSY 445 Industrial/Organizational Psychology

5. Cognitive:

PSY 357 Psychology of Language
 PSY 361 Perception
 PSY 363 Learning
 PSY 365 Cognition

6. General:

PSY 311 Controversial Issues in Psychology
 PSY 362 Environmental Psychology
 PSY 405 History and Systems
 PSY 410 Tests and Measurements

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
 SS 381 Death and Dying

Biopsychology Major

This program is an interdepartmental major offered jointly by Biology and Psychology. Students may earn either a B.A. or B.S. degree in biopsychology.

Requirements

The following psychology courses are required for biopsychology majors:

PSY 101 Introductory Psychology
 PSY 300 Research Methods in Psychology
 PSY 363 Learning
 PSY 364 Life Span Developmental Psychology
 PSY 400 Advanced Research in Psychology
 PSY 420 Theories of Personality
 PSY 430 Physiological Psychology

Psychology

In addition, the related courses are required:

BIO 120 General Biology I
BIO 302 Comparative Vertebrate Anatomy
BIO 352 Animal Behavior
BIO 355 Human Genetics
 or BIO 375 Genetics
 and BIO 376 Genetics Laboratory
BIO 432 Comparative Animal Physiology
CHM 109 Introductory Chemistry
CHM 231 Introductory Organic Chemistry
CHM 232 Biological Chemistry
CS 150 Introduction to Computing
MTH 201 Calculus I
PHY 220 General Physics I
PHY 221 General Physics II
STA 215 Introductory Applied Statistics

Additional Course Requirements

In addition, students must take the capstone course from either the biology (495) or psychology (492) departments.

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 sequence from either the psychology or biology departments:

Psychology sequence:

PSY 300 Research Methods in Psychology
 and PSY 430 Physiological Psychology
 or PSY 431 Introduction to Neuropsychology
STA 215 Introductory Applied Statistics

Biology sequence:

BIO 120 General Biology I
BIO 375 Genetics
BIO 376 Genetics Laboratory
 and MTH 125 Survey of Calculus
 or MTH 201 Calculus I or STA 215 Introductory Applied Statistics

Psychology — Special Education Major

A Psychology-Special Education major is offered through the cooperation of the Psychology Department and the College of Education for those students who are preparing for a teaching career in special education. Because of the complexity of the program, students are advised to declare their major early and consult with their advisors regularly.

The Required 33–36 hours of courses for the Major are:

ED 332 Methods and Strategies of Special Education Teaching
ED 361 Principles, Processes, and Methods in Special Education
ED 495 Diagnostic and Interpretive Procedures

One or both of the following courses are required, depending on desired endorsements.

ED 497 Educational Interventions: Cognitive Impairment CI
 or ED 498 Educational Interventions: Emotional Impairment
 PSY 301 Child Development
 PSY 302 Psychology of Adjustment
 PSY 304 The Psychology and Education of the Exceptional Child
 PSY 324 Developmental Psychopathology
 PSY 325 Educational Psychology

Choose one of the following:

PSY 331 Adolescent Development
 PSY 357 Psychology of Language
 PSY 365 Cognition
 PSY 368 Psychology of Physical Disabilities
 PSY 431 Introduction to Neuropsychology
 PSY 452 Counseling: Theories and Applications
 PSY 490 Practicum Credits: 1 to 6

See the College of Education regarding available endorsement options.

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.

The B.S. degree cognate sequence requirement is:

ED 495 Diagnostic and Interpretive Procedures
 PSY 300 Research Methods in Psychology
 STA 215 Introductory Applied Statistics

Other Requirements

The psychology-special education major is only part of what is required for teacher certification. Other requirements are described in the Education section: Elementary Teacher Certification (Special Education Endorsement).

Students must complete all of the following by the time they enter the College of Education.

- The General Education/Basic Skills program, including a Theme
- All the psychology courses in the major
- The Elementary Education/Special Education major (except Education 320 and 360)
- The Professional Education requirements necessary for endorsement (ED 25, PSY 326 and PSY 310)
- Degree Cognate for either the B.A. or the B.S.

Students should apply to the College of Education by February 1st for fall admission.

Career Opportunities

About half of all psychologists are employed in educational settings; the second largest group work in human services settings, including government agencies, hospitals, clinics, and private practice; some work in business and industry. Working as a psychologist requires at least a master's degree, and for many, such as those in colleges and universities, a doctoral degree is necessary.

Psychology

Students who major in psychology and then seek employment at the bachelor's level find jobs in such human services settings as mental hospitals, residential institutions for the developmentally disabled, alcohol and drug abuse centers, juvenile correctional facilities, vocational rehabilitation centers, and residential facilities for emotionally disturbed children and adolescents.

Graduates may also find employment in business and industry and in government at the national, state, or local levels, where a general liberal arts degree in a social science is required.

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.

Courses of Instruction

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 Sciences Foundation requirement. Offered every semester. Three credits.

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. Prerequisite: PSY 101 and STA 215. Three credits.

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. Prerequisite: PSY 101. One to three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Three credits.

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. Prerequisite: PSY 101. Three credits.

PSY 306 Issues in Early Childhood Development. Discussion and possible applications of developmental issues in early childhood. Focuses on issues such as the role of play, parenting, development of language skills, nutrition, health and safety, and ethical considerations. Offered on sufficient demand. Prerequisites: PSY 301 or PSY 305 or PSY 364. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: PSY 101 and PSY 301. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Three credits.

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. Prerequisite: PSY 101. Three credits.

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

Psychology

language and other communication systems; lexical, sentence, and discourse processing; speech production and perception; acquisition of spoken and written language; bilingualism; and the relationship between language and thought. Offered spring and fall semesters. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Three credits.

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, and PSY 300 or SS 300. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: PSY 101 or PHI 101. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: Junior standing. Three credits.

PSY 380 Seminar in Selected Topics. 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. Prerequisite: Variable. One to four credits.

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. Prerequisite: PSY 101 or SOC 201. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Prerequisite: Approval of instructor before registration. One to three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: PSY 101 and STA 215. Three credits.

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. Prerequisite: PSY 101. Three credits.

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, and PSY 300 or SS 300. Three credits.

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,

Psychology

memory, consciousness, learning, and perception will be explored. Offered upon sufficient demand. Prerequisites: PSY 101, and PSY 300 or SS 300. Three credits.

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. Prerequisite: PSY 101 and PSY 300 or permission of instructor. Three credits.

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. Prerequisite: PSY 101. Three credits.

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. Three credits.

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. One to six credits.

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. Prerequisite: Senior standing. Three credits.

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. One to four credits.

PSY 540 Characteristics of Autism. The course provides an introduction to the characteristics and etiology of autism spectrum disorder. Students will learn about the history of autism, diagnostic criteria and common characteristics, etiology, an overview of current interventions, and current controversies in the field. Offered on sufficient demand. Prerequisite: Permit only. Three credits.

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. Prerequisite: Permit only. Three credits.

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. Three credits.

School of Public and Nonprofit Administration (PA)

Director: Balfour. Professors: Balfour, Mast, Orosz, Payne; Associate Professors: Hoffman, Jelier, Robbins; Assistant Professors: Borders, Kimoto, Mavima, Sponholz.

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 and Nonprofit 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 government, nonprofit, or health administration include city manager, department head, program or agency director, management or program analyst, budget officer, personnel manager, classification specialist or technician, labor relations specialist, program evaluation specialist, or equal opportunity officer. Positions in criminal justice include court administrator and, for those who qualify as sworn officers, police chief, federal, state, or local law enforcement officer, or positions in the management of agencies dealing with security, corrections, parole, and probation, or narcotics and dangerous drugs. Graduates may qualify for similar positions in business, higher education, journalism, consulting firms, nursing homes and hospitals, planning agencies, and in neighborhood and community organizations.

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.

Major in Public and Nonprofit Administration (B.S. or B.A.)

Associate Director for Undergraduate Programs: Mast.

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

Public and Nonprofit Administration

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.

Program Requirements

The prerequisite for the public and nonprofit administration major is:

PLS 102 American Government and Politics

The Major consists of 36 credit hours

Which includes three credit hours of required internship:

PA 490 Public Administration Internship

Students must complete 24 credit hours of courses by taking:

PA 270 Public and Nonprofit Administration
and PA 307 Local Politics and Administration

PA 360 Voluntarism and the Nonprofit Sector

PA 375 Public Budgeting and Finance Administration

PA 376 Public Personnel Policy and Administration

PA 420 Organization Theory and Dynamics

and PA 495 Public Policy (capstone)

Students must also complete three credit hours of elective by taking one of the following:

PA 311 Public Sector Information Technology

PA 330 Health Care Financing

PA 335 Grant Writing

or PA 372 International and Comparative Administration

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:

PA 300 Research Methods

PA 439 Community Analysis

STA 215 Introductory Applied Statistics

Select one Specialty

Students must also select one specialty consisting of at least nine credit hours or a total of 18 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

GPY 309 Introduction to City and Regional Planning (Required)

HST 327 History of American Urban History

PA 390 Leadership Dynamics
PLS 338 Citizenship
SOC 382 Race and Ethnicity

Also required:

The B.S. cognate course
PA 439 Community Analysis

Public Personnel Management

LIB 331 Person and Profession
MGT 334 Labor and Employment Law
MGT 355 The Diversified Workforce
MGT 432 Grievance Administration, Arbitration, and Collective Bargaining
PA 390 Leadership Dynamics
PHI 325 Ethics in Professional Life

Information Technology

CS 231 Problem Solving Using Spreadsheets
CS 233 Concepts of Database Systems
CS 237 Introduction to Network Management
CS 238 Internet Media and Programming
GPY 307 Introduction to Computer Mapping/Geographic Information Systems
GPY 407 Advanced GIS
MGT 268 Introduction to Management Information Systems

Local Economic Development

BUS 201 Legal Environment for Business
CAP 220 Fundamentals of Public Relations
ECO 200 Business Economics
ECO 435 Urban Economics
ECO 436 Real Estate Economics
HTM 101 Fundamentals
MGT 339 Business and Society

Public and Nonprofit Budgeting and Finance

ACC 212 Principles of Financial Accounting
ACC 213 Principles of Managerial Accounting
CS 231 Problem Solving Using Spreadsheets
ECO 210 Introductory Macroeconomics
ECO 211 Introductory Microeconomics
FIN 331 Risk and Insurance
PA 335 Grant Writing

Community Health

BMS 222 Introduction to Public Health
COM 209 Health Communication Systems
HPR 220 Health Care Delivery
HPR 340 Health Care Management
MKT 350 Marketing Management
OSH 300 Introduction to Occupational Safety and Health
PLS 310 Politics and Health Policy
REC 110 Foundations of Recreation and Leisure

Public and Nonprofit Administration

Also required:

The elective

PA 330 Health Care Financing

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

PA 360 Voluntarism and the Nonprofit Sector

PA 375 Public Budgeting and Finance Administration

PA 376 Public Personnel Policy and Administration

PA 420 Organization Theory and Dynamics

and PA 495 Public Policy (capstone)

And Either

PA 307 Local Politics and Administration

or PLS 203 State Politics

Minor in Nonprofit Administration

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

The minor in nonprofit administration consists of 21 credits. The required courses are:

PA 270 Public and Nonprofit Administration

PA 335 Grant Writing

PA 360 Voluntarism and the Nonprofit Sector

PA 420 Organization Theory and Dynamics

and PA 490 Public Administration Internship

Two courses are to be selected from the following:

MGT 355 The Diversified Workforce

MKT 350 Marketing Management

PA 311 Public Sector Information Technology

PA 376 Public Personnel Policy and Administration

PA 390 Leadership Dynamics

PA 439 Community Analysis

PA 491 Public Administration Internship II

and SW 453 Case Management

Undergraduate Courses of Instruction

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 Sciences Foundation requirements. Offered every semester. Three credits.

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. STA 215, junior standing and PA major. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

PA 380 Special Topics in Public Administration. Consideration of selected topics not ordinarily dealt with in other courses. Topics to be determined by faculty interest and student request. Offered on sufficient demand. Prerequisite: Permission of instructor. One to three credits.

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. Prerequisites: Sophomore standing. Three credits.

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: Junior or senior status and permission of instructor. Graded credit/no credit. One to three credits.

Public and Nonprofit Administration

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: 270 and senior standing. Three credits.

PA 439 Community Analysis. Basic analytical concepts, including group dynamic skills, housing and land use surveys, historic district analysis, and neighborhood identification. Offered every semester. Three credits.

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: Junior or senior status, permission of instructor, and completion of an application form obtained during the semester before the internship. Graded credit/no credit. Three credits.

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. Prerequisites: Senior status, permission of instructor, and completion of an application form obtained during the semester before the internship. Graded credit/no credit. Three credits.

PA 495 Public Policy (capstone). This course uses a policy studies framework to examine systematically the nature, causes, and effects of alternative public policies, with an emphasis on implementation. Offered fall and winter semesters. Prerequisite: Senior standing. Three credits.

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: Senior status and permission of instructor. Graded credit/no credit. One to three credits.

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. Three credits.

Master of Public Administration

MPA 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 and Nonprofit 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 MPA degree.

Admission

The minimum requirements are listed in the Admissions section of the Grand Valley State University Undergraduate and Graduate Catalog. 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 nondegree status.

Workshops

The MPA 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.

MPA Degree Requirements

The MPA 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
- PA 611 Research Methods
- PA 612 Human Resources in Organizations
- PA 614 Organization Theory
- PA 619 Public Management Seminar

Public and Nonprofit Administration

Students must also select one concentration specialization of 15 credit hours.

Concentrations (15 credit hours)

Public Management

PA 615 Public Financial Administration
PA 620 Metropolitan Politics and Administration
PA 643 Strategic Management and Planning

And select two of the following:

PA 616 Public Policy Analysis
PA 621 Administrative and Regulatory Law
PA 623 Labor Management in the Public Sector
PA 641 Economic and Community Development
PA 642 Conflict Management
PA 644 GIS in the Public Service

Urban and Regional Policy and Planning

PA 615 Public Financial Administration
PA 616 Public Policy Analysis
PA 620 Metropolitan Politics and Administration
PA 641 Economic and Community Development
PA 644 GIS in the Public Service

Health Administration

PA 630 Health Administration and Service
PA 631 U.S. Health Policy and Politics
PA 632 Health Services Financial Management
PA 633 Health Economics
PA 634 Health Care Law and Ethics

Nonprofit Management and Leadership

PA 660 The Nonprofit Sector: History and Ethics
PA 661 Nonprofit Management: Practices
PA 662 Nonprofit Resource and Financial Management
PA 663 Nonprofit Organizations and Public Policy

And Either

PA 641 Economic and Community Development
or PA 665 Nonprofit Boards, Trustees, and Governance

Criminal Justice

CJ 601 Criminal Justice Leadership
CJ 604 Criminal Justice Policy
PA 615 Public Financial Administration

And select two of the following:

- Electives (at least 9 credits)
- CJ 606 Research Methodology and Data Analysis
CJ 680 Special Topics (One to three credits. May be used as elective hours.)
PA 680 Special Topics Seminar (One to three credits. May be used as elective hours.)

Or

CJ 602 Legal and Ethical Issues
CJ 603 Community and Media Relationships
CJ 605 Program Evaluation

Electives

PA 610 Economic Analysis for Public Administrators
PA 635 Hospital Organization and Management
PA 637 Ambulatory Care Organization and Management
PA 638 Long-Term Care Organization and Management
PA 640 Marketing Health and Human Services
PA 680 Special Topics Seminar

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
PA 551 Public Administration Workshop
PA 552 Public Administration Workshop
PA 553 Public Administration Workshop

Students may take up to three hours of the following:

PA 699 Directed Readings

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
PA 691 Public Administration Internship II

Thesis

Students are not required to submit a thesis, but those pursuing policy expertise or those considering going on in doctoral studies are strongly encouraged to take up to six hours of:

PA 693 Research Project
PA 695 Master's Thesis

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 and Nonprofit 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.

Russian Studies

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

PA 551 Public Administration Workshop

PA 552 Public Administration Workshop

PA 661 Nonprofit Management: Practices

PA 662 Nonprofit Resource and Financial Management

PA 663 Nonprofit Organizations and Public Policy

PA 665 Nonprofit Boards, Trustees, and Governance

Note: Refer to the Master's of Health Administration Section of the catalog for Graduate course descriptions in PA.

Russian Studies (RST)

Coordinator: Rydel.

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.

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, economics, 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 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.

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.

Requirements for a Major

Majoring in Russian Studies requires at least three years of Russian as follows and a total of 36 hours.

RUS 101 Elementary Russian I
 RUS 102 Elementary Russian II
 RUS 201 Intermediate Russian I
 RUS 202 Intermediate Russian II
 RUS 301 Advanced Russian Grammar I
 RUS 302 Advanced Russian Grammar II

Must include the following:

HST 389 Russian History
 HST 390 Soviet History
 HST 391 Russian Thought—Ninth to Twentieth Centuries
 RST 331 Russian Literature in Translation, 1800–1880
 RST 332 Russian Literature in Translation, 1880–1932
 RST 333 Russian Literature in Translation, 1932 to the Present
 RST 495 Russia in Context (capstone)
 RUS 301 Advanced Russian Grammar I
 RUS 302 Advanced Russian Grammar II

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
 GPY 350 Geography of Russia and Its Neighbors
 PLS 282 Government and Politics of Russia and Eastern Europe
 RST 225 Introduction to Russian Culture
 RST 380 Special Topics in Russian Studies
 RST 499 Independent Study and Research

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)

Requirements for a Minor

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 Russian 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).

Courses of Instruction

RST 180 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

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 con-

Science

trasts with the United States and the West. Fulfills World Perspectives requirement. Offered spring semester in even-numbered years or on demand. Three credits.

RST 280 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

RST 331 Russian Literature in Translation, 1800–1880. Survey of major writers of the period, including Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, and Tolstoy. Supplemental writing skills course. Fulfills Philosophy and Literature Foundation. Offered fall semester of odd-numbered years. Prerequisite: WRT 150. Three credits.

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. Prerequisite: WRT 150. Three credits.

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. Prerequisite: WRT 150. Three credits.

RST 380 Special Topics in Russian Studies. One to three credits.

RST 399 Independent Reading. One to three credits.

RST 480 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

RST 495 Russia in Context (capstone). Interdisciplinary exploration of the so-called accused 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. Prerequisite: Senior standing with a major in Russian studies (others only with permission of coordinator). Three credits.

RST 499 Independent Study and Research. One to four credits.

Science (SCI)

Coordinator: Burton; Program Faculty: Ambrose, Dobson, Golden, Goossen, Henderleiter, Herrington, Hessler, Joseph, Mattox, Oliver, Soman, Vail, Vigna, Yezierski.

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.

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.

Integrated Science Major for Elementary Teacher Certification

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
and SCI 336 Ecology for K–8 Pre-service Teachers

2. Earth and Space Sciences:

GEO 201 The Geosphere for K–8 Pre-Service Teachers
GEO 202 Exploring the Hydrosphere
GEO 203 Weather for K–8 Pre-Service Teachers
and PHY 205 Astronomy for K–8 Pre-Service Teachers

3. Life Science:

BIO 120 General Biology I
BIO 121 General Biology II
and BIO 205 Genetics for K–8 Pre-Service Teachers

4. Physical and Chemical Sciences:

CHM 109 Introductory Chemistry (Satisfies B.S. degree cognate requirement for the major. CHM 201 is recommended.)
or CHM 201 Introduction to Chemical Sciences (Satisfies B.S. degree cognate requirements for the major. CHM 201 recommended.)
PHY 200 Physics for the Life Sciences
and PHY 201 Inquiry: The Mechanical and Thermal World

5. Capstone:

SCI 495 Teaching Science in the 21st Century

Recommended sequence to complete the ISCI major

First Year

BIO 120 General Biology I
BIO 121 General Biology II
CHM 109 Introductory Chemistry
or CHM 201 Introduction to Chemical
Sciences

Second Year

BIO 205 Genetics for K–8 Pre-Service Teachers
GEO 203 Weather for K–8 Pre-Service
Teachers
PHY 200 Physics for the Life Sciences
PHY 201 Inquiry: The Mechanical and
Thermal World

Science

Third Year

GEO 201 The Geosphere for K–8 Pre-Service Teachers
GEO 202 Exploring the Hydrosphere

Fourth Year

PHY 205 Astronomy for K–8 Pre-Service Teachers
SCI 319 Science in Elementary Education
SCI 336 Ecology for K–8 Pre-service Teachers
SCI 495 Teaching Science in the 21st Century

Elementary Teaching Minor

Students must earn at least a 2.7 GPA in the major and minor requirements listed above in order to teacher assist, student teach, and receive approval for teacher certification.

Requirement 1

ENG 308 Teaching Reading: The Necessary Skills
MTH 221 Mathematics for Elementary Teachers I*
and
MTH 222 Mathematics for Elementary Teachers II*
or MTH 223 Mathematics for Elementary Teachers III

Requirement 2

ART 230 Art for the Classroom Teacher Credits: 4 or
MUS 350 Music for Classroom Teachers

Requirement 3

One course chosen from:

- Any foreign language course or
- ENG 307 Teaching Writing: Elementary
ENG 309 Teaching Literature to Children
WRT 219 Introduction to Creative Writing

Requirement 4

CTH 366 Drama in Education
or PED 305 Movement Education

Requirement 5

One course chosen from:

ECO 210 Introductory Macroeconomics
ECO 211 Introductory Microeconomics
GPY 235 World Regional Geography
HST 203 World History to 1500 A.D.
HST 204 World History since 1500
HST 205 American History to 1877
HST 206 American History since 1877
PLS 102 American Government and Politics
or SOC 280 Social Problems

Courses of Instruction

SCI 225 Integrated Life Science for K–8 Teachers. Introduces pre-service teachers to the knowledge and content required to successfully teach science in elementary schools. Focuses on hands-on constructivist approaches to scientific inquiry. Course content reflects national science

*Satisfies B.S. degree cognate requirement for the major. CHM 201 recommended

standards and the Michigan Curriculum Framework for Science. Fulfills Life Sciences lab Foundation. Four credits.

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. Three credits.

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 and PHY 201, and GEO 201. Two credits.

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). Four credits.

SCI 380 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. One to four credits.

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). Three credits.

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.

Social Studies (SST)

Coordinator: Galbraith. Professor: O'Neill; Associate Professor: Cooley; Assistant Professors: Collier, 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

Social Studies

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.

Core:

ECO 210 Introductory Macroeconomics
ECO 211 Introductory Microeconomics
GPY 100 Physical Geography
GPY 235 World Regional Geography
HST 203 World History to 1500 A.D.
HST 204 World History since 1500
HST 205 American History to 1877
HST 206 American History since 1877
PLS 206 American Constitutional Foundations
PLS 211 International Relations
SST 310 Strategies for Social Studies Teachers
SST 495 Education in Plural Societies (capstone)

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. 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.

Political Science:

Core plus four courses, including:

PLS 203 State Politics
or PLS 304 Political Parties and Interest Groups
or PLS 305 Congress and the Presidency

And Either

PLS 221 Government and Politics of Western Europe
or PLS 327 Politics of Developing Countries

And two additional PLS courses

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
and ECO 313 Business Cycles and Growth

Courses of Instruction

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. Prerequisite: Junior standing or consent of the instructor. Three credits.

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. Prerequisite: Senior standing in the major; one semester fieldwork in school (may be concurrent). Three credits.

School of Social Work (SW)

Director: Grant, Jr. Professors: Chung, Golensky, Guevara, Haynes, McFadden, Schott; Associate Professors: Bolea, Grant, Jr., Johnson; Assistant Professors: Banghart Therrien, Berlin, Borst, Green-Smith, Hayes, Lopes-Arias, Mulder, Shands-Baab, Smith, Smith-Colton; Affiliate Professors: Gabrielse, Schuurman; Visiting Professors: Burghart; Administrative Professionals: Edwards, Lehker, Owens.

The School of Social Work prepares students at the bachelor and master levels for professional social work practice and leadership roles in the development and implementation of social welfare policies, programs, and services.

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.

The Bachelor of Social Work Program

Director: Gabrielse.

The Bachelor of Social Work program is accredited by the Council on Social Work Education.

Mission of the GVSU Bachelor of Social Work Program

The mission of the Grand Valley State University Bachelor of Social Work program at Grand Valley State University is to provide a comprehensive, superior educational experience that produces knowledgeable, skilled generalist social work professionals prepared for beginning-level social work practice with individuals, families, groups, organizations and

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communities. The purpose is to develop social work professionals who can capably serve people in West Michigan or in distant corners of the globe, utilizing the foundation of knowledge, skills and values provided by the B.S.W. curriculum. The B.S.W. program seeks to prepare social work professionals who can meet the human services needs of diverse populations within the local community, in addition to meeting needs of agencies, organizations, communities and systems in state, national, and international arenas. It endeavors to develop social workers with excellent critical thinking and problem-solving skills, a depth of professional knowledge, and a deep commitment to translate social work ethics and values into practice. Additionally, the B.S.W. program seeks to empower and motivate students to become lifelong learners who are committed to continual improvement of their own skills, as well as improvement of the social work profession through participation in practice-based research and evaluation, and membership in professional organizations.

Goals

The overriding goal of the Bachelor of Social Work program is to prepare students for the beginning level of social work practice. Specific goals are compatible with, and flow from, the mission, philosophy, and objectives of Grand Valley State University and the School of Social Work. They are as follows:

1. To prepare students for entry into the social work profession as generalist social work practitioners.
2. To further students' understanding of the common needs of all individuals and the common needs of the families and the communities in which individuals live and work.
3. To provide students with content about social work practice with client systems of various sizes and types.
4. To prepare students to practice in diverse contexts with diverse populations.
5. To provide students with knowledge about and skill for working in the varied social contexts of social work practice, including increasing students' understanding of the changing nature of social contexts and the dynamics of such changes.
6. To provide students with ongoing and multiple exposures to information about the values and ethics that guide professional social workers in their practice, with the expectation that students incorporate and use these ethics and values to guide their own practice behaviors.
7. To develop students' awareness of and commitment to fulfilling the responsibility to achieve continued professional growth and development after completion of the B.S.W. degree.

Bachelor of Social Work graduates have been employed in a wide range of social service agencies serving many types of people. Life consultation centers, probation and parole, mental health programs, hospital social services, children's centers, senior citizen programs, sheltered workshops, juvenile courts, protective services, programs for the developmentally disabled, and alcoholism treatment programs are just some of the areas in which our graduates are employed.

Admission and Academic Requirements

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. Completed all freshman and sophomore course requirements in the B.S.W. curriculum.

2. A minimum cumulative GPA of 2.5 (4.0 scale).
3. Earned a minimum grade of B- (2.7) and not have repeated the following courses more than once: SW 150, PLS 102, PSY 303, PSY/SOC 360, SOC 382 or SW 300, SOC 280 or 384, and SOC 385.
4. Complete the application and process for candidacy for the B.S.W. degree.

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 pursue opportunities in other areas.

Advising

Students interested in social work as a major should complete the online “Declaration of Major” form and seek advisement from their assigned academic advisor of the B.S.W. program. All social work majors should maintain regular contact with their advisors to ensure proper course enrollment and steady progress toward earning their degree.

The B.S.W. Degree Requirements

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

SW 316 Interviewing in Social Work

SW 317 Generalist Practice I

SW 318 General Practice II

SW 319 Social Welfare Policy and Services

SW 340 Human Behavior and the Social Environment I

SW 341 Human Behavior and the Social Environment II

SW 348 Field Practicum Laboratory

SW 430 Social Work Research

SW 490 First Senior Level Field Practicum

SW 491 Second Senior Level Field Practicum

SW 492 Field Practicum in Social Work Seminar I

SW 493 Field Practicum in Social Work Seminar II

SW 495 Senior Seminar in Social Work (capstone)

Cognate requirements include:

BIO 103 The Biology of People

PLS 102 American Government and Politics

PSY 101 Introductory Psychology

and PSY 303 Psychopathology

Social Work

PSY 360 Social Psychology: Psychology's View

SOC 201 Introduction to Sociology

Plus

ECO 210 Introductory Macroeconomics

or

ECO 211 Introductory Microeconomics

or

SOC 385 Social Class Inequality

Plus

SOC 280 Social Problems

or

SOC 384 Sociology of Drug Use and Abuse

Plus

SOC 382 Race and Ethnicity

or

SW 300 Pluralism in American Society

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:

Sample Curriculum

First Year

First Semester — Fall

- Physical Science (non lab)
- Arts foundation

MTH 110 Algebra

SW 150 Human Needs in Complex Societies

WRT 150 Strategies in Writing

Second Semester — Winter

- Philosophy and Literature Foundation
- Historical Perspectives Foundation

BIO 103 The Biology of People

PSY 101 Introductory Psychology

SOC 201 Introduction to Sociology

Second Year

Third Semester — Fall

- U.S. Diversity Course
- World Perspectives Course
- Free elective (see Recommended List)

PLS 102 American Government and Politics

PSY 360 Social Psychology: Psychology's View

Fourth Semester — Winter

- International Relations Program course (see Recommended List)

PSY 303 Psychopathology

SOC 280 Social Problems
or SOC 384 Sociology of Drug Use and Abuse

Plus

SOC 382 Race and Ethnicity
or SW 300 Pluralism in American Society

Plus

ECO 210 Introductory Macroeconomics
or
ECO 211 Introductory Microeconomics
or
SOC 385 Social Class Inequality

Third Year

Fifth Semester — Fall

SW 317 Generalist Practice I
SW 319 Social Welfare Policy and Services
SW 340 Human Behavior and the Social Environment I
SW 348 Field Practicum Laboratory
WRT 305 Writing in the Disciplines

Students must have candidacy for B.S.W. degree to take the Social Work courses listed below:

Sixth Semester — Winter

- Free electives (see Recommended List)
- General education theme course-1

STA 215 Introductory Applied Statistics
SW 316 Interviewing in Social Work
SW 318 General Practice II
SW 341 Human Behavior and the Social Environment II

Fourth Year

Seventh Semester — Fall

- Social Work elective (see list)
- General education theme course-2

SW 430 Social Work Research
SW 490 First Senior Level Field Practicum
SW 492 Field Practicum in Social Work Seminar I

Eighth Semester — Winter

- Social Work elective (see list)
- General education theme course-3

SW 491 Second Senior Level Field Practicum
SW 493 Field Practicum in Social Work Seminar II
SW 495 Senior Seminar in Social Work (capstone)

Social Work Electives (six credits required)

SW 300 Pluralism in American Society
SW 320 Children and Child Welfare Services
SW 322 Health Care and Social Services
SW 354 Social Work: International Service

Social Work

SW 450 Law and Social Work
SW 453 Case Management
SW 461 Multicultural Issues in Social Work Practice
SW 499 Independent Study in Social Work

International Relations Program (three credits required)

GPY 235 World Regional Geography
HST 210 Empire, Culture, and Conflict
HST 331 Modern Latin America
HST 337 The Age of Islamic Empire
HST 338 Modern Middle East
HST 386 Europe since World War II
LAS 374 Revolution in the Americas
PLS 211 International Relations
PLS 313 International Organization
PLS 327 Politics of Developing Countries
SS 351 Family & Gender in the Developing World
SW 354 Social Work: International Service

Recommended Free Electives

Note: Students are not restricted to this list.

ANT 204 Introduction to Cultural Anthropology
PA 270 Public and Nonprofit Administration
PA 439 Community Analysis
PHI 102 Ethics
PHI 325 Ethics in Professional Life
PSY 310 Behavior Modification
PSY 316 The Psychology of Human Intimacy and Sexuality
SOC 379 Love, Sex, and Gender
SOC 383 Sociology of Women
SOC 390 Advanced Seminar on Social Issues
SS 381 Death and Dying
WGS 200 Introduction to Gender Studies
WGS 360 Foundations of Feminism
WGS 380 Special Topics in Women's Studies

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 Application for 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.

Undergraduate Courses of Instruction

Note: SW 150 is a prerequisite for all social work courses.

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 Sciences Foundation. Offered fall, winter, and spring/summer semesters. Note: SW 150 is a prerequisite for all social work courses. Three credits.

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. Three credits.

SW 316 Interviewing in Social Work. Principles and techniques associated with the successful interview. Consideration is given to understanding the interviewee, oneself as the interviewer, and the implications of sociocultural backgrounds for the interview and its participants. Recording and reporting skills specifically related to social work practice are taught and case materials from different fields of practice are employed. Offered winter semester. Prerequisite: SOC 382. Three credits.

SW 317 Generalist Practice I. Provides students with knowledge, values, and skills for multi-level generalist practice. Prepares students for direct and indirect service delivery involving intervention model; micro, mezzo, and macro skills, planning; risk management and crisis intervention; termination, evaluation, and follow-up. Three hours per week of volunteer service in an approved social agency required. Offered fall semester. Prerequisites: SW 150; Corequisite: SW 319, SW 340 and SW 348. Three credits.

SW 318 General Practice II. Students are provided with additional aspects of generalist practice, such as understanding and working with families; making ethical decisions; developing cultural sensitivity; record keeping; and varying generalist practice roles required in micro, mezzo, and macro practice settings. Three hours per week of volunteer service in an approved social agency required. Offered winter semester. Prerequisites: Candidacy and SW 317, SW 319, and SW 340, and SW 348. Concurrent second semester social work curriculum. Three credits.

SW 319 Social Welfare Policy and Services. Discussion of social welfare policy and services that includes economic, tradition, political, and other sociocultural influences. Introduces students to basic policy and services analysis, examines specific target populations, and demonstrates the translation of policy into beginning-level social work practice. Offered fall semester. Prerequisite: PLS 102 and ECO 210 or 211 or SOC 385 and concurrent with SW 317, SW 340, and SW 348. Three credits.

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. Prerequisite: SW 319. Three credits.

Social Work

SW 322 Health Care and Social Services. Provides an overview of the health care and social services delivery systems in America. Examines values, and multicultural, political, and economic issues that affect the development and implementation of health care policy and practices. The effects of illness, environment, nutrition, and the roles of the generalist social work practitioner are included. Part of Health, Illness and Healing. Offered fall and winter semester. Prerequisite: junior standing. Three credits.

SW 340 Human Behavior and the Social Environment I. Provides knowledge, values and skills employed in assessing individuals, families, groups, organizations, and communities. Emphasized are: social systems perspective; social work values and ethics; diversity; populations-at-risk; social economic justice; and subjects, i.e., gender and human sexuality considered throughout the assessment process in generalist practice. Offered fall semester. Prerequisites: BIO 103 and SOC 382, or SW 300, PSY 360, SOC 360, PSY 303, SOC 280 or SOC 384; Corequisite: SW 317, SW 319, and SW 348. Three credits.

SW 341 Human Behavior and the Social Environment II. Provides knowledge about human growth and development within life cycle stages. Addressed are biological, psychological, social, and economic justice which are considered throughout the assessment process in generalist practice. Offered winter semester. Prerequisite: Candidacy for B.S.W. degree and SW 340; Corequisite: SW 316, SW 318, and SW 348. Three credits.

SW 348 Field Practicum Laboratory. Focus on social work knowledge, values, and skills required of generalist practitioners in social welfare agencies. Discussions emphasize contents of Field Practicum Manual; its contract through evaluation. Offered fall semester. Corequisites: SW 317, SW 319, and SW 340. Two credits.

SW 354 Social Work: International Service. Focus is international and uses a service-learning approach. Explores the theme of social welfare development. Includes a two-to-three-week experiential learning component in an international location. Demonstrates the interconnectedness between social work, social justice, and civic/global responsibility. Offered spring/summer semester. Prerequisite: Candidacy or permission of instructor. Three to four credits.

SW 380 Special Topics in Social Work. The study of issues and concerns important to the social work community not ordinarily covered in other courses. Offered in response to the special interests of faculty and student majors. Topics to be announced. Offered every other fall semester. Prerequisite: SW 317, SW 319, and SW 340, and SW 348. One to four credits.

SW 430 Social Work Research. Examines basic investigative methods in social work research, including logic and theory; hypotheses, sampling, single systems designs, and data collection. Stress social work ethics in research; evaluation of programs, client systems, and one's own generalist practice. Students use computers and develop a research proposal to be implemented in SW 491 and SW 493. Offered fall semester. Prerequisites: STA 215; Corequisite: SW 490 and SW 492. Four credits.

SW 439 The Family and Social Work Practice. An elective course that deepens, broadens, and integrates professional foundation knowledge, values, and skills as these apply to generalist practice with families. Examines practice processes related to assessment, intervention, and evaluation, including presenting problems of race, gender, and other multicultural variables related to programs and services for families in America. Offered winter semester. Prerequisite: SW 317; Corequisite: SW 318 and SW 341. Three credits.

SW 450 Law and Social Work. Familiarizes students with the complex institution of law in American society and its relation to some of the problems, policies, programs, and populations of special concern to social work. Selective survey of court decisions, social legislation, and administrative regulations important to social welfare policy and social work are included. Offered every other fall semester. Prerequisite: SW 318, SW 319, and SW 341. Three credits.

SW 453 Case Management. Defines the concept and discusses the development and role of case management in social service delivery systems. Explores case management as a mode of

intervention in mental health and other fields of practice as well as the role of the generalist social work practitioner. Offered fall semester. Prerequisite: SW 317, SW 318, and SW 341. Three credits.

SW 461 Multicultural Issues in Social Work Practice. Increases knowledge and skills needed for generalist social work practice in a multicultural, multiracial society. Emphasis is on the commonalities and diversities among groups in American society and the nature of transactions between and among these groups. Offered winter semester. Prerequisite: SW 317, SW 319, and SW 340. Three credits.

SW 490 First Senior Level Field Practicum. Involves 225 clock hours per semester. Offers opportunities to apply theories, techniques, and concepts through observation and participation in supervised activities of assigned social agencies as generalist practitioners. Offered fall semester. Prerequisites: Candidacy and SW 348; Corequisite: SW 492 and SW 430. Graded credit/no credit. Three credits.

SW 491 Second Senior Level Field Practicum. Involves 225 clock hours per semester. Offers opportunities to apply theories, techniques and concepts through observation and participation in supervised activities of assigned social agencies as generalist practitioners. Offered winter semester. Prerequisites: SW 490, SW 492 and SW 430; Corequisite: SW 493 and SW 495. Graded credit/no credit. Three credits.

SW 492 Field Practicum in Social Work Seminar I. Assists students in the understanding and achievement of learning objectives in their field practicum experiences. Requires regular reporting of field activities including assessment and evaluation of client populations as well as the social agency itself. Offered fall semester. Corequisite: SW 490. One credit.

SW 493 Field Practicum in Social Work Seminar II. Assists students in the understanding and achievement of learning objectives in their field practicum experiences. Requires regular reporting of field activities including assessment and evaluations of client populations as well as the social agency itself. Offered winter semester. Corequisite: SW 491. One credit.

SW 495 Senior Seminar in Social Work (capstone). Integration of social work content and cognate subject content into a holistic framework with a focus on beginning-level generalist social work practice. Emphasis on integrating theory and practice. Offered winter semester. Prerequisites: SW 490; Corequisite: SW 491 and SW 493. Three credits.

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. One to four credits.

The Master of Social Work Program

Director: Schott.

The Master of Social Work program is accredited by the Council on Social Work Education.

Mission and Philosophy

The mission of the Master of Social Work program is to prepare students for advanced professional practice in direct service and in the development and implementation of social welfare policies and programs. The graduate program also lays the foundation for students to assume leadership roles in society's institutions, organizations and communities. The curriculum is predicated on a belief in an egalitarian, humane, and just social order for all individuals, families, groups, organizations and communities.

Building on a liberal arts foundation, the curriculum is organized in accordance with the principles of the Advanced Generalist perspective, which affirms that human problems derive from a complex interplay of psychological, social, cultural, economic, political, biological

Social Work

and physical forces. Through a careful blending of coursework and field experience, students grow both personally and professionally as they acquire skills in: relationship building, assessment, problem solving, intervention, cultural competency, communication, collaboration, community building, program evaluation, organizational management, policy analysis, and research. Thus, graduates of the program are able to draw on a range of theories and methods to practice at multi-systemic levels and are also prepared to engage in grassroots and political organizing as well as electoral politics.

The school requires all students to complete a series of foundation courses that introduce the profession's history and its basic values, ethics and processes. The advanced courses expand students' competence in the use of multi-level assessment, intervention and evaluation modalities with diverse client systems. Themes of oppression, empowerment, social and political action and civic participation are incorporated into all courses. Furthermore, the curriculum addresses issues of social work values and ethics in every course, in response to the *NASW Code of Ethics*, the changing nature of American culture, and new societal and environmental demands on the practitioner.

At the core of the program is recognition of the necessity to prepare students to be culturally competent practitioners in an increasingly complex, global society. This occurs not only in the classroom but also in the field practicum, which incorporates the knowledge of individuals, families, groups, organizations, and communities, both here and abroad, gained in the classroom into real-world experiences. Over three consecutive semesters, students are exposed to a variety of opportunities to work directly with diverse cultural, class and ethnic groups and populations-at-risk, locally, in other parts of the United States and internationally, in a carefully selected professional learning environment, under the guidance and supervision of faculty and agency staff.

Program Goals

The School's curriculum is designed to operationalize the Advanced Generalist perspective by fostering an integration of theory and practice. Through this educational experience, students acquire a wide range of knowledge and skills in order to achieve a higher level of personal growth and professional competence, grounded in social work values and ethics. These goals are addressed through a carefully devised and systematic structure of courses in social work practice, human behavior and the social environment, social welfare policy and services, social research, and field education, as well as through the relationships established with faculty and peers.

The School of Social Work's specific objectives are:

1. To award the graduate degree to individuals who are not only skilled practitioners but also capable of assuming leadership and scholarly roles in our local, state, regional, 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 existing within the social welfare and human services communities through direct participation in capacity building and social and political action.

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.

Degree Seeking

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.

In addition to the requirements for admission to the university set forth above, admission to the School of Social Work is based on an assessment of prior academic preparation, personal maturity, conceptual abilities, work experience, and personal commitment to the profession of social work, its values, and its ethics. All applicants for admission to the Master of Social Work program must:

1. Submit a complete application for admission to the School of Social Work.
2. Enclose a non-refundable \$30.00 application fee.
3. Have official transcripts sent from each undergraduate and graduate institution attended.
4. Have a baccalaureate degree from an accredited college or university.
5. Have a cumulative undergraduate GPA of 3.0 on a 4.0 scale (calculated on the last two years of study). A limited number of applicants may be admitted with less than the minimum GPA requirement. This exception may be granted to students who have been out of school for five or more years and/or those with outstanding work experience in human services.
6. Have a broad liberal arts background in subject areas such as the life, physical, and social sciences; values and ideas, art and humanities; history; foreign cultures and multi-cultural issues; and logic and mathematics.
7. Have the minimum 18 hours in social and behavioral sciences with coursework in psychology, social work, and/or sociology.
8. Applicants with deficiencies in liberal arts and/or behavioral and social sciences may be required to complete compensatory undergraduate work prior to reconsideration for admission.
9. Have three letters of reference submitted by individuals who can directly and/or objectively assess the applicant's qualifications for successful graduate study and professional social work practice.
10. Prepare and submit a 2–3 page personal statement of career goals and background experiences, including an explanation of how the M.S.W. program at Grand Valley will help them achieve their educational and professional objectives.
11. A *one page*, double-spaced essay that addresses the way in which social justice is or is not manifested in a contemporary social problem of your choice/selection. Indicate possible causes and solutions. Be creative.
12. A resume, detailing work and volunteer experiences.

Completed applications are reviewed by the Admissions Committee in the order received. However, to ensure full consideration for fall admission, applications should be received before May 1. Early application is strongly encouraged. When all materials have been received, the applicant's file is reviewed by the school's Admission Committee, which makes a disposition of each completed application on a first-come, first-served basis. The committee reserves the right to require additional information it deems appropriate and necessary. The majority of students admitted to the School of Social Work will begin their studies in the fall semester. Late applicants will be admitted on the basis of remaining vacancies. Limited part-time spaces are available for January enrollment.

All applicants who meet the School of Social Work admission requirements will be invited for a personal interview prior to admission to discuss admission and further explore the

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program. Admissions decisions are promptly communicated in writing to each applicant. Because of limited class size the Admissions Committee may not be able to accept all qualified applicants.

Applicants denied admission have the right to appeal their denial. Written appeals should be addressed to the Director of Recruitment and Admissions. Appeals must be filed within ten days of the decision.

Field Education

Director: Edwards.

The fieldwork component of the M.S.W. program is an integral part of the 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. The School's practicum program is organized on the basis of "concurrent model" of field education. Under this model, admitted students will participate in three academic semesters of supervised, agency-based field instruction, for a minimum of 21 hours per week. Field instruction is done concurrently with classroom courses. 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 general objectives of the school and the particular needs and interests of individual students.

Prior to entering field practice each student must attend a scheduled mandatory five-hour 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 3.5 in social work courses from a CSWE accredited baccalaureate program may qualify 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.

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 nondegree 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 Admissions Office.
3. All degree seeking applicants who meet the School of Social Work admission requirements will be interviewed by the Admissions Committee.

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.

M.S.W. Degree Requirements

The M.S.W. degree consists of a minimum of 60 credit hours.

The program core includes 18 credit hours, as follows:

SW 600 Cultural Competency for Social Work
 SW 601 Foundations of Social Work Practice
 SW 603 Integrated Methods
 SW 610 Social Welfare Policy and Services I
 SW 620 Human Behavior and the Social Environment
 SW 690 Social Research I

Students must also take the following courses in human behavior, policy, and research (12 hours):

SW 612 Social Policy: Families and Children
 or
 SW 613 Human Rights and Social Work
 or
 SW 614 Social Policy and Mental Health
 or
 SW 616 Law, Ethics, and Social Welfare
 or
 SW 618 Contemporary Social Policy for Elders
 or
 SW 619 Comparative Social Welfare Policy
 and SW 622 Psychopathology and Social Deviance

SW 640 Seminar in Advanced Generalist Practice (capstone)

SW 693 Social Research II

Students must also take 12 hours of field practicum:

SW 650 Field Education I

SW 651 Field Education Seminar I

SW 652 Field Education II

SW 653 Field Education Seminar II

SW 654 Field Education III

SW 655 Field Education Seminar III

Students must also take 18 hours of advanced practice classes

Practice courses are divided into the following four categories:

Group A (micro-core)

SW 670 Social Work Practice: Individuals

SW 672 Social Work Practice: Groups

SW 674 Social Work Practice: Families and Children

Group B (micro-elective)

SW 662 Substance Abuse and Social Work Practice

SW 665 Aging in Contemporary Society

SW 667 Holistic Practices in Social Work

SW 671 Social Work Practice in Health Care

SW 673 Social Work Practice with Children and Adolescents

SW 675 Child Welfare and Family Services

SW 680 Special Topics in Social Work

Group C (macro-core)

SW 676 Community and Social Planning

SW 677 Principles of Supervision

SW 678 Human Services Administration

Group D (macro-elective)

SW 630 Social Work: Global Service-Learning

SW 660 Grant Writing and Resource Development

SW 679 Program Planning, Monitoring & Evaluation

SW 694 Master's Thesis

SW 695 Master's Thesis

Students must take 18 hours, as follows:

One course from Group A.

One course from Group A or B.

One course from Group C.

One course from Group C or D.

One course from Group A, or B, or C, or D.

One course from Group A, or B, or C, or D.

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.

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

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

SW 677 Principles of Supervision

SW 678 Human Services Administration

and one SW Elective

One of the following:

SW 660 Grant Writing and Resource Development

SW 662 Substance Abuse and Social Work Practice

Two of the following:

SW 672 Social Work Practice: Groups

SW 673 Social Work Practice with Children and Adolescents

and/or SW 674 Social Work Practice: Families and Children

Graduate Courses of Instruction

Note: Prerequisites must be satisfied as prescribed prior to enrollment in indicated courses.

SW 600 Cultural Competency for Social Work. Examines cross-cultural practices and values, with emphasis on the commonalities and differences among individuals, groups, organizations, and communities in American society. Critical analyses of people based on age, ethnicity, race, gender, religion, spirituality, sexual orientation, socioeconomic status, veteran, and/or disability status. Three credits.

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. Three credits.

SW 603 Integrated Methods. Examines theories, goals, and processes relevant to Advanced Generalist social work practice. Focus is on social systems theory, social work roles, theories, and

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skills necessary to implement processes for achieving desired outcomes in practice with individuals, families, groups, organizations, and communities. Offered fall and winter semesters. Prerequisite for advanced practice course enrollment. Three credits.

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. Three credits.

SW 612 Social Policy: Families and Children. An examination of the historical and contemporary impact of major 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. Offered spring/summer semester. Prerequisite: SW 610. Three credits.

SW 613 Human Rights and Social Work. The course is structured to provide students with a basis for literacy about modern human rights, including core principles, key documents, institutions and practices. A framework for the analysis of social work/human rights interactions is utilized and systematically applied, including but not limited to the effect of social, political and economic policies and programs on human rights; health and social consequences of human rights violations; and the inextricable linkage between promoting and protecting mental and physical health, community well being and family functioning and promoting and protecting human rights. Prerequisite: SW 610. Three credits.

SW 614 Social Policy and Mental Health. Examines the development of mental health policies and services in the United States and in Michigan. Public policies and organizations are analyzed and evaluated in relation to trends, impacts, and outcomes on the problem of mental illness in society. Offered spring/summer semester. Prerequisite: SW 610. Three credits.

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. Prerequisite: SW 610. Three credits.

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. Prerequisite: SW 610. Three credits.

SW 619 Comparative Social Welfare Policy. Analysis of U.S. and Host Country's Welfare Policy/Practice. Offered summer semester. Prerequisite: SW 610. Three credits.

SW 620 Human Behavior and the Social Environment. Focuses on the interactions between the person and the social system in which human development and maturation take place. The differential effects of life-cycle, lifestyle, and culturally diverse perspectives are considered in relation to several major theories for assessing human behavior and their relationship to the generalist orientation in social work. Offered fall and winter semesters. Prerequisite: SW 622. Three credits.

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. Prerequisite: SW 600 and SW 620. Three credits.

SW 630 Social Work: Global Service-Learning. Focus is international and uses a service-learning approach. Explores the theme of social welfare development. Includes a two- or three-

week experiential learning component in an international location. Demonstrates the interconnectedness between social work, social justice, and civic/global responsibility. Offered spring/summer semester. Prerequisites: SW 600, SW 603, SW 610, and SW 620. Three to four credits.

SW 640 Seminar in Advanced Generalist Practice (capstone). A broadening of student-break 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. Corequisite: SW 654 and SW 655. Three credits.

SW 650 Field Education I. The first in a series of applied field education courses involving 315 clock hours. Emphasis is on the advanced application of assessment, interaction, and evaluation skills within a generalist framework. Offered spring/summer and winter semesters. Prerequisites: SW 600, SW 601, SW 603, and SW 620; Corequisite: SW 651. Graded credit/no credit. Three credits.

SW 651 Field Education Seminar I. Focus on the integration of knowledge, skills, and values with Advanced Generalist practice for students in field education placements. Illustrations from students' work in agency setting included. Offered spring/summer and winter semesters. Corequisite: SW 650. One credit.

SW 652 Field Education II. A continuation of SW 650. A 315-clock-hour applied field practicum that has been contracted for by students. Emphasis on the advanced application of assessment, intervention, and evaluation skills within generalist framework. Offered fall semester. Prerequisite: SW 650 and SW 651. Corequisite: SW 653. Graded credit/no credit. Three credits.

SW 653 Field Education Seminar II. Continuation of SW 651 with focus on the advanced application of assessment, intervention, evaluation, knowledge, and skills required of students in field education agency setting as generalist practitioners. Offered fall semester. Prerequisites: SW 650 and SW 651. Corequisite: SW 652. Graded credit/no credit. One credit.

SW 654 Field Education III. A continuation of SW 652. A 315-clock-hour applied field practicum that has been contracted by students. Emphasis on the advanced application of assessment, intervention, and evaluation skills within the generalist framework. Offered winter semester. Prerequisite: SW 650, SW 651, SW 652 and SW 653. Corequisite: SW 655 and SW 640. Graded credit/no credit. Three credits.

SW 655 Field Education Seminar III. A continuation of SW 653 with emphasis on evaluation skills and demonstration of knowledge, values, and skills required of Advanced Generalist practitioners in field education placements. Offered winter semester. Prerequisites: SW 650, SW 651, SW 652 and SW 653. Corequisite: SW 654 and SW 640. Graded credit/no credit. One credit.

SW 660 Grant Writing and Resource Development. Instruction in finding grant sources, writing grants, developing grant budgets, and evaluating grant proposals and programs. Students will be expected to write one actual grant proposal. Offered winter semester. Three credits.

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. Three credits.

SW 664 Social Work Practice in Schools. Required for social work practitioners in Michigan public schools. Provides an overview of social work practice in a host (public school) setting. The school as an institution, its staff, students, community, and laws that affect education and social work practice, as well as methods of practice. Offered spring/summer and winter semesters. Prerequisite: SW 600, SW 601, SW 603, SW 610, and SW 620. Four credits.

SW 665 Aging in Contemporary Society. Students gain a specialized knowledge of social work practice with older adults, their families, caregivers, and professionals. Theories of aging and social

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work practice principles are applied to address contemporary issues that impact citizens' goals for individual autonomy, appropriate health care, income security, and signified social supports. Three credits.

SW 667 Holistic Practices in Social Work. Introduces energy management for behavioral transformation and explores a range of energy management approaches, e.g., acupuncture, bio-feedback, massage, qigong, and yoga, among others, as social holistic practice. Focuses on stress management, energy, and capacity development through mind, body, and spirit dynamic application for holistic health and self-actualization. Three credits.

SW 670 Social Work Practice: Individuals. Focuses on selected knowledge and skills from the cognitive/behavioral and psychosocial models and their application to social work practice with individuals. Perspectives on differential assessments and interventions drawn from these approaches will be studied. Factors of minority group status and gender are examined. Offered fall and winter semesters. Prerequisite: SW 603. Three credits.

SW 671 Social Work Practice in Health Care. Development of social work skills pertinent to health care settings. Assessment of the impact of illness, treatment and hospitalization on patients and families. Models of the helping process and health care theories will be examined and applied to practice. Offered winter semester. Prerequisite: SW 603. Three credits.

SW 672 Social Work Practice: Groups. Focuses on concepts, values, skills, and techniques germane to the practice of social group work. Examines the history, roles, theoretical underpinnings, interventive strategies, and modes of group work practice. Offered fall semester. Prerequisite: SW 603. Three credits.

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. Prerequisite: SW 603 and SW 622. Three credits.

SW 674 Social Work Practice: Families and Children. Examines an integrated model of family practice focusing on family development and dysfunction at various stages in the family life cycle. Using a family system and ecological systems perspective, students are taught specific assessment and intervention knowledge and skills. Concepts from several current models of family practice are studied and drawn upon. Offered fall and winter semesters. Prerequisite: SW 603. Three credits.

SW 675 Child Welfare and Family Services. Prepares students for practice in child welfare and family services in the public or private sector. Addresses social work's historic mission to serve poor and vulnerable families with a variety of direct practice methods in the Advanced Generalist perspective. Offered winter semester. Prerequisite: SW 603. Three credits.

SW 676 Community and Social Planning. Prepares students for professional practice in social planning and community organization. Focuses on a range of theories, concepts, and their application in practice situations. Includes theories of community power and influence, inter-organizational relationships and action strategies for problem solution. Attention will also be given to the development and use of structure and leadership, community problem-solving models and roles, tasks, and activities related to practice. Offered fall semester. Prerequisite: SW 603. Three credits.

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. Prerequisite: SW 603. Three credits.

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. Prerequisite: SW 603. Three credits.

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. Prerequisite: SW 603. Three credits.

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. Prerequisite: SW 600, SW 601, SW 603, SW 610, and SW 620. One to four credits.

SW 690 Social Research I. The first of two courses in social work research. Foundation 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 generalist orientation. Offered winter and spring/summer semesters. Three credits.

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. Prerequisite: SW 690. Three credits.

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. Three credits.

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. Prerequisite: SW 690, SW 693, SW 694 and consent of thesis committee. Three credits.

SW 699 Independent Study. Independent study of an issue related to social welfare or social work theory or practice. Offered every semester. Prerequisite: Approval of advisor and faculty member directing the study. One to three credits.

Sociology (SOC)

Chair: Kennedy. Professors: deYoung, Kennedy, McCrea, Williams, Yu; Associate Professors: Joannis, Malaret, Rynbrandt; Assistant Professors: Battani, Boudreaux, Lundskow, Ott, Phillips, Stewart, Stillerman.

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.

Sociology

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.

Requirements for a Major

Students majoring in sociology are required to complete 36 hours in the department, including core courses SOC 201, 304, 360, 382, 385, 400 or 401, 495, and three hours in anthropology. No more than six hours of 399 and 499 combined may count toward the major.

Students may earn either a B.A. or a B.S. degree.

Core Courses Hours: 27

- Three (3) hours in Anthropology
- SOC 201 Introduction to Sociology
SOC 304 Analysis of Sociological Data
SOC 360 Social Psychology: Sociology's View
SOC 382 Race and Ethnicity
SOC 385 Social Class Inequality
SOC 400 Classic Social Theory
or SOC 401 Contemporary Sociological Theory
SOC 490 Practicum: Career-Service
SOC 495 Senior Seminar in Sociology (capstone)

Electives Hours: 9

Any three sociology courses must be taken in addition to the core. The total for all courses in the department must be at least 36 hours. An internship (SOC 490) is required of all students. A student may replace the internship with an additional 440-level course. Students must receive approval from their advisor and the department chair for the substitution. Credit will not be granted for a substitute course for graduation without prior approval.

Cognate Degrees

B.A.

- Third-semester proficiency in a foreign language.

B.S.

SOC 304 Analysis of Sociological Data
 SOC 360 Social Psychology: Sociology's View
 STA 215 Introductory Applied Statistics

Sociology Minor

Students minoring in sociology are required to complete 21 hours in the department. At least 12 hours must be at the 300 or 400 level. No more than three hours of 399 and 499 combined may count toward a minor.

Candidates seeking secondary teacher certification will be endorsed to teach sociology in grades 7–12 upon successful completion of the sociology minor and the Michigan Test for Teacher Certification.

Candidates are strongly urged to take the following courses to fulfill the minor:

SOC 201 Introduction to Sociology
 SOC 280 Social Problems
 SOC 304 Analysis of Sociological Data
 SOC 360 Social Psychology: Sociology's View
 SOC 382 Race and Ethnicity
 SOC 385 Social Class Inequality
 SOC 400 Classic Social Theory
 or SOC 401 Contemporary Sociological Theory

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.

Sociology

Sample Curriculum

First Year

- ANT elective
- General education courses
- Electives (or foreign language)

MTH 110 Algebra

SOC 201 Introduction to Sociology

WRT 150 Strategies in Writing

Third Year

- General Education Theme Courses
- Electives

SOC 360 Social Psychology: Sociology's View

SOC 382 Race and Ethnicity

SOC 490 Practicum: Career-Service

WRT 305 Writing in the Disciplines

Second Year

- General education courses
- Electives (or foreign language)

SOC 304 Analysis of Sociological Data

SOC 360 Social Psychology: Sociology's View

SOC 382 Race and Ethnicity

STA 215 Introductory Applied Statistics

Fourth Year

- General Education Theme Courses
- Electives

SOC 400 Classic Social Theory

or SOC 401 Contemporary Sociological Theory

SOC 495 Senior Seminar in Sociology (capstone)

Courses of Instruction

SOC 180 Special Topics. Course content varies. Refer to schedule of classes to determine course description and prerequisites. Students may repeat this course under different topics. Three credits.

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 Sciences Foundation. Offered every semester. Three credits.

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 Perspectives from the Outside theme. Offered fall semester. Three credits.

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. Three credits.

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. Three credits.

SOC 280 Social Problems. Examines a range of social conditions, arrangements, and behaviors typically defined as problems in modern society. Applies sociological analysis to understand how problems arise from the organization of society, and the processes by which conditions become identified as social problems, and how ideology and power shape responses to social problems. Fulfills Social Sciences Foundation. Fulfills U.S. Diversity requirement. Offered every semester. Three credits.

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. Three credits.

SOC 304 Analysis of Sociological Data. Examination of the basic methods of empirical research in sociology. Focus on collection, analysis, and interpretation of data. Offered winter semester. Prerequisite: Six hours in sociology or consent of instructor. Three credits.

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. Three credits.

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 Civil Rights theme. Offered fall semester. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: SOC 201. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: SOC 201. SOC 360 is not equivalent to PSY 360. Students may receive credit for both courses. Three credits.

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. Three credits.

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. Three credits.

Sociology

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. Prerequisite: Junior standing. Three credits.

SOC 380 Special Topics Seminar. 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. One to three credits.

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. Prerequisite: SOC 201 or SOC 280. Three credits.

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. Prerequisite: SOC 201. Three credits.

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. Three credits.

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. Three credits.

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 Perspectives from the Outside theme. Offered fall and winter semesters. Prerequisite: Junior standing. Three credits.

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. Prerequisite: SOC 201. Three credits.

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. Three credits.

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. Three credits.

SOC 390 Advanced Seminar on Social Issues. An in-depth analysis of a specific social issue, problem, or sociological area. Seminar in format, the course is intended to give majors an opportunity to continue to pursue some topic of interest in depth. Topics vary. Students may take more than once if topic is different. Offered on sufficient demand. Three credits.

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. Three credits.

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 the written consent of the instructor before registration. One to three credits.

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. Prerequisite: Six hours in sociology. Three credits.

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. Prerequisite: Six hours in sociology. Three credits.

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. Three credits.

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. One to nine credits.

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 and prior approval. Three credits.

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. One to three credits.

Social Science Courses

The following are interdisciplinary social science courses that may be used for a sociology major or minor. Consult with your advisor for further information.

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. Three credits.

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. Part of the Gender, Society, and Cultural theme. Offered winter semester. Three credits.

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. Three credits.

Statistics (STA)

Chair: P. Stephenson. Professors: Hong, Jinn; Associate Professors: Curtiss, Downer, Gabrosek, Reischman, Richardson, Rogness, P. Stephenson; Assistant Professors: Anderson, Frobish, Otieno, Shoultz, Zeitler; Affiliate Faculty: Siehling; Visiting Instructor: T. Stephenson.

Degrees Offered: Master of Science in Biostatistics; Bachelor of Science or Bachelor of Arts in Statistics; Minors in Applied Statistics and 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 office for 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.

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. Actuaries are statisticians who use their quantitative skills to analyze and plan for future financial situations. For example, they estimate the impact of seatbelt 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 a thorough understanding of the theory and 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 Statgraphics.

Requirements for a B.S. or B.A. 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

or STA 312 Probability and Statistics

STA 216 Intermediate Applied Statistics

STA 311 Introduction to Survey Sampling

STA 315 Design of Experiments

STA 319 Statistics Project

STA 412 Mathematical Statistics I

STA 415 Mathematical Statistics II (capstone) — Satisfies capstone course requirement for a statistics major.

All majors must complete two of the following statistics elective courses

STA 310 Introduction to Biostatistics

STA 314 Statistical Quality Methods

STA 317 Nonparametric Statistical Analysis

STA 318 Statistical Computing

STA 321 Applied Regression Analysis

STA 416 Multivariate Data Analysis

STA 421 Bayesian Data Analysis

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:

CS 162 Computer Science I

MTH 201 Calculus I

MTH 202 Calculus II

Statistics

MTH 227 Linear Algebra I

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.

Sample Curriculum

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. Sample curriculum 1 assumes students take MTH 201 in the fall of their first year; sample curriculum 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.

Sample Curriculum 1

First Year

Fall

MTH 201 Calculus I

Winter

CS 162 Computer Science I
MTH 202 Calculus II

Second Year

Fall

MTH 227 Linear Algebra I
STA 312 Probability and Statistics

Winter

STA 216 Intermediate Applied Statistics

Third Year

Fall

• One of the statistics electives
STA 315 Design of Experiments
and one of the statistics electives

Winter

STA 311 Introduction to Survey Sampling
STA 319 Statistics Project

Fourth Year

Fall

• One of the statistics electives
STA 412 Mathematical Statistics I
and one of the statistics electives

Winter

STA 415 Mathematical Statistics II (capstone)

Sample Curriculum 2

First Year

Fall or Winter

STA 215 Introductory Applied Statistics

Second Year

Fall

CS 162 Computer Science I
MTH 201 Calculus I
STA 216 Intermediate Applied Statistics

Winter

• One of the statistics electives
MTH 202 Calculus II
and one of the statistics electives

Third Year

Fall

MTH 227 Linear Algebra I
STA 315 Design of Experiments

Winter

STA 311 Introduction to Survey Sampling
STA 319 Statistics Project

Fourth Year

Fall

• One of the statistics electives
STA 412 Mathematical Statistics I

Winter

STA 415 Mathematical Statistics II (capstone)

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

Either

STA 215 Introductory Applied Statistics
or STA 312 Probability and Statistics

Plus

STA 216 Intermediate Applied Statistics

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
STA 311 Introduction to Survey Sampling
STA 313 Probability and Stochastic Processes
STA 314 Statistical Quality Methods
STA 315 Design of Experiments
STA 317 Nonparametric Statistical Analysis
STA 318 Statistical Computing
STA 319 Statistics Project
STA 321 Applied Regression Analysis
STA 412 Mathematical Statistics I
STA 415 Mathematical Statistics II (capstone)
STA 416 Multivariate Data Analysis

Requirements for a Minor in Statistics

The statistics minor is offered within the Department of Statistics and consists of six courses (at least 22 credits).

Statistics

All minors must complete the following core courses:

MTH 201 Calculus I
MTH 202 Calculus II
STA 216 Intermediate Applied Statistics
STA 312 Probability and Statistics
STA 412 Mathematical Statistics I

Additional Course Requirements

In addition, all 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
STA 311 Introduction to Survey Sampling
STA 313 Probability and Stochastic Processes
STA 314 Statistical Quality Methods
STA 315 Design of Experiments
STA 317 Nonparametric Statistical Analysis
STA 318 Statistical Computing
STA 319 Statistics Project
STA 321 Applied Regression Analysis
STA 415 Mathematical Statistics II (capstone)
STA 416 Multivariate Data Analysis

Master of Science in Biostatistics

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 pre-clinical, 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 receive 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.

Requirements for a 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 Graduate and Undergraduate Catalog. It is anticipated that the Biostatistics program will be launched in the fall of 2006.

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
 CS 661 Introduction to Medical & Bioinformatics
 PSM 650 Ethics and Professionalism in Applied Science
 STA 610 Applied Statistics for Health Professions
 or STA 622 Statistical Methods for Biologists

2. The Directed Courses for the Biostatistics Program Credits: 18

- 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.

CS 635 Knowledge Discovery and Data Mining
 TA 616 Statistical Programming
 STA 621 Design of Experiments and Regression
 STA 623 Categorical Data Analysis
 STA 625 Clinical Trials
 STA 630 Perspectives in Advanced Biostatistics (Capstone)

3. The PSM Seminar Courses

PSM 661 Seminar in Professional Science Practice I
 PSM 662 Seminar in Professional Science Practice II

4. An Internship Experience (at least 4 credits):

PSM 691 Internship Credits: 1 to 9

Courses of Instruction

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. Prerequisite: MTH 110 or equivalent. Fulfills Mathematical Sciences Foundation. Three credits.

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. Prerequisite: STA 215 or STA 312. Three credits.

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. Prerequisite: STA 216. Three credits.

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. Prerequisite: STA 216. Three credits.

STA 312 Probability and Statistics. Introduction to the basic concepts of probability and statistics using calculus; discrete and continuous probability distributions, sampling, estimation, confidence intervals, tests of hypotheses, regression and correlation, applications, and problem solving. Offered fall and winter semesters. Prerequisite: MTH 201. Three credits.

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. Prerequisites: MTH 202 and either STA 215 or EGR 103. Corequisite: MTH 302 or MTH 227. Three credits.

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. Prerequisite: STA 215 or EGR 103. Three credits.

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. Prerequisite: STA 216 or STA 312 or STA 314. Three credits.

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. Prerequisite: STA 216. Three credits.

STA 318 Statistical Computing. A detailed study of the advanced features of major statistical packages used in statistical computing, such as SAS and SPSS. Emphasis on the data entry, data

manipulation, data storage, data simulation, and graphical display features of these packages. Offered on sufficient demand. Prerequisite: STA 215. Three credits.

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. Prerequisite: STA 216. Three credits.

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, colinearity, data transformation, polynomial regression, general linear model, selecting a best regression model, and logistic regression. Offered fall semesters on sufficient demand. Prerequisite: STA 216. Three credits.

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. Prerequisite: STA 215 or STA 312. Three credits.

STA 380 Special Topics. 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. One to three credits.

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. Prerequisite: either STA 215 or STA 312, and MTH 202. Four credits.

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. Four credits.

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. Three credits.

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. Prerequisite: STA 412. Three credits.

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. Prerequisite: Junior status and permission of the instructor. Graded credit/no credit. One to three credits.

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. One to three credits.

STA 513 Probability and Statistics for Engineers. Application-oriented introduction to topics in probability and statistics commonly encountered in engineering. Descriptive statistics, discrete

Statistics

and continuous probability distributions, sampling distributions, estimation of and hypothesis testing for parameters, and linear regression analysis. Offered the second half of fall semesters on sufficient demand. Prerequisites: MTH 201 and either STA 215 or EGR 103. Two credits.

STA 580 Selected Topics. Readings, lecture, discussions, or labs (or any combination of these) in special topics in statistics or biostatistics. Prerequisites: Depends on the topic. One to four credits.

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. Prerequisite: STA 215 or equivalent. Three credits.

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. Three credits.

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. Prerequisites: STA 610 or STA 622. Three credits.

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. Prerequisite: STA 616. Four credits.

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. Prerequisites: STA 215. Three credits.

STA 623 Categorical Data Analysis. A study of regression models for the analysis of categorical data: logistic, probit and complementary log-log models for binomial random variables; log-linear models for cross-classification of counts; regression models for Poisson rates; and multinomial responses models for both nominal and ordinal responses. Model specification and interpretation are emphasized. Offered fall semesters. Prerequisite: STA 412 and STA 616. Two credits.

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 multi-center trials, and study closeout. Offered winter semesters. Prerequisites: STA 610 and one of the following: PSM 650, SHP 610, BIO 610, HS 601, or NUR 690. Two credits.

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. Prerequisites: STA 415, STA 621, and PSM 691. Three credits.

STA 680 Special Topics. Readings, lecture, discussions, or labs (or any combination of these) in special topics in statistics or biostatistics. Prerequisites: Depends on the topic. One to four credits.

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. Departmental approval is required. One to four credits.

Therapeutic Recreation (REC)

Director: Beck. Associate Professor: Beck; Assistant Professor: Kensingler.

Degree offered: B.S. in therapeutic recreation.

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, 1994), 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 bachelor of science 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.

Therapeutic Recreation

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 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.

Major Requirements: 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
REC 111 Foundations of Therapeutic Recreation

REC 200 Leisure Education
REC 253 Diagnostic Groups in Therapeutic Recreation
REC 256 Therapeutic Recreation Programming
REC 308 Recreation Leadership
REC 310 Interventions in Therapeutic Recreation
REC 318 Fieldwork in Therapeutic Recreation
REC 404 Issues in Recreation and Leisure (capstone)
REC 405 Administration of Therapeutic Recreation
REC 407 Assessment and Evaluation in Therapeutic Recreation
REC 490 Internship in Therapeutic Recreation

3. Electives

Two courses:

REC 313 Therapeutic Recreation for Physical Disability
REC 315 Therapeutic Recreation for Mental Health
REC 316 Therapeutic Recreation with the Elderly
REC 317 Therapeutic Recreation for Pediatrics
REC 318 Fieldwork in Therapeutic Recreation
REC 380 Special Topics

4. Cognates:

BIO 120 General Biology I
BMS 208 Human Anatomy
BMS 290 Human Physiology
BMS 291 Laboratory in Human Physiology
CHM 109 Introductory Chemistry
CHM 230 Introduction to Organic and Biochemistry
HPR 220 Health Care Delivery
MOV 300 Kinesiology
MOV 304 Physiology of Activity
PSY 101 Introductory Psychology
PSY 303 Psychopathology
PSY 364 Life Span Developmental Psychology
STA 215 Introductory Applied Statistics

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

Therapeutic Recreation

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.

Sample Curriculum

First Year

Fall

- General education course
- CHM 109 Introductory Chemistry
MTH 110 Algebra
PSY 101 Introductory Psychology

Second Year

Fall

- General education course
- CHM 230 Introduction to Organic and Biochemistry
HPR 220 Health Care Delivery
REC 110 Foundations of Recreation and Leisure
REC 111 Foundations of Therapeutic Recreation

Third Year

Fall

- General education course
- BMS 290 Human Physiology
BMS 291 Laboratory in Human Physiology
REC 256 Therapeutic Recreation Programming
REC 308 Recreation Leadership

Summer

- REC 318 Fieldwork in Therapeutic Recreation (300 hours)
Eligibility: 80 percent competence in REC-designed courses.

Fourth Year

Fall

- MOV 300 Kinesiology
PSY 303 Psychopathology
REC 315 Therapeutic Recreation for Mental Health
REC 316 Therapeutic Recreation with the Elderly
REC 407 Assessment and Evaluation in Therapeutic Recreation

Winter

- General education course
 - General education
- BIO 120 General Biology I
WRT 150 Strategies in Writing

Winter

- BMS 208 Human Anatomy
PSY 364 Life Span Developmental Psychology
REC 200 Leisure Education
REC 253 Diagnostic Groups in Therapeutic Recreation

Winter

- ENG 305/General education course
 - Theme Course
- REC 310 Interventions in Therapeutic Recreation
REC 313 Therapeutic Recreation for Physical Disability
STA 215 Introductory Applied Statistics

Winter

- Theme Course
- MOV 304 Physiology of Activity
REC 317 Therapeutic Recreation for Pediatrics
REC 404 Issues in Recreation and Leisure (capstone)
REC 405 Administration of Therapeutic Recreation

Summer

REC 490 Internship in Therapeutic Recreation (600 Hours)

Eligibility: 80 percent competence in REC-designated courses.

Last course of the program.

Courses of Instruction

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. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: REC 253. Three credits.

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. Corequisite: REC 256. Three credits.

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. Three credits.

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. Three credits.

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, PSY 303, or permission of instructor. Three credits.

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. Com-

University Studies

munity service and practical experience in program planning and delivery. (2-1-0) Offered winter semester. Prerequisite: REC 310 or permission of instructor. Three credits.

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. Three credits.

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. Three credits.

REC 380 Special Topics. Provides an opportunity for students to pursue advanced or specialist study in topics related to the field of therapeutic recreation. The selected topics are not ordinarily dealt with in other courses. Can be repeated. Offered on sufficient demand. Prerequisite: Permission of instructor. One to four credits.

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. One to three credits.

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. Three credits.

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 318. Three credits.

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. Prerequisite: REC 310. Three credits.

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. Twelve credits.

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. One to three credits.

University Studies (US)

Coordinator: Whipps

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. One credit.

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. Three credits.

Women and Gender Studies (WGS)

Coordinator: Underwood

The Women and Gender Studies minor offers an interdisciplinary curriculum in the scholarship of women's studies, men's studies, and gay, lesbian, bisexual, and transgender studies. The minor (1) acquaints students with the scholarship on women and gender; (2) 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 (3) prepares students for graduate school and/or careers in which knowledge of and sensitivity to gender issues are relevant.

Career Opportunities

Some students take a women and gender studies minor because they are interested in studying about the types of issues listed above. Others find that the Women and Gender Studies minor complements their major in helping prepare them for certain professional roles. Examples:

- A science or math/education major who wants to encourage girls to study science and math in elementary and high school.
- A business major who plans to work in personnel and is interested in gender issues in the workplace.
- A criminal justice major who expects to deal with domestic violence.
- A social work major who will work with single parent families.
- A psychology major who plans to do graduate work and then specialize in counseling women, gays, lesbians, bisexuals, or the transgendered.
- An international studies major who will work in a developing country and wants to be aware of women-in-development issues.
- A literature history, or philosophy major who plans to do doctoral work and make gender issues her or his specialty.

Requirements for a Women's Studies Minor

All students take three core courses:

WGS 200 Introduction to Gender Studies

WGS 360 Foundations of Feminism

WGS 491 Contemporary Theory and Practicum

And complete:

The total of 21 hours required for the minor by choosing with the approval of the WGS coordinator, four courses (12 hours) from the following list:

AAA 351 Perspectives on African American Males

ANT 370 Cross-cultural Perspectives on Gender

BIO 325 Human Sexuality

CLA 320 Women in the Classical World

ECO 350 Gender and Economics

ENG 436 Women and Literature

HST 312 History of American Women

HST 371 History of Gender, Family, Sexuality

PHI 370 Feminist Philosophy

PSY 316 The Psychology of Human Intimacy and Sexuality

SOC 323 Families in Society

SOC 379 Love, Sex, and Gender

Women and Gender Studies

SOC 383 Sociology of Women
SOC 389 Child Maltreatment
WGS 236 Introduction to Writing by Women
WGS 310 Sexual Orientation and the Law
WGS 315 Psychology of Sex Differences
WGS 320 Crimes Against Women
WGS 324 Introduction to Lesbian and Gay Studies
WGS 351 Family & Gender in the Developing World
WGS 352 Black Women's Culture and Communities
WGS 370 Women and the Law
WGS 373 Women and Minorities in Film and Television
WGS 375 Perspectives on Masculinity
WGS 380 Special Topics in Women's Studies
WGS 399 Independent Readings
WGS 460 Spanish Women Authors
WGS 461 Language and Gender
WGS 490 Women's Community Collaborative

Additional Course Requirements

In addition to the courses listed above, 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*. In some cases cross-listed courses in a student's WGS minor may also be used in the student's major. Note, however, the Grand Valley State University policy that a student must have a minimum of 30 credits in the major that are not duplicates of credits in the minor.

Courses of Instruction

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 sciences foundation. Offered fall and winter semesters. Three credits.

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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits.

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. Offered winter semester. Three credits.

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. Three credits.

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. Three credits.

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. Three credits.

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. Part of the Gender, Society and Culture theme. A dual listing of SS 351. Offered winter semester. Prerequisite: completion of the social sciences foundation category of general education. Three credits.

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. Three credits.

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. Three credits.

WGS 370 Women and the Law. An overview of the U.S. law's treatment of constitutional limitations in law 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 the Gender, Society, and Culture theme. A dual listing of LS 370. Offered winter semester. Three credits.

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. Three credits.

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. Three credits.

WGS 380 Special Topics in Women's 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. One to four credits.

WGS 399 Independent Readings. Independent supervised readings in selected topics. Offered every semester. Prerequisite: Permission of program coordinator. Graded credit/no credit. One to three credits.

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. Prerequisite: SPA 330 and SPA 331 or SPA 332 with a grade of C (not C-) or better. Three credits.

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. Prerequisite: ENG 261. Three credits.

Writing

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.

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. Prerequisite: WGS 360. Three credits.

Writing

Chair: Royer. Professors: Clark, Frerichs; Associate Professors: Dwelle, Gilles, Kountz, Losey, Royer, Schaub; Assistant Professors: Haven, Monson, Schendel, Sun.

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 "General Academic Policies" in the Grand Valley State University Undergraduate and Graduate Catalog for 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.

Requirements for the Writing Major

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

ENG 226 American Literature II: from 1860
 WRT 200 Introduction to Professional Writing
 WRT 210 Writing with Style
 WRT 219 Introduction to Creative Writing

Creative Writing Track Requirements

Literature

Any three 200-level literature (ENG) courses.

Writing

Genre Studies

Take all three courses in two of the following four genre groups:

Poetry

ENG 320 Studies in Poetry
WRT 320 Intermediate Poetry Workshop
WRT 420 Advanced Poetry Workshop

Fiction

ENG 330 Studies in Fiction
WRT 330 Intermediate Fiction Workshop
WRT 430 Advanced Fiction Workshop

Nonfiction

ENG 360 Studies in Nonfiction
WRT 360 Intermediate Nonfiction Workshop
WRT 460 Advanced Nonfiction Workshop

Drama

ENG 340 Studies in Drama
WRT 340 Intermediate Drama Workshop
WRT 440 Advanced Drama Workshop

Professional Writing Track Requirements

Rhetoric and Design

COM 203 Argument and Analysis
WRT 251 Document Production and Design

Writing Internship

WRT 490 Internship

Professional Writing

WRT 350 Business Communication
WRT 351 Writing for the World Wide Web
WRT 360 Intermediate Nonfiction Workshop

Professional Emphasis

English

ENG 225 American Literature I: to 1860
ENG 261 Study of Modern English
ENG 313 British Literature: Shakespeare

Or Journalism

CJR 236 News in Society
CJR 256 News Reporting I
CJR 270 News Reporting II

Or Public Relations

CAP 220 Fundamentals of Public Relations
CAP 321 Media Relations Writing
CJR 256 News Reporting I

Capstone Requirement for All Majors

WRT 495 Genre and Writing (capstone)

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.

Core Requirements

WRT 200 Introduction to Professional Writing

WRT 210 Writing with Style

WRT 320 Intermediate Poetry Workshop

or WRT 330 Intermediate Fiction Workshop

or WRT 340 Intermediate Drama Workshop

or WRT 360 Intermediate Nonfiction Workshop

Writing Electives

Choose any three courses:

WRT 251 Document Production and Design

WRT 320 Intermediate Poetry Workshop

WRT 330 Intermediate Fiction Workshop

WRT 340 Intermediate Drama Workshop

WRT 350 Business Communication

WRT 351 Writing for the World Wide Web

WRT 360 Intermediate Nonfiction Workshop

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 among students.

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 English department, 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.

Grand Valley Writers Festival. A one-day spring workshop for area high school students that offers small-group sessions on fiction writing, article writing, poetry writing, Web writ-

Writing

ing, playwriting, and memoir writing. Workshops are conducted by Grand Valley faculty and local writers, with assistance by current writing students.

Courses of Instruction

WRT 98 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. Four credits.

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. Four credits.

WRT 180 Topics in Composition. Topics will be announced in the class schedule and prerequisites may be listed. May be repeated for credit. Three credits.

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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits.

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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits.

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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Part of Creativity theme. Three credits.

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. Three credits.

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. Three credits.

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. Prerequisite: Fulfillment of the Freshman Writing Requirement and current employment by the Writing Center. May be repeated one time for credit. One credit.

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. Prerequisite: WRT 219. Three credits.

WRT 330 Intermediate Fiction Workshop. Theory and practice of the genre of fiction. Students will read literature in the genre of fiction and then write fiction. There will be some

discussion of current publication markets; periodically, guest writers will give public readings and visit class. Offered fall and winter semesters. Prerequisite: WRT 219. Three credits.

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. Prerequisite: WRT 219. Three credits.

WRT 350 Business Communication. Training in communication skills for business and the professions. Assignments cover varieties of information management, including handling research, gathering data, writing reports, manuals, directions, and correspondence, and making oral presentations. Offered fall and winter semesters. Prerequisite: Completion of the Freshman Writing requirement. Three credits.

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. Prerequisite: Completion of the Freshman Writing Requirement. Three credits.

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. Three credits.

WRT 380 Topics in Writing. Topics will be announced in the class schedule and prerequisites may be listed. May be repeated for credit. Three credits.

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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits.

WRT 399 Independent Studies. Before registration, the student must arrange for supervision by a faculty member and submit a contract (available in the Writing office) specifying the scope of the proposed study. No more than three credits in WRT 399 may be applied to the major or minor. Offered fall and winter semesters. Prerequisite: Fulfillment of the Freshman Writing Requirement. One to four credits.

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. Offered winter semester. Prerequisite: WRT 320. Three credits.

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. Offered fall and winter semesters. Prerequisite: WRT 330. Three credits.

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. Offered winter semester. Prerequisite: WRT 340. Three credits.

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. Offered winter semester. Prerequisite: WRT 360. Three credits.

Writing

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. One to three credits.

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. Three credits.

Academic Degree Programs

Program	Page
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Aging and Adult Life (minor)	149
Anthropology, B.A., B.S.	150
Art and Design, B.A., B.F.A., B.S.	158
Art History, B.A.	172
Athletic Training, B.S.	578
Behavioral Science, B.A., B.S.	174
Biology, B.A., B.S., M.S.	175
Biomedical Sciences, B.S., M.S.	193
Biopsychology, B.A., B.S.	699
Biostatistics, M.S.	752
Broadcasting, B.A., B.S.	307
Business General, B.B.A., M.B.A.	227, 233
Business Economics, B.B.A.	221
Business/Nursing, M.B.A./M.S.N.	236
Cell and Molecular Biology, B.S., M.S.	261
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City and Regional Planning (minor)	282
Classics, B.A.	283
Clinical Laboratory Science, B.S.	295
Communications, B.A., B.S., M.S.	303, 319
Computer Information Systems, M.S.	336
Computer Science, B.A., B.S.	337
Criminal Justice, B.A., B.S., M.S.	357, 362
Dance, B.A.	366
Earth Science, B.S.	477
East Asian Studies (minor)	369
Economics, B.A., B.S.	371
Education (teacher certification)	373
Elementary	377
Secondary	379
Special	380
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Education, Reading/Language Arts, M.Ed.	387
Education, School Counseling, M.Ed.	388
Education, Special Education, M.Ed.	389
Engineering, B.S.E., M.S.E.	411, 432
English Language and Literature, B.A., M.A.	446, 453
Entrepreneurship (minor)	228
Film and Video, B.A., B.S.	310
Finance, B.B.A.	222
French, B.A.	560
Geochemistry, B.S.	476
Geography, B.A., B.S.	466
Geology, B.S.	474
German, B.A.	564

Academic Degree Programs

Greek Emphasis, (Classics, B.A.)	283
Health Administration, M.H.A.	482
Health Communication, B.A., B.S.	314
Health Professions, B.S.	488
History, B.A., B.S.	491
History of Science (minor)	504
Hospitality and Tourism Management, B.A., B.S.	515
Information Systems, B.A., B.S.	341
Integrated Science, B.S.	181
International Business, B.B.A.	223
International Relations, B.A.	520
Journalism, B.A., B.S.	315
Latin Emphasis, (Classics, B.A.)	283
Latin American Studies (minor)	522
Legal Studies, B.A., B.S.	527
Liberal Studies, B.A., B.S.	530
Management, B.B.A.	224
Marketing, B.B.A.	226
Mathematics, B.A., B.S.	534
Medical and Bioinformatics, M.S.	347
Middle East Studies (minor)	553
Music, B.A., B.M., B.M.E.	588
Natural Resources Management, B.S.	609
Nursing, B.S.N., M.S.N.	618, 626
Occupational Safety and Health Management, B.S.	640
Occupational Therapy, M.S.	644
Philosophy, B.A.	653
Photography, B.A., B.S.	316
Physical Education, B.S.	578
Physical Therapy, D.P.T.	658
Physician Assistant Studies, M.P.A.S.	667
Physics, B.S.	676
Political Science, B.A., B.S.	685
Preidental Studies	693
Premedical Studies	693
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Psychology, B.A., B.S.	697
Public Administration, B.A., B.S., M.P.A.	707, 712
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Russian (minor)	566
Russian Studies, B.A.	716
School Health Education (minor)	578
Social Studies Group Major, B.A., B.S.	721
Social Work, B.S.W., M.S.W.	723, 731
Sociology, B.A., B.S.	741
Spanish, B.A.	568
Statistics, B.A., B.S.	748
Taxation, M.S.T.	235
Theatre, B.S., B.A.	317
Therapeutic Recreation, B.S.	757
Women and Gender Studies (minor)	763
Writing, B.A.	766

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.

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.

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.)

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.

Degree analysis: A report showing the requirement for a specific degree. The report also details the student's progress toward the degree. An analysis is mailed to each undergraduate student in February and October of each year.

Degree student: A student who has been admitted to a degree category and is seeking a bachelor's or master's 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.

Glossary

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 a general credit toward a degree but is not a specific program requirement.

Emphasis: A designated group of courses within a major program.

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.

Graduation audit: Degree-seeking undergraduates receive an audit of course requirements for graduation twice each year.

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.

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 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 concentration 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 concentration of courses generally consisting of a minimum of 20 semester hours of credit.

Nondegree student: A student who has been admitted to a nondegree category (sometimes referred to as a continuing education student) and is not currently seeking a bachelor's or master's degree.

Part-time student: An undergraduate student who takes fewer than 12 hours during a semester or a graduate student who takes fewer than nine hours during a semester.

Portfolio: A collection of work (e.g., paintings, writings, etc.) that may be used to demonstrate competency in an academic area.

Prerequisite: A requirement, usually the completion of another course, that must be met before a student may register for a course.

Quality point: The numerical value given to letter grades. An "A" is equivalent to 4 points per semester hour, a "B" to 3 points, a "C" to 2 points, a "D" to 1 point, and an "F" to 0 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.

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.

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.

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.

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.

Glossary

Tuition: The amount of money that must be paid for courses based on the number of credits for which one registers.

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.

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

Grand Valley State University, a community of approximately 25,000 people, consists of a 1,275-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.

Crime Rates and Statistics

In compliance with the Student Right-to-Know and Campus Security Act of 1990, Grand Valley State University 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.

Allendale Campus — 2004

16,354 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	—
Manslaughter	0	0	—
Sex Offenses-Forcible*	6	2	.0004
Sex Offense-Nonforcible	0	0	—
Robbery	0	0	—
Aggravated Assault	1	0	.0001
Arson	1	1	.0001
Burglary	2	0	.0001
Larceny	141	24	.0086
Motor Vehicle Theft	1	1	.0001
Liquor Law Incidents**	115	278	.0070
Drug Abuse Incidents***	16	16	.0010
Weapon Possessions	2	3	.0001
Total Incidents	285		
Total Arrests		325	

* 4 incidents had no criminal complaint and/or investigation per victim's request.

** 5 additional referrals of liquor law incidents were submitted for judicial referral without prosecution.

*** 1 additional referral of drug incidents was submitted for judicial referral without prosecution.

Campus Safety

Allendale Campus—2005

16,967 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	—
Manslaughter	0	0	—
Sex Offenses-Forcible	2	1	.0001
Sex Offense-Nonforcible	0	0	—
Robbery	1	0	.0001
Aggravated Assault	0	0	—
Arson	1	1	.0001
Burglary	0	0	—
Larceny	158	50	.0093
Motor Vehicle Theft	0	0	—
Liquor Law Incidents*	141	273	.0083
Drug Abuse Incidents	34	50	.0020
Weapon Possessions	1	1	.0001
Total Incidents	343		
Total Arrests		375	

* 5 additional referrals of liquor law incidents were submitted for judicial referral without prosecution.

Allendale Campus Statistics—2006

17,692 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	—
Manslaughter	0	0	—
Sex Offenses—Forcible*	4	1	.0002
Sex Offense—Nonforcible	0	0	—
Robbery	0	0	—
Aggravated Assault	0	0	—
Arson	0	0	—
Burglary	5	3	.0003
Larceny	111	25	.0006
Motor Vehicle Theft	2	2	.0001
Liquor Law Incidents**	96	224	.0005
Drug Abuse Incidents	16	16	.0009
Weapon Possessions***	1	0	.0001
Total Incidents	235		
Total Arrests		271	

* 1 additional referrals of Sexual Assault incidents were submitted for judicial referral without prosecution

** 4 additional referrals of Liquor Law incidents were submitted for judicial referral without prosecution.

*** 2 additional referral of Weapons incidents was submitted for judicial referral without prosecution.

Robert C. Pew Grand Rapids Campus Statistics—2004

9,981 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	—
Manslaughter	0	0	—
Sex Offenses-Forcible	1	0	.0001
Sex Offense-Nonforcible	0	0	—
Robbery	0	0	—
Aggravated Assault	0	0	—
Arson	0	0	.0002
Burglary	2	0	.0014
Larceny	14	2	—
Motor Vehicle Theft	0	0	.0004
Liquor Law Incidents	4	1	.0001
Drug Abuse Incidents	1	0	.0001

Weapon Possessions	0	0	—
Total Incidents	22		
Total Arrests		3	

Robert C. Pew Grand Rapids Campus Statistics — 2005

9,981 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	—
Manslaughter	0	0	—
Sex Offenses-Forcible	0	0	—
Sex Offense-Nonforcible	0	0	—
Robbery	0	0	—
Aggravated Assault	0	0	—
Arson	0	0	—
Burglary	0	0	—
Larceny	18	4	.0017
Motor Vehicle Theft	0	0	—
Liquor Law Incidents	0	0	—
Drug Abuse Incidents	3	3	.0003
Weapon Possessions	0	0	—
Total Incidents	21		
Total Arrests		7	

Robert C. Pew Grand Rapids Campus Statistics — 2006

11,258 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	—
Manslaughter	0	0	—
Sex Offenses—Forcible	0	0	—
Sex Offense—Nonforcible	0	0	—
Robbery	0	0	—
Aggravated Assault	0	0	—
Arson	0	0	—
Burglary	0	0	—
Larceny	38	0	.0034
Motor Vehicle Theft	1	1	.0001
Liquor Law Incidents*	0	0	.0083
Drug Abuse Incidents**	0	0	—
Weapon Possessions	0	0	—
Total Incidents	39		
Total Arrests		1	

* 2 additional referrals of Liquor Law incidents were submitted for judicial referral without prosecution

** 1 additional referrals of Drug Abuse incidents was submitted for judicial referral without prosecution.

Meijer Campus in Holland Statistics — 2004

1,009 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Campus Safety

Meijer Campus in Holland Statistics—2005			
803 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Meijer Campus in Holland Statistics—2006			
544 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Muskegon Campus Statistics—2004			
304 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Muskegon Campus Statistics—2005			
236 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Muskegon Campus Statistics—2006			
187 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Traverse City Campus Statistics—2004			
230 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Traverse City Campus Statistics—2005			
260 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Traverse City Campus Statistics—2006			
260 Students	Incidents Reported	Arrests	Crime Rate
No incidents reported			

Note: None of the above statistics involved hate crimes (see FBI Definitions of Crime Categories, on the following page).

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.

Campus Safety

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 seek 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
(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 Grand Valley State University 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 who are nationally certified R.A.D. instructors.

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 service from Ottawa County Central Dispatch Authority.

Criminal incidents and emergencies at the Pew Grand Rapids Campus are reported to the Grand Rapids Police Department as well as to Grand Valley's Department of Public Safety Services. 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 Grand Valley's Department of Public Safety Services.

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.

Policies and Procedures

Approximately 1,700 faculty and staff and 23,000 students work and study at Grand Valley. More than 4,900 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 can 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.

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, eight apartment style living centers housing 1,034 students and the Ravines, Laker Village, Mark A. Murray Living Center, South B, and Grand Valley apartments, which accommodate 2,025 students. Secchia and Winter Hall on the Pew Grand Rapids Campus houses 379 students. Off-campus housing includes Greek houses and private apartment complexes located near both the Allendale and Grand Rapids campuses.

Non-academic living center entrances are always locked. Niemyer Living Center is open for classes inside the building Monday through Friday, 8:00 AM until 8:00 PM. 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 sex 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 their 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 the Housing Handbook.)

The Plant Operations Department maintains the university buildings and grounds, with concern for safety and security. All 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.

The most frequent crimes on campus are larcenies, many of which could be prevented. Do not leave book bags, books, purses, bikes, or other personal effects unattended in the field-house, living centers, classrooms, or other unsecured areas. When parking on campus, close your vehicle's windows and lock your doors.

Campus Safety

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
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 require 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. *A person who refuses to submit to a PBT under these circumstances is responsible for a state civil infraction.*

It is a misdemeanor for a person under 21 years of age to knowingly transport or possess alcoholic liquor in a motor vehicle, unless such activities are in connection with the minor's employment pursuant to a liquor license or other authorized agent of the Liquor Control Commission. Following a conviction for violation of this provision, steps may also be taken to impound the vehicle used in the offense. Alcoholic liquor may not lawfully be sold, traded, or otherwise furnished to a person who has not attained the age of 21 years. Knowingly selling or furnishing alcoholic liquor to a person under the age of 21, or failing to make a diligent inquiry as to whether the person is under the age of 21 is a misdemeanor.

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.

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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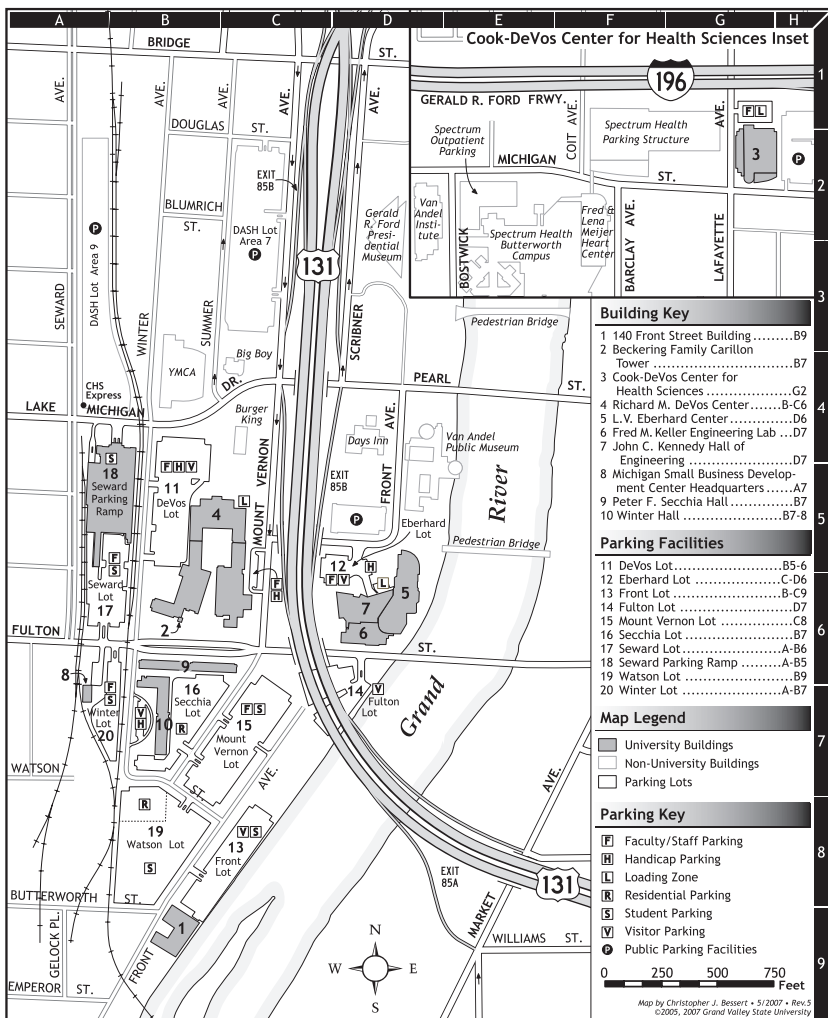
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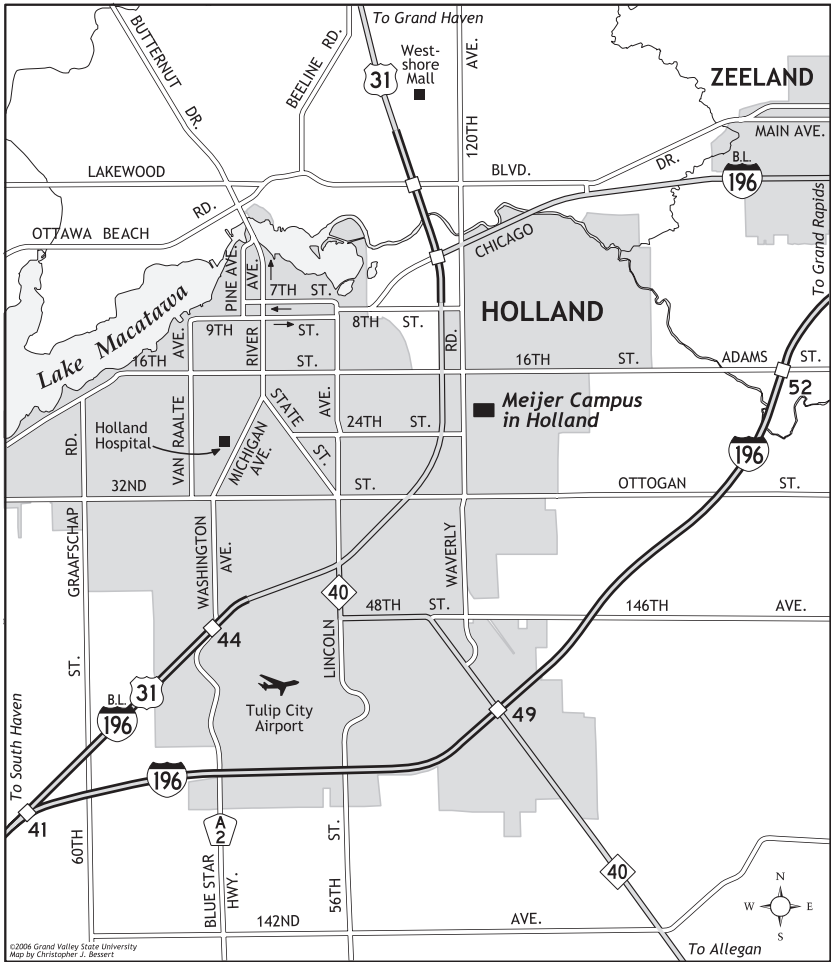
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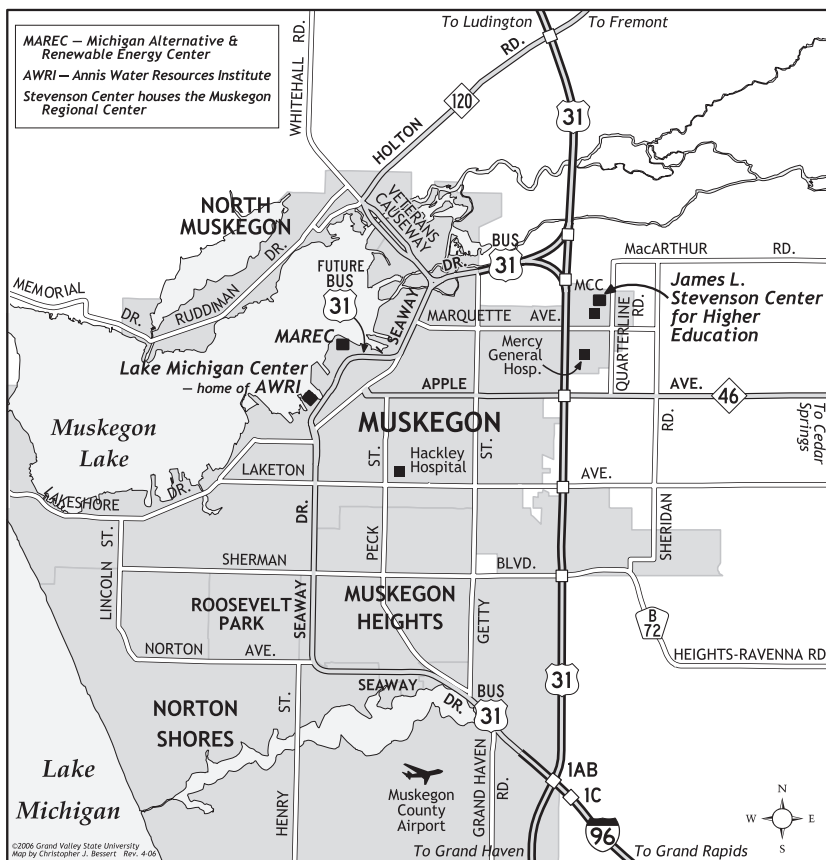
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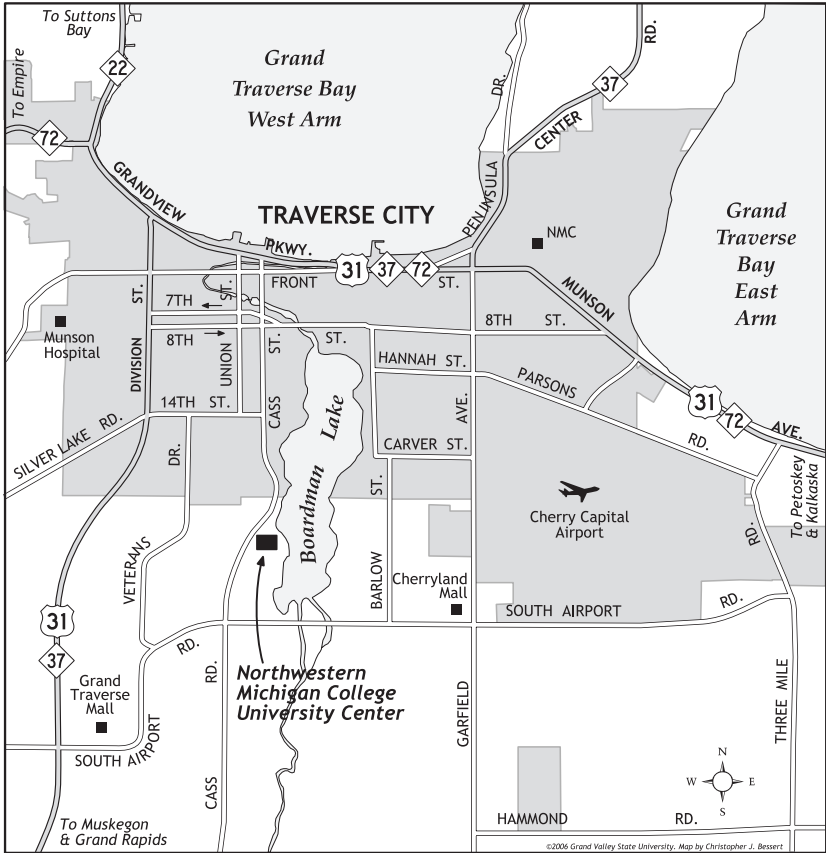


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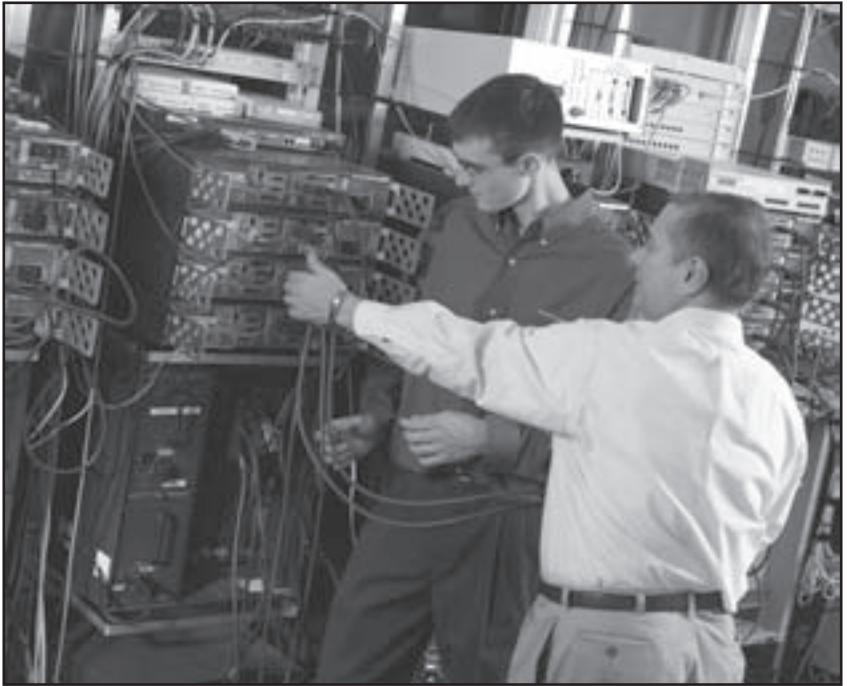
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