

2004

# GVSU Undergraduate and Graduate Catalog, 2004-2005

Grand Valley State University

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

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

# 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

## The University and Its Objectives

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

### Scholarship

Scholarship is an essential component of the university's mission as an institution of higher learning 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 2004–2005 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.

Calendar

## Grand Valley Calendar, 2004—07

### Fall Semester 2004

Convocation	August 27, 2004
Classes Begin	August 30, 2004
Labor Day Recess	September 5–7, 2004
Thanksgiving Day Recess	November 24–28, 2004
Classes End	December 11, 2004
Commencement	December 11, 2004
Examinations	December 13–18, 2004
Semester Ends	December 18, 2004
Grades Due	December 21, 2004

### Winter Semester 2005

Classes Begin	January 10, 2005
Spring Break	March 6—March 13, 2005
Classes End	April 23, 2005
Examinations	April 25–30, 2005
Semester Ends	April 30, 2005
Commencement	April 30, 2005
Grades Due	May 3, 2005

### Spring/Summer Session 2005

Classes Begin first six-week session and 12-week session	May 9, 2005
Memorial Day Recess	May 30, 2005
Classes End first six-week session	June 20, 2005
Examinations first six-week session	June 21–22, 2005
Classes Begin second six-week session	June 27, 2005
Independence Day Recess	July 4, 2005
Classes End second six-week session and 12-week session	August 8, 2005
Examinations second six-week session and 12-week session	August 9–10, 2005
Session Ends	August 10, 2005

### Fall Semester 2005

Convocation	August 26, 2005
Classes Begin	August 29, 2005
Labor Day Recess	September 4–6, 2005
Thanksgiving Day Recess	November 23–27, 2005
Classes End	December 10, 2005
Commencement	December 10, 2005
Examinations	December 12–17, 2005
Semester Ends	December 17, 2005
Grades Due	December 20, 2005

### Winter Semester 2006

Classes Begin	January 9, 2006
Spring Break	March 5–12, 2006
Classes End	April 22, 2006
Examinations	April 24–29, 2006
Semester Ends	April 29, 2006
Commencement	April 29, 2006
Grades Due	May 2, 2006

## Calendar

### Spring/Summer Session 2006

Classes Begin first six-week session and 12-week session	May 8, 2006
Memorial Day Recess	May 29, 2006
Classes End first six-week session	June 19, 2006
Examinations first six-week session	June 20–21, 2006
Classes Begin second six-week session	June 26, 2006
Independence Day Recess	July 4, 2006
Classes End second six-week session and 12-week session	August 4, 2006
Examinations second six-week session and 12-week session	August 7–8, 2006
Session Ends	August 8, 2006

### Fall Semester 2006

Convocation	August 25, 2006
Classes Begin	August 28, 2006
Labor Day Recess	September 3–5, 2006
Thanksgiving Day Recess	November 22–26, 2006
Classes End	December 9, 2006
Commencement	December 9, 2006
Examinations	December 11–16, 2006
Semester Ends	December 16, 2006
Grades Due	December 19, 2006

### Winter Semester 2007

Classes Begin	January 8, 2007
Spring Break	March 4–11, 2007
Classes End	April 21, 2007
Examinations	April 23–28, 2007
Semester Ends	April 28, 2007
Commencement	April 28, 2007
Grades Due	May 1, 2007

### Spring/Summer Session 2007

Classes Begin first six-week session and 12-week session	May 7, 2007
Memorial Day Recess	May 28, 2007
Classes End first six-week session	June 18, 2007
Examinations first six-week session	June 19–20, 2007
Classes Begin second six-week session	June 25, 2007
Independence Day Recess	July 4, 2007
Classes End second six-week session and 12-week session	August 3, 2007
Examinations second six-week session and 12-week session	August 6–7, 2007
Session Ends	August 7, 2007

### Fall Semester 2007

Convocation	August 23, 2007
Classes Begin	August 26, 2007
Labor Day Recess	September 1–3, 2007
Thanksgiving Day Recess	November 27—December 1, 2007
Classes End	December 7, 2007
Commencement	December 7, 2007
Examinations	December 9–14, 2007
Semester Ends	December 14, 2007
Grades Due	December 17, 2007

Note: The calendar for registration is published in the Schedule of Classes each semester.

## Academic Excellence

# Academic Excellence

Grand Valley'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 nonteaching professional staff and Grand Valley's exceptionally fine teaching facilities. The quality of instruction is enhanced further by small class size, individual student advising, and career counseling.

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 collaborate 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 & Mary Pew Faculty Teaching and Learning Center, and the Center for Research and Development. 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 Center for Research and Development focuses on the enhancement of faculty and student research and scholarship. The Faculty scholarship grants program provides faculty with funds to support research and



## Academic Excellence

scholarly projects. The Student Summer Scholars Program provides funding 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 more than 75 major areas.

Grand Valley is proud to have campus chapters of 15 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 Non-profit 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 a distinctly high level of intelligence, motivation, creativity, and academic achievement. The program 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 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 this 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. Participating in student organizations helps Honors students develop leadership skills to complement their academic skills.

Honors Council, 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 council attend faculty meetings, make recommendations to the honors director, and assume responsibility for the Honors Code.

Students are encouraged to engage in extra-curricular activities. These develop leadership skills and appreciation of the richness and diversity of university life.

Honors scholarships: students with exceptional records in high school or junior or community colleges may qualify for a scholarship. Scholarship eligibility criteria for students are detailed in the Financial Aid section of this catalog.



## The 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 1,112-acre campus is formed by deep wooded ravines penetrating a high bluff overlooking 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 river bank.

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 buildings constructed on Grand Valley's campus, in 1963–64, they are characterized by tall, slender concrete arches and native Michigan fieldstone.

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

Lake Superior Hall houses the English and Philosophy Departments, the School of Communications, and the Office of the Assistant Dean of the Arts and Humanities cluster, as well as three English composition computer labs.

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

## The Campus



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 near by 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, periodical abstracts and indexes, 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, newspapers, microforms, and microreaders are on the fourth floor. Throughout the building are reading areas furnished with lounge chairs, individual study carrels, and group work tables.

The library houses more than 634,000 volumes, more than 5,000 periodical subscriptions in print and electronic formats, 23,200 reels of microfilm, 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 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, and the Art Gallery.

**Kirkhof Center** is a multipurpose 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

## The Campus

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, Political Science, Psychology, the Office of the Assistant Dean of the Social Sciences cluster, Women and Gender Studies, Criminal Justice, the K — 12 Curriculum Resource Center 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 for 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, Mr. and Mrs. Peter C. 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 Emajean 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.

Mackinac Hall contains classrooms, faculty offices, and computer labs. The Departments of Hospitality and Tourism Management, Mathematics, Statistics, Computer Science and Information Systems, the College of Education undergraduate division, Academic and Administrative Computing, Information Technology, Charter Schools, and the Robert and Mary Pew Faculty Teaching and Learning



## The Campus

Center are 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 an IBM Enterprise server, 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 and a few select non-academic locations. Thousands of computers located throughout the campus serve both 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 the artist whose stabile, **La Grand Vitesse**, is a Grand Rapids landmark, houses facilities for graphic design, painting, print-making, art education, drawing, ceramics, and two computer graphics labs.

**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, Padnos International Center, Student Employment, Academic 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, six microcomputer labs, and one Macintosh lab. 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 Chemistry, Geology, and Physics Departments, as well as the School of Health Sciences, 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 is located on the upper level, with an entrance from the campus walkway on the east. On the lower level, a food court featuring 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 Minority Affairs and the Multicultural Center 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 newly expanded and renovated 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 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 Edward J. Frey and Arthur C. Hills Living Centers are named for past Grand Valley Board of Trustee members. The Glenn A. Niemeyer Living Center is named after the past-Provost who retired in 2001 after more than 30 years of service to Grand Valley State University; this living center also houses the University Honors College and features two student meeting rooms and faculty offices.

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 new three story apartment buildings that open in the Fall of 2004, accommodating 460 students, are 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.

**The Fieldhouse/Recreation Complex** is located in the north central portion of campus. It includes playing fields, baseball and softball diamonds, tennis courts, and the Lubbers Stadium for football and track. The 210,000-square-foot field-house 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 and 10 different lanes. Other facilities include a 25 yard x 25 meter swimming pool with 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 Gravitron 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 1/8-mile fitness/walking track separates runners from the active sports on the main floor. The

## The Campus

facility was enlarged in 2002 and now provides a free weight room, a spinning room, and additional individual work out areas.

**The Alumni House and Visitors 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](http://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 being used for the operation or maintenance of the course.

**The Richard M. DeVos Center** on the 29-acre Pew Campus in downtown Grand Rapids has 22 classrooms, three distance education classrooms, 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. 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 Services, and the Development Office are housed in the DeVos Center. 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 Campus. An automated retrieval 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, 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. This library houses the Grand Rapids Bar Association's law collection. 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 center. The Library is attached to the Beckering Family Carillon Tower.

**The Eberhard Center**, on the Pew campus, has 40 classrooms and labs, high-technology teleconference and conference facilities, and one interactive television



## The Campus

room. The College of Education, the Padnos College of Engineering and Computing, and Pew Campus Security are housed in the Eberhard Center. Classes are offered in certain graduate and upper-level undergraduate programs.

**The Keller Engineering Laboratories Building**, located adjacent to the Eberhard Center, is a newly constructed, three-story, 27,000 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 electronics, instrumentation and controls, manufacturing processes and control, materials, vibrations, and fluid and thermal systems. The building includes extensive shops for students to implement their designs.

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

**Winter Hall**, the new four-story residence hall at the Pew Campus that opened in the Fall of 2003, accommodating 226 students, is a combination of singles and doubles. The doubles provide individual bedrooms. A bathroom and kitchenette are also provided in each unit. 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 Meijer Public Broadcast Center**, part of the university's Grand Rapids Campus, houses Grand Valley's public television stations, WGVU-TV 35 and WGVK-TV 52, radio stations WGVU-AM 1480, WGVU-FM 88.5, WGVU-AM 850, and WGVU-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 Cook-DeVos Center for Health Sciences**, located on the Pew Grand Rapids Campus, assists future healthcare professionals and researchers from different disciplines to work together creatively and productively. Most higher education academic programs focus on single disciplines, referred to as the silo approach. Grand Valley is among a handful of institutions nationally who are recognizing and integrating the interdisciplinary approach. The new 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, College of Health Professions, the Graduate Program in Cell and Molecular Biology, Frey Learning Center, West Michigan Science and Technology Initiative and the Grand Rapids African American Health Institute.

**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 the courses necessary to fulfill the basic skills and general education requirements, undergraduate degree programs in business administration, criminal justice, language arts/elementary education, nursing, and sociology, as well as graduate degree programs in business administration, education, and public administration.

**The Lake Michigan Center**, located at 740 West Shoreline Drive, on the south shore of Muskegon Lake, is the home for the Robert B. Annis Water Resources Institute.

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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.

### Regional Centers

Through facilities at the Stevenson Center for Higher Education on the campus of Muskegon Community College, the University Center in Traverse City, and on the campus of North Central Michigan in Petoskey, Grand Valley offers graduate and undergraduate programs and provides on-site student services. Admission and registration information, academic advising, bookstore services, tuition payment, library resources, and computer technology are all available in each of the Grand Valley centers.

For further information, please contact our Muskegon office at 221 S. Quarterline Road; telephone: (616) 895-7750. The Traverse City office is located at 2200 Dendrin Drive; telephone (231) 995-1785. The Petoskey office is located on the campus of North Central Michigan College; telephone: (231) 439-6221.

### 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.

We do ask that you first make an appointment, especially for Saturday visits, with the Admissions Office by either calling or writing:

Admissions Office  
300 Student Services Building  
Grand Valley State University  
Allendale, Michigan 49401-9403  
Telephone: (616) 331-2025 or  
Toll free: (800) 748-0246 (for Admissions, Financial Aid, Housing, and Records).  
Email: [go2gvsu@gvsu.edu](mailto:go2gvsu@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)

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 Passport Social Mentoring Program; (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.

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. Students interested in working for ALERT Labs or in internships are invited to call (616) 331-2537 or to email [HarperN@gvsu.edu](mailto:HarperN@gvsu.edu).

### The Bookstore

Textbooks for classes taught at Grand Valley State University are available through University Bookstore at various locations. 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-imprinted clothing and gifts, greeting cards, computer software, school and art supplies, and general reading books. The Allendale store also provides textbooks for students who attend classes at several other Michigan locations, including Muskegon, Petoskey, Sault Ste. Marie, Scottville, and Traverse City. Books may be ordered on the Web at [www.ubs.gvsu.edu](http://www.ubs.gvsu.edu) or by phone at (866) 299-0001.

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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 Pew Grand Rapids Campus may purchase their textbooks at University Bookstore adjacent to the plaza on the first floor of the DeVos Center. Hours are 8 a.m. to 7 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.

Textbooks for classes taught at the Holland Meijer campus are available at that facility during the week prior to the start of classes and the first two weeks of the semester. After that time, textbooks are returned to the bookstore on the Allendale campus. For book availability, contact the book information desk at University Bookstore-Allendale. Telephone: (616) 331-2458.

### Shuttle Service

Transportation between the Pew Grand Rapids Campus and the Allendale Campus is easy and convenient with Grand Valley's *Campus Connector*. This shuttle service runs Monday through Saturday during the fall and winter semesters and Monday through Friday during the spring/summer semesters. The *Campus Connector* has round trips from the Pew Campus to the Kirkhof Center on the Allendale Campus with stops along Lake Michigan Drive and at Mackinac Hall. Campus Connector buses run every 15 minutes between 7 a.m. and 6:30 p.m., and then every 30 minutes until the last bus leaves Allendale at 11:20 p.m. The spring/summer schedule is limited. In addition, the CHS Express shuttle operates every 20 minutes between the main Campus Connector stop on the Pew Campus and the Cook-DeVos Center for Health Sciences (CHS). Parking for all students attending class at the Center for Health Sciences will be located in Grand Valley's new parking ramp at the corner of Lake Michigan Drive and Seward Avenue on the Pew Campus. Schedules are subject to change, so please review current schedules at [www.gvsu.edu](http://www.gvsu.edu). Printed schedules are available at the Eberhard Center Security Desk on the Pew Campus, the Office of Student Life, the Kirkhof Center Information Desk and the Student Assistant Centers (cashiers' windows) in Allendale, and at the DeVos Center on the Pew Campus. Questions about the *Campus Connector* and the CHS Express shuttle should be directed to the Pew Campus Operations Office at (616) 331-6700.

### 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 Center

The Grand Valley Children's 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 grow academically, socially, psychologically, and physically. Fees range from \$2.80 per hour to \$103.60 for full time. Pell Grant recipients receive a reduced rate ranging from \$2.00 to \$2.60 per hour. Hours are from 7 a.m. to 9 p.m., Monday through Thursday, and 7 a.m. to 6 p.m. on Friday during the fall/winter semester. Spring/summer semester hours are from 7 a.m.

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to 6 p.m. Monday through Friday. Telephone: (616) 895-4146 or toll free (866) 814-4146.

### Wellness and Recreation Services

The Office of Wellness and Recreation Services is located in the Recreation Center and encourages the well-being of a diverse university community through structured fitness activities, wellness education and services, and recreational programming. Programs include Campus Wellness, Intramural Sports, and Laker Aerobics.

Campus Wellness includes the Wellness Center, which is located on the lower level of the Recreation Center adjacent to the basketball courts. The center provides a variety of fitness and wellness services to Grand Valley students and employees. Services include health risk appraisals, health screenings, body composition analyses, fitness appraisals, personal exercise programs, equipment orientations, personal training, nutritional counseling, and massage therapy. Many of these services are free or at a reduced cost to students. In addition, Campus Wellness sponsors various campus wide programs such as fitness challenges, "how to" leisure recreation clinics, health fairs and RAD self-defense training. For more information and/or student employment opportunities, contact the Wellness Center at (616) 331-3659 or go online at [www.gvsu.edu/wellness](http://www.gvsu.edu/wellness).

The Intramural Sports program offers men's, women's and co-recreational divisions for competitive and recreational skill levels in over 25 sports activities, including flag football, basketball, volleyball, soccer, roller and floor hockey, golf, bowling, billiards, softball, tennis, and racquetball. These activities may be individual or team oriented. For more information and/or student employment opportunities, contact the Intramural Office at (616) 331-2600 or go online at [www.gvsu.edu/wellness](http://www.gvsu.edu/wellness).

Laker Aerobics provides a variety of group exercise formats with over 40 classes scheduled throughout the week. Classes include Assets, Cardio Kickboxing, Killer Core, Pilates, Spinning(R)<sup>®</sup>, Step Aerobics, Water Aerobics, and Yoga. For more information and/or student employment opportunities, go online at [www.gvsu.edu/wellness](http://www.gvsu.edu/wellness).

### Health Services

The Campus Health Center is located in room 163 Fieldhouse on the Allendale Campus. The purpose of the Health Center is to provide urgent health care for



## Campus Services

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.

Grand Valley 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 8,200 parking spaces are available in eleven lots on the Allendale Campus and 3,200 spaces in eight lots on the Pew Grand Rapids Campus for students who wish to drive their cars to Grand Valley. Freshmen, as well as upper class students are welcome to have their vehicles on campus. Parking permits for residents and commuters are required on both the Allendale and Pew campuses. Permits are available for purchase online through the Department of Public Safety Services.

### **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 [www4.gvsu.edu/fsp/publicsafety/Liaison/liaison.htm](http://www4.gvsu.edu/fsp/publicsafety/Liaison/liaison.htm)

### **Communications**

WGVU-TV 35/WGVU-DT 11 and WGVK-TV 52/WGVK-DT 5, affiliated with the Public Broadcasting Service, present a variety of informative and entertaining

## Student Life

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 Pew campus.

## Student Life

Grand Valley 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, religious groups, social organizations, fraternities, and sororities, professional associations, special interest groups, leadership groups, and community service organizations.

### 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.

Alpha Kappa Delta (sociology fraternity)	Biology Club
Alpha Phi Omega (service fraternity)	Chemistry Club
Alpha Phi Sigma (criminal justice)	Chinese Language and Culture
American Advertising Federation	Collegiate Chapter of the National
American Humanics (non-profit leadership)	Association for Music
American Marketing Association	Collegiate Entrepreneurs
American Society of Mechanical Engineers	Computer Science & Information Systems
American Society of Safety Engineers	Debate Team
Anthropology Club	Delta Sigma Pi (business)
Art Education Student Chapter	Forensics Team
Athletic Training/Sports Medicine	Geology Club
Bachelor of Social Work	German Club
Beta Alpha Psi	Investment Club

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Latino Student Business Association	Public Relations Student Society of America (PRSSA)
Law Society	Radiologic and Imaging Sciences
Linux Users' Group	Richard Paul Clodfelder Student Society
Mathematics and Statistics Club	Robotics Team
Mini Baja Club	Russian Club
Mu Phi Epsilon	Sigma Tau Delta (English)
National Residence Hall Honorary	Social Work Advocacy Network (SWAN)
National Society of Black Engineers	Society for Human Resource Management
Omicron Delta Kappa	Society for the Advancement of Management
Phi Alpha Theta (history)	Society of Automotive Engineers
Philosophy Club	Sociology Club
Physical Therapy Class 2005, 2006	Student Chapter of National Science Teachers Association
Physics & Astronomy Club	Student Chapter Phi Delta Kappa
Pre-Chiropractic Club	Student Council for Exceptional Children
Pre-Dental Club	Student Nurses
Pre-Med Club	Student Occupational Therapy
Pre-Physical Therapy Club	Therapeutic Recreation Club
Pre-Physician Assistants Club	
Pre-Veterinarian Club	
Psi Chi (psychology)	

### 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.

Arab Cultural	International Student Association (ISA)
Asian Student Union	Latino Student Union
Black Student Union	Native American Student Association
Ethnic Festival Committee	

### Greek Life

Greek Life provides students with the opportunity to increase their leadership, academic, and social skills in an atmosphere of friendship and support. Fraternities and sororities promote academic excellence through scholarship programs, sponsor and participate in community and national service projects, and encourage personal development through officer positions and social contacts. (616) 331-3963

Governing Councils	Fraternities	Sororities
Interfraternity Council	Alpha Phi Alpha	Alpha Omicron Pi
Independent Greek Council	Alpha Sigma Phi	Alpha Sigma Alpha
National Pan-Hellenic Council	Delta Sigma Phi	Alpha Sigma Tau
Order of Omega	Lambda Chi Alpha	Delta Sigma Theta
Panhellenic Council	Phi Beta Sigma	Delta Zeta
Presidents' Council	Sigma Lambda Beta	Sigma Kappa
	Sigma Phi Epsilon	Sigma Lambda Gamma
	Sigma Pi	Zeta Phi Beta
	Theta Chi	

### Media/Performing Arts

Student organizations having involvement in radio, television, and newspaper, as well as, students involved in artistic performance activities are included in the



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following student organizations. Additional opportunities for music and dance are available through the Music Department.

Dance Troupe	Student Technicians and Actors Guild for Entertainment (S.T.A.G.E.)
Lantern	Voices of GVSU (Gospel Choir)
Renaissance Fair	WCKS Student Run Radio

## Religious Groups

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

Alpha Omega Co-ed Christian Ministries	His House Christian Fellowship
Bible Talk	Inter-Varsity Christian Fellowship
Campus Crusade for Christ	Muslim Students' Association
Campus Ministry	United Methodist Student Fellowship
Catholics Aspiring to Reach Others	Ways of the Earth
Chi Alpha Christian Fellowship	Young Life
Christianity on Campus	
Glory Phi God Campus Ministry	
Hillel	

## 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.

Alternative Spring Break	Out 'N' About (GLBT)
Animal Care Takers	P.A.L.S.
Best Buddies	Rotoract
Cancer Awareness Resistance Education	Seniors Volunteer GVSU
Circle K International Disabilities	Soil & Water Conservation
Eyes Wide Open	Student Environmental Coalition
F.O.R.G.E.	Students Against Sweatshops
Feminists for Life	Students for a Free Tibet
Habitat for Humanity	Students for a Peaceful Existence
Health & AIDS	Students for Life
Hunger & Homelessness	Voices for Healthy Choices
La Pulperia Nica	Volunteer GVSU!
Literacy	Women's Issues Volunteer Corp.

## 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.

After School Special	Otaku No Anime
Alternative Realities	Passport Student Organization
College Democrats	Photographers Guild
College Republicans	Positive Influences
Dance Troupe	Scrapbooking Club
Future Alumni Association	Syllabes
Future Police & Educators Association	Wheel, Run 5K Challenge
Hardcore Music Club	You Beautiful Black Woman
Harry Potter Club	
Organization for the Advancement of Disabled Students	

**Sport Clubs**

Recreational sport clubs provide opportunities for competition with other schools through individual and team events. Other organizations provide personal fitness opportunities and school spirit support.

Backpacking Club	Officials' Club
Bowling Club	Rodeo Team
Cycling & Multi Sport	Rowing Club/Crew Team
Equestrian Club	Rugby Club Men's and Women's
Fencing Team	Shooting Team
Frisbee Club	Ski Team
Go Club	Soccer Men's & Women's
Hockey Club	Synchronized Skating Team
Kung-Fu Club	Vertical Ventures (rock climbing)
Lacrosse Men's and Women's	Water Polo Men's and Women's
Laker Dance Team	Volleyball Men's & Women's
Paintball Club	Wrestling Club

**Student Government**

Students residing in the living centers can become involved in their governance through the following organizations:

Copeland Community Council	Laker Village North and South/Calder Community Council
DeVos, Pew, Pickard Community Council	Niemeyer Community Council
Frey, Hills Community Council	North A & B Community Council
Grand Valley Apartments Community Council	Ravine Community Council
Hoobler/Johnson/Ott/Weed Community Council	Residence Housing Association
Kirkpatrick/Seidman/Stafford/Swanson Community Council	Robinson Community Council
Kistler Community Council	Secchia Hall Community Council
	West A & B Community Council
	Winter Hall Community Council

**Spotlight - Campus Life Programming**

Spotlight Productions plans and presents a wide variety of events. Students choose entertainers and work together to produce events. The organization is open to all students including freshmen and new students. These include comedy, lecture, films, traditional events, music, and guests. Contact (616) 331-2806 for more information.

**Cultural Board**

The Cultural Board is designed to assist students of color from a variety of ethnic backgrounds in developing their leadership skills and strengthening their cultural and political knowledge base. The board offers a variety of experiences including educational workshops and forums, facilitation, community service, and professional development through conferences, training, etc. The Cultural Board is open to all students interested in issues specific to culture and ethnicity and promotes an environment that allows for exchange of ideas and continual growth in services. Contact (616) 331-3965 for more information.

**Student Senate**

The Student Senate is an elected body of 40 students. The Senate conveys student opinion to the Grand Valley Administration and the Board of Trustees in matters of

## Student Life

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, Student Resources, Public Relations, Community Affairs, Education Development, and Political Action Committees. Contact (616) 331-2333 for more information.

### Lanthorn

The *Lanthorn* is an award-winning 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.

### 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.

## 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.

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, DVD rentals, game room & giant movie theater room.

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

Students are encouraged to participate in student organizations, attend campus events, and become involved in leadership and service projects. The Office of

## Student Life

Student Life annually registers over 150 student organizations each year. Explore your opportunities for involvement in campus life and create a plan to **MAXimize** your college experience.

### Volunteer GVSU

Volunteer GVSU is a service-learning organization that encourages students, faculty, and staff to engage themselves in their community in order to learn about the economic, social, and political issues facing society. Volunteer GVSU provides support and resources to all student organizations with the primary mission of service or advocacy. Grand Valley students are encouraged to become involved in a community service activity that will enhance their understanding of civic responsibility. The Service and Advocacy resource area is located in the Student Organization Center on the lower level of the Kirkhof Center. Volunteer opportunities, sponsored by our service and advocacy student organizations, are available in several areas including:

Alternative Spring Break	Health and AIDS	Philanthropic Fundraising
Community Outreach Week	Hunger and Homelessness	Senior Citizens
Disabilities	International Human Rights	Substance Abuse
Domestic Violence	Literacy	Tutoring
Environment	Make A Difference Day	Women's Issues
Habitat for Humanity	Mentoring	Youth

### Leadership GVSU Initiative

The Office of Student Life in collaboration with several other areas of the university provides leadership training, development, and experiences for students and student organizations. This initiative attempts to assist students in learning and applying new leadership techniques in a social and engaging environment. The mission of Leadership GVSU is to provide the students of Grand Valley State University with training, education, and experiences that encourage their growth as leaders of integrity and honor who promote social change and civic engagement within their professions and communities.

Our leadership philosophy is based on the following premises:

- Leadership is a relationship, not the property of an individual
- Leadership is a process not a position
- Leadership is about change
- Leadership can be learned
- Leadership is inclusive
- Leadership is collaborative
- Leadership is comprised of relationships
- Leadership is oriented toward social change

Developing strong leadership skills has lifelong benefits for students including:

- Improved academics
- Better marketability in the job market
- Stronger business and personal relationships
- More opportunities and experiences
- A sense of accomplishment
- The ability to help others
- Making a difference

Students can get involved in the Leadership GVSU Initiative by participating in any or all of the following programs:

## Student Life

**Leadership Odyssey** is a one-year experiential program that assists emerging leaders to create and enhance a personal philosophy of leadership while developing basic leadership skills. All first year students are encouraged to be a part of the Leadership Odyssey, particularly those interested in future leadership roles. The program teaches leadership through multimedia and interactive activities as well as small group discussion led by experienced student leaders.

**Leadership Journey** is for experienced leaders who desire to increase their impact as a leader. The program teaches advanced skills and focuses on the Social Change Leadership Model. Through activities and discussion with advanced student leaders, participants learn how they can help and create positive change for the groups they lead, their members, and their community. The Leadership Journey is an eight week program offered each semester.

The **Excellence in Leadership** speaker series brings local and regional leaders, including Grand Valley alumni, to campus to speak on their leadership experiences and cover a wide range of skills such as improving motivation, developing visions and missions, delegating, running effective meetings, or recruitment. The program provides the perfect opportunity for new, emerging, or advanced leaders to develop new skills. Students attending ten sessions over the year and completing four hours of service are recognized for their involvement.

**Leadership Summit** is an annual conference that promotes civic engagement as well as leadership renewal and development for emerging and experienced leaders of diverse backgrounds both from Grand Valley and from other universities across the Midwest.

**Leadership in Progress** or **Grantmakers** is for the experienced leader interested in non-profit or servant leadership. The program focuses on teaching team leadership skills and the principles of servant leadership through the activities such as developing grants that fund community agencies and community service projects.

**Venderbush Lecture Series** recognizes Kenneth R. Venderbush who served as Vice President of Student Affairs at Grand Valley State University from 1969–1973. Since 1983, the University has bestowed its highest student leadership award, the Kenneth R. Venderbush Leadership Award, to a graduating senior. The lecture features a speaker from the community, or a past Grand Valley Venderbush Award recipient, sharing their experiences and inspirations on the topic of leadership.

### Campus Life Night

Campus Life Night, held at the beginning of fall semester, provides students with the opportunity to find out about the opportunities for involvement on campus. Student organizations and campus departments set up displays and provide information about their programs.

### Traditions and Festivals

Student organizations and special committees work with professional staff in sponsoring and planning such events as Family Weekend, Laker Bash, Homecoming, Sibs n Kids Weekend, Big Ol' Bash, Black History Month, Make a Difference Day, Peace Week, Relay for Life, Renaissance Festival, Seidman Business Week, and Presidents' Ball.

Student organizations and special committees work with professional staff to sponsor and plan cultural events such as:

## Student Life

**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.

**Pow Wow** — An annual celebration of the Native American culture. The Native American Student Association with the leadership and permission of the Ottawa Tribal Counsel shares an entire day of ceremony and trade with the campus and the general public.

**Soulfest** — An annual event honoring the history of African people in the United States. 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.

**Asian Festival** — An annual celebration honoring the Asian New Year. Each February the Asian Student Union sponsors a variety of events, the most celebrated being the festival. 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.

**Hispanic Heritage Month** — Each fall the Latino Student Union celebrates Latino history and culture with a variety of events. Latino students educate us on the diversity within the culture and offer campus-wide celebrations featuring traditional foods and presenting and teaching music and dance.

### **Student Promotions**

The University Promotions Office is a student-run advertising and public relations department of the Office of Student Life, which assists student organizations. Students produce various promotional pieces to publicize upcoming campus activities.

## **Campus Events Information**

### **Information Desk**

Located in the main lobby of the Kirkhof Center, the 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 Information Desk staff at (616) 331-2020.

### **Student Organization Center**

Located on the lower level of the Kirkhof Center, the Student Organization Center provides an exciting environment for campus student organizations to interact and conduct their daily business. The Student Organization Center features interactive spaces for the organizations to collaborate with each other. Additional resources include: computers, telephones, business center, resource information, library, meeting spaces and interactive space for organizations to work together. Over 150 student organizations are supported by this center.

### **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

## Student Services

stay current on the many events and programs scheduled. Check out the campus events calendar on the Internet at: [events.gvsu.edu](http://events.gvsu.edu)

For additional information on campus events, contact the Office of Student Life at (616) 331-2345 and athletic event information (616) 331-3800.

### 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, eleven times. Grand Valley's men's teams have won conference championships in football twelve times; basketball, seven; baseball, nine; wrestling, seven; tennis, one; golf, one; indoor track, five; outdoor track, three; and cross country, three. In women's sports, Grand Valley has won championships in basketball six times; cross country, five; softball, eleven; tennis, two; volleyball, nine; indoor track, five; outdoor track, five; and golf, three.

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 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.

## Student Services

### Mediation

Facilitative mediation is a nonjudicial, 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

### Arts & Humanities Teacher Certification Advising Center

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

The Center provides services and resources to: Undergraduate A&H Education students who have questions regarding the application process and admission into 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 for teacher certification.

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

### Seidman Undergraduate Student Services

For more than a decade, Seidman Undergraduate Student Services' mission has been "facilitating business students' successful progress through graduation." This



## **Student Services**

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 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 pre-requisites. 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.

### **Math and Science Student Support**

Math and Science Student Support (MS<sup>3</sup>) is an academic assistance and enrichment program offered in the Learning Center, 377 Padnos Hall. 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, health science, 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 MS<sup>3</sup> 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. 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 choices. The Center provides individual counseling sessions in which personal

## Student Services

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 that help students plan for the future by addressing topics such as study skill techniques, planning for graduate school, and job interviewing skills. Current career information and job trends data are included in both individual career counseling sessions and career seminars through the use of DISCOVER, a computerized program. The Counseling and Career Development Center and Library are located in 204 Student Services Building. Telephone: (616) 331-3266.

### Counseling

The Counseling Center staff provides students with counseling on personal issues such as relationships, anxiety, depression, self-awareness, and substance abuse. 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 and Thursdays 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 in preparing resumes and credentials, in developing interviewing skills and job search techniques. 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 seven annual career fairs: CareerFest (fall event for all majors and the police academy), West Michigan Career Connections (business and industry), Health Career Day, Summer Job Fair, Careers in Communication Day, Career Expo (nonprofit, social services, and government) and Teacher Search. 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 125B DeVos Center, (616) 331-6708, with office hours 8 a.m. to 6 p.m., Monday through Wednesday and 8 a.m. to 5 p.m. on Friday. Services are also available at the Eberhard Center and Cook-DeVos Health Science Building 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](http://www.gvsu.edu/careers).

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### Employment Statistics for 2003–2004

The employment rate for Grand Valley graduates continues to be very high. Students can enhance their employment success by improving their written and verbal communication skills, taking supplemental computer science classes, and completing at least one internship.

Recent employment statistics—those persons employed in a job directly related to their majors—are listed for various majors at Grand Valley.

Major	Percent Employed Directly
Accounting (Graduate)	100%
Communications (Graduate)	100%
Computer Information Systems (Graduate)	100%
Criminal Justice (Graduate)	100%
Engineering	95%
Engineering (Graduate)	100%
General Education (Graduate)	95%
General Education: CSAL (Graduate)	80%
Health Science (Graduate)	100%
International Business	88%
Journalism	83%
Legal Studies	86%
Nursing	100%
Nursing (Graduate)	100%
Occupational Therapy	89%
Physical Therapy	95%
Physician Assistant	94%
Reading (Graduate)	86%
Social Work (Graduate)	83%
Spanish	88%
Special Education	95%
Special Education (Graduate)	97%
Statistics	100%
Taxation (Graduate)	100%

### Cooperative Education and Internships

**Academic Requirements and Credits.** Each academic department determines the academic requirements for internships and cooperative education experiences. Students 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. The 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

## Student Services

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. 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. 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](http://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 101 Student Services Building. Telephone: (616) 331-3238.

### Multicultural Affairs

The Office of Multicultural Affairs (OMA) fosters within the university community a respect for and an appreciation of the history, tradition, and culture of different ethnic groups, and to empower the ethnic minority students to be active participants in Grand Valley's community. To achieve this, OMA sponsors or co-sponsors programs with student organizations, various university departments, and the community to promote academic, social, and cultural activities for students. OMA's staff members serve as a university resource for students, faculty, and staff on issues of diversity and multiculturalism. OMA administers the four multicultural cohort programs: Multicultural Business Education Cohort (MBEC), Multicultural Higher Education Cohort (MHEC), Multicultural Science Education Cohort (MSEC) and Multicultural Teaching Education Cohort (MTEC). OMA also oversees the King/Chavez/Parks programs (future faculty, college day, and visiting professors), and the Wade H. McCree Incentive Scholarship Program. OMA is located in 130 Commons. Telephone: (616) 331-2177, email: [oma@gvsu.edu](mailto:oma@gvsu.edu), Web site: [www.gvsu.edu/oma](http://www.gvsu.edu/oma).

### Pew Campus Student Services

Pew Campus Student Services coordinates activities and provides a full-range of services for students attending Grand Rapids campus locations. The office serves as a hub for support services and as a gateway to information and resources. Moreover, the department seeks to identify student needs to find solutions that enhance learning while providing opportunities for involvement. The office, located in 101B DeVos Center, serves to promote university and community activities and other events of interest to Grand Rapids students through "The

## Student Services

Downtowner,” the online newsletter available at [www.gvsu.edu/pewcampus](http://www.gvsu.edu/pewcampus). For information, please call (616) 331-7220.

Within Pew Campus Student Services, students can obtain assistance from several departments including Admissions, Career Services, Counseling & Career Development, and Financial Aid. Additionally, academic advising and other services are provided to business students through the Seidman College of Business Undergraduate Student Services office, while the Academic Resources and Special Programs office offers similar services for undeclared majors and to students participating in specific academic programs.

The Academic Resources department also provides tutoring, writing, and testing services downtown, including the WRT 305 assessment essay and accommodated testing for students with disabilities through the Office of Academic Support. For information regarding downtown tutoring services and hours, please call (616) 331-6407.

Students can also register for College Level Examination Program (CLEP) tests, administered exclusively at the University’s DeVos Center, in downtown Grand Rapids. CLEP registration forms are available for download from the CLEP Web site at <http://www.collegeboard.com/student/testing/clep/reg.html> or from the Academic Resources Center, located in 200 Student Services Building on the Allendale Campus. For information regarding CLEP testing or to request a WRT 305 assessment essay, please 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 Resident 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, and River Landing at the Kirkhof Center, depending on

## Student Services

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 this convenience store 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 Resident 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.

In addition, students can choose the apartments located on the 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 through its Off-Campus Referral Service in the Housing and Residence Life Office, 103 Student Services Building. 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.

## Student Services



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.

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 women throughout the University. The vision for the Women's Center is to *create a Grand Valley community that promotes and supports the present and future success of women students*. The center creates an environment where women are encouraged to engage in dialogue, increase self-awareness, connect with resources, apply skills, conduct research, and, in short, empower themselves to succeed. Regardless of gender, it also serves as a place of education and involvement for anyone seeking to further their knowledge and/or advocate on the status of women. The Women's Center is committed to creating an environment in which the diversity of women 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 utilize the resource library. The Women's Center is located in 161 Kirkhof Center. Telephone: (616) 331-2748, Web site: [www.gvsu.edu/women\\_cen](http://www.gvsu.edu/women_cen), email: [womenctr@gvsu.edu](mailto: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 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.

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 4<sup>th</sup> 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



## Admission to Grand Valley

interview prospective students. Appointments for interviews should be arranged in advance by calling the Admissions Office at (616) 331-2025 or toll free (800) 748-0246, or by writing

Admissions Office  
300 Student Services Building  
Grand Valley State University  
Allendale, MI 49401-9403

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 Academic 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 this catalog.

### **Transfers from Michigan Community Colleges**

Grand Valley State University is a member of the Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO), which has formulated an agreement between two-year and four-year institutions.

Students who transfer to Grand Valley with the MACRAO approved associate of arts or science degree from a Michigan public community college have satisfied the Foundation Categories of the General Education Program, the Writing 150 Basic Skills requirement, and one Supplemental Writing Skills (SWS) course. Transfer students with a MACRAO are required to complete the following Basic Skills requirements: demonstrate proficiency in Mathematics (MTH 110); fulfill the junior-level Writing requirement (a satisfactory score on the junior-level assessment essay or a grade of C or better in Writing 305); one SWS course in their major or division. In addition, transfer students with a MACRAO must also fulfill the following general education requirements: the two-course Cultural Emphasis requirement; and one three-course theme. For specific course information, please refer to the General Education section of this 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 this catalog for specific admissions requirements to Grand Valley State University.

## Admission to Grand Valley

### 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 is 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 program 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.

## Admission to Grand Valley

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 this catalog.

### International Students

Grand Valley welcomes international students wishing to study at our campus. In 2003–2004, students from 45 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), or the International English Language Testing System (IELTS)
- 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.

International student applicants should be able to communicate well in English. The following minimum scores are expected: TOEFL 550, or computer-based TOEFL 213, CELT 85, or IELTS 6.5 for undergraduate students, 7.0 for graduate students.

Applicants must demonstrate financial independence before they can be admitted. Generally, financial aid is not available during an international student's first year of enrollment at Grand Valley. 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 of June 1 for fall admission.

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 this 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.

## Admission to Grand Valley

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

## Appeal of Admissions Decisions—Undergraduate

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

## Graduate Admission

The graduate programs at Grand Valley State University are designed for students who, 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.

All graduate students at Grand Valley State University will be classified as either degree-seeking or nondegree-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 master's degree program.

### Graduate Nondegree-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 nondegree-seeking status. A maximum of six to twelve semester credits may be earned at Grand Valley State University as a nondegree-seeking

## Admission to Grand Valley

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 nondegree to degree-seeking.

### Changing Status from Nondegree 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.

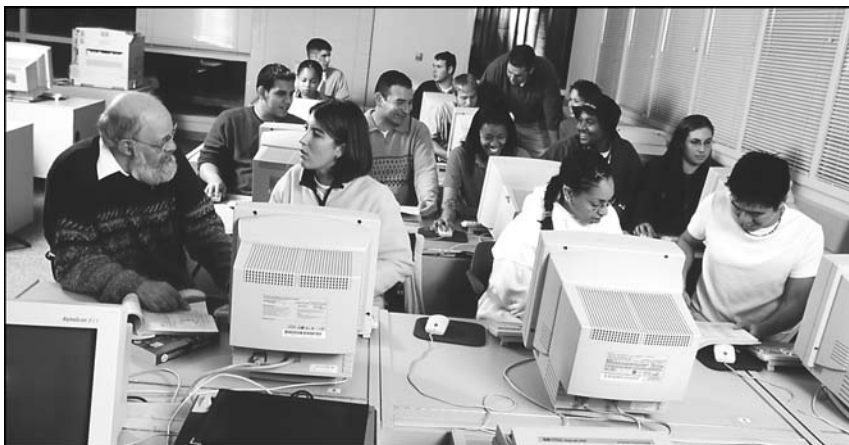
### Appeal of Admissions Decisions—Graduate

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.
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.



## Admission to Grand Valley

### International Students

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, computer-based TOEFL 213, or CELT 85. Financial independence must be demonstrated prior to admission. Applicants must be aware that financial aid dollars are *extremely* limited for international students. 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 June 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 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 \$2,824 per semester. Tuition is \$246 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 \$2,927 per semester. Tuition is \$255 per credit hour for fewer than 12 credits and for each credit over 16. Tuition for graduate resident students is \$270 per credit hour for graduate courses, \$255 for undergraduate courses.

For lower division (0–54 credits) nonresident undergraduate students, tuition is \$6,108 total per semester for anywhere from 12 to 16 credits and \$520 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 \$6,314 total per semester for anywhere from 12 to 16 credits and \$537 per credit for fewer than 12 credits and for each credit over 16. Nonresident graduate tuition is \$586 per credit hour for graduate courses, \$537 for undergraduate courses.

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.

\*Tuition rates and fees are set by the Board of Trustees. The rates listed here are for the 2003–2004 academic year.



## Costs and Financial Aid

### Parking

Starting Fall 2004, students wishing to park on either the Allendale or Pew Campus, must purchase a parking permit. Permits can be ordered electronically starting July 15, 2004 at [www.gvsu.edu/publicsafety](http://www.gvsu.edu/publicsafety). The permit costs \$95/semester for full-time students and \$50/semester for part time students. 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 July 15, 2004 or after will be issued a permit.

### Residency

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

### Fees

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

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

### Changes in Tuition and Fees

Rates of tuition and fees are those in effect at the time of publication of this 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:



## Costs and Financial Aid

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

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

Appeals because of extraordinary circumstances are reviewed by the Tuition Refund Appeals Committee twice each semester. Appeal application forms are available at the Registrar's Office and must be filed with that office. Please note that appeals will not be considered unless the class under appeal has been dropped officially with the registrar.

### Financial Aid for Undergraduate Students

At Grand Valley State University more than 70 percent of full-time students receive some kind of financial aid. The average award is approximately \$6,597. Thus, for many students the actual cost of attending Grand Valley as a resident student is substantially less than the total cost of tuition, room, and board.

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

## Costs and Financial Aid

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 State University as new, full-time degree-seeking freshmen during the fall of 1996 was 48.3 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](http://www.fafsa.ed.gov) to file the FAFSA online. Paper forms are also available from your local high school 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 GVSU priority deadline of February 15. Limited funds are available to students who file after February 15 (see application dates in the next section). You must be a degree-seeking student to be eligible to receive financial assistance. Most aid is awarded to students attending at least half time (six or more credit hours for undergraduate students and 5 or more credit hours for graduates), although students attending less than half time may be considered for the Federal Pell Grant Program. Continuing education students (part-time, nondegree-seeking students) are not eligible for federal financial aid; however, they may apply for and receive institutional tuition loans and some types of alternative loan programs. 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 should indicate that on your application for funds.

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 January 1 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

## Costs and Financial Aid

*www.fafsa.ed.gov* is the fastest and most accurate means of filing. You may also request a paper form from Grand Valley or your high school guidance office. You should list Grand Valley among your choice of schools. Our federal school code is 002268. **The Free Application for Federal Student Aid (FAFSA) is the only application for aid Grand Valley requires.**

3. In some cases you and your parent will be required to submit Federal 1040 forms to verify the information submitted on your application.

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

The FAO encourages you to apply before the due dates to receive full consideration for all types of financial aid programs. Late awards are based on the availability of funds.

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

**February 1:** Freshman and community college transfer applicants must apply for admission to be considered for the major scholarship programs offered by Grand Valley.

**February 15:** Entering freshman, graduate, 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.

**February 15:** Renewal aid applicants and returning upperclass and graduate students: submit the Free Application for Federal Student Aid (FAFSA).

**April 15:** Entering freshman, graduate, and transfer students receive notification of their financial aid award.

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

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

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

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

**December 1:** Students receive notification of their financial aid award.

If you plan to enroll beginning with the spring/summer session, the following dates are important:

**February 15:** Entering freshman, graduate, transfer, renewal aid applicants, and upperclass students: submit the Free Application for Federal Student Aid (FAFSA).

**February 15:** 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* under the section "Spring/Summer information."

**May 1:** Students receive notification of their financial aid award.

## Costs and Financial Aid

### 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)	\$5458
Books and supplies	800
Personal and miscellaneous	740
Room and board*	5768
Transportation	1200
Total	\$13,966

#### Commuting Students (Michigan resident)

Tuition and fees*	\$5458
Books and supplies	800
Personal and miscellaneous	1220
Food (lunches)	620
Transportation	1800
Total	\$9898

#### Out-of-State Students

Out-of-state tuition\* for lower division (0–54 credits) students is \$6,108 per semester for 12–16 credit hours, \$520 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 \$6,314 per semester for 12 to 16 credit hours, \$537 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 the above 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 your family or other responsibilities do not allow full-time attendance, you may be considered for financial aid if you are enrolled part time (at least six credit hours for undergraduate students and five credit hours for graduate students).

\*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 2004–2005 academic year.

## Costs and Financial Aid

As a part-time student, you should follow the normal application procedures. Undergraduate students taking fewer than six 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 five credit hours at Grand Valley:

1. Federal College Work-Study Program: The majority of campus jobs are funded under this program (see following program description).
2. Student Loans: Federal Direct Student Loans of up to \$9,250 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, 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 Padnos International Center regarding available program options and are encouraged to apply early for financial aid.

### Financial Aid Programs

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

## Costs and Financial Aid

### Programs Not Based on Need

#### Grants and Scholarships

Scholarship eligibility criteria indicated below are for students entering in the 2004–2005 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 February 1 for the following fall semester. Complete applications consist of an application for admission, official transcripts, results of the ACT or SAT test, and a \$30 application fee. All relevant information including ACT scores must be received by the February 1 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.



## Costs and Financial Aid

- 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, 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 additional years provided you continue to maintain a 3.5 or better GPA and complete 25 credits after your first year, 55 credits after your second year, and 85 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 1300 for nonresidents, 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 additional years provided you maintain a 3.5 or better GPA and complete 25 credit hours after your first year, 55 credit hours after your second year, and 85 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 February 1 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 and an ACT composite score of 26.  
  
This scholarship is renewable for three additional years (eight semesters total) provided you maintain a 3.25 or better GPA and complete 25 credits after your first year, 55 credits after your second year, and 85 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. This amount is currently approximately \$5,420. Students are also invited to visit Grand Valley to interview for up to an additional \$1,200. All admitted freshman students will be considered for this scholarship. Students who receive this award have GPAs of 3.5 and ACT composite scores of 26 or SAT scores of 1150.  
  
This scholarship is renewable for three additional years (eight semesters total) provided you maintain a 3.25 or better GPA and complete 25 credits after your first year, 55 credits after your second year, and 85 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.



## Costs and Financial Aid

All admitted transfer students will be considered for this scholarship. Students who receive this award have college GPAs of 3.75. Midyear 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 year (four semesters total) provided you maintain a 3.25 or better GPA and complete 25 credits after your first year of attendance.

3. **Bert Price Diversity Scholarship Program (Michigan Residents).** Grand Valley State University is committed to increasing the diversity of its student body. As a result, this full tuition scholarship is awarded to students from underrepresented populations on our campus. Awards are made to entering freshman students with a minimum high school GPA of 3.3 and a minimum composite ACT score of 21. Students must apply for admission by February 1. This scholarship is renewable for three years provided the student maintains a minimum 2.85 grade point average, maintains full-time enrollment status, and meets satisfactory financial aid academic progress requirements. Students receiving the Native American Tuition Benefit are not eligible for the Bert Price Diversity Scholarship.
4. **Bert Price Diversity Scholarship Program (Non-Michigan Residents).** Grand Valley State University is committed to increasing the diversity of its student body. As a result, this scholarship for the difference between non-Michigan and Michigan resident tuition is awarded to students from underrepresented populations on our campus. Awards are made to entering freshman students with a minimum high school GPA of 3.3 and a minimum composite ACT score of 21 or SAT score of 960. Students must apply for admission by February 1. This scholarship is renewable for three years provided the student maintains a minimum 2.85 grade point average, maintains full-time enrollment status, and meets satisfactory financial aid academic progress requirements. Students receiving the Native American Tuition Benefit are not eligible for the Bert Price Diversity Scholarship.
5. **Bert Price Diversity Scholarship Program (Transfer Students).** Grand Valley State University is committed to increasing the diversity of its student body. This scholarship provides awards of \$4,000 in total (\$2,000 a year for up to two years) to students who are scheduled to receive an associate's degree from an accredited Michigan community college. Students who receive this award must have a cumulative community college GPA of 3.1 and GVSU must be the first institution they attend after receiving the associate's degree. Students must apply for admission by February 1. The scholarship is renewable for one additional year provided the student enrolls full-time, maintains a 2.85 grade point average and meets satisfactory financial aid academic progress requirements. Students receiving the Native American Tuition Benefit are not eligible for the Bert Price Diversity Scholarship.
6. **Helen Claytor Scholarship Program.** Grand Valley State University is committed to increasing the diversity of its student body. As a result, this \$1,000 non-renewable scholarship is awarded to students from underrepresented populations on our campus. Awards are made to entering freshman students with a minimum high school GPA of 3.5 and a minimum composite ACT score of 23 or SAT score of 1040. Students must apply for admission by February 1. The application for admission serves as the scholarship application.

## Costs and Financial Aid

7. **High School Recognition Scholarship.** Grand Valley State will select two students from participating high schools to each receive a \$1000 scholarship as an incoming freshman. Students must have a minimum 3.1 GPA and have applied for admission by February 1 of their senior year. Selected candidates will be invited to participate in an on-campus interview. The scholarship is renewable for 3 additional years provided the student maintains a 2.85 and meets standard academic progress. Participating high schools are: Michigan (Benedictine, Cass Technical, Creston, Crockett Technical, Dearborn, Detroit High School for Fine and Performing Arts, Detroit Redford, Divine Child, Dominican, Grand Rapids Central, Grand Rapids Union, Holland, J W Sexton, Lansing Eastern, Martin Luther King, Muskegon, Muskegon Heights, Ottawa Hills, Renaissance, Southfield, Southfield Lathrup, Southwestern, St. Martin De Porres, West Ottawa) and Illinois (De La Salle, Homewood-Flossmore Community, Hyde Park Career Academy, Morgan Park).
8. **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 February 1. To be renewed for one additional 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.
9. **Phi Theta Kappa Scholarships.** New entering transfer students who are members of the PTK Honor Fraternity 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. The scholarship is renewable for one additional year provided the student maintains a 3.5 GPA and maintains satisfactory academic progress.
10. **Robert C. Trotter Tri-County Scholarships.** Each high school in the counties of Kent, Muskegon, and Ottawa is 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.
11. **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

## Costs and Financial Aid

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, 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. Scholarships will be renewable for three additional years (one additional year for transfer students) provided the student maintains a 3.0 GPA and successfully completes 25 credits after the first year, 55 credits after the second year, and 85 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 February 1 each year.

12. **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 nominated 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.
13. **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.
14. **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.
15. **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.
16. **Michigan Merit Award.** 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.

## Costs and Financial Aid

17. **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.

18. **Other Grand Valley State University Scholarship Programs**

**Accounting Alumni Scholarship**

Eligibility: Seniors majoring in accounting.

Amount: Up to \$1000, renewable.

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 better as an entering freshman. Must not be receiving academic or other scholarship awards from Grand Valley.

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.

**American Society for Quality Control**

Eligibility: Upperclass student in engineering; 3.0 GPA.

Amount: Up to \$750.

Selection: By faculty committee of the Padnos School of Engineering.

Application: Contact the Padnos School of Engineering.

**Angus Foundation "Most Improved Student" Award**

Eligibility: Undergraduate student 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 Academic Resource Center.

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

**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 February 1.

Amount: \$500.

Selection: By Padnos School of Engineering.

Application: Contact Padnos School of Engineering.

## Costs and Financial Aid

### **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: Undergraduate and graduate handicapped or learning-disabled student accepted as a full-time degree-seeking student.

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

Selection: By the Grand Valley Office of Academic Support with the advice of a representative of Grand Valley's Financial Aid Office.

Application: Contact the Grand Valley Student Support Program. 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 and file the Free Application for Federal Student Aid (FAFSA) by 2/15.

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.

### **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.

## Costs and Financial Aid

### **Joan Board 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.

### **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 & 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.

### **Donna K. Brooks Presidential Scholarship**

Eligibility: Freshman Award of Distinction applicant.

Amount: Varies. Renewable for three years.

Selection: Grand Valley Financial Aid Office.

Application: Awards of Distinction Scholarship application, which is automatically sent to eligible students by the Admissions Office.

### **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.

### **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.

## Costs and Financial Aid

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.

### **Alexander Calder Honor Scholarship**

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

Amount: Tuition, 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.

### **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.

### **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.

### **School of Communications Scholarship**

Eligibility: The School of Communications Scholarship honors upper level School of Communication's students who have demonstrated promise in their chosen 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.

## Costs and Financial Aid

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

Selection: Decision is made by 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.

### **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.

### **David's House Ministries Scholarship**

Eligibility: Second or third year student in Therapeutic Recreation. Minimum 2.7 cumulative GPA.

Amount: Varies.

Selection: College of Health Professions (Therapeutic Recreation) and David's House Ministries.

Application: College of Health Professions (Therapeutic Recreation).

### **Gilbert and Patricia Davis Scholarship**

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.

### **Greta and Arthur DeLong Scholarship**

Eligibility: For education and psychology majors; at least junior level with 3.0 GPA.

Amount: Varies.



## Costs and Financial Aid

Selection: By the College of Education and Psychology Department scholarship committees.

Application: Contact the College of Education or Psychology Department.

### **Richard M. DeVos Presidential 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: Awards of Distinction Scholarship application, which is automatically sent to eligible students by the Admissions Office.

### **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: Awards of Distinction Scholarship application, which is automatically sent to eligible students by the Admissions Office.

### **Diesel Technology 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

### **L.V. Eberhard Business Scholarship**

Eligibility: Entering freshman majoring in business. Must have a 3.5 GPA and a minimum 29 ACT composite score.

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.

### **Leslie Eitzen Voice Scholarship**

Eligibility: Voice majors.

Amount: Varies, nonrenewable.

Selection: By the Department of Music.

Application: Contact the Department of Music.

## Costs and Financial Aid

### **Electrolux Home Products Scholarship**

Eligibility: Son or daughter of employees of Frigidaire Company.

Amount: Tuition and fees and \$50 per semester for books, renewable for three years.

Selection: By Financial Aid Office based on need and academic record.

Application: Apply directly to Frigidaire Company. Deadline is March 1.

### **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 Padnos School of Engineering.

Application: Contact Padnos School of Engineering.

### **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 fulltime 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. 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.

### **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.

## Costs and Financial Aid

### **Geology/Earth Science Tremba Scholarship**

Eligibility: For geology majors.

Amount: \$500.

Selection: By Geology Department.

Application: Contact the 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 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.

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.

### **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.

## Costs and Financial Aid

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

Application: Contact the Financial Aid Office.

### **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 Scholarship**

Eligibility: Students in the Congressional Intern Program.

Amount: \$1,000.

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 application (FAFSA). Must be enrolled full time.

Amount: Varies, non-renewable.

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 GVSU 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

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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 application (FAFSA) and have a completed application for admission by February 1.

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.

### **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 GVSU 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.

### **Daniel Kemp Alumni Leadership Scholarship**

Eligibility: Freshman Award of Distinction applicant.

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

Selection: Grand Valley Alumni Scholarship Committee.

Application: Awards of Distinction Scholarship application, which is automatically sent to eligible students by the Admissions Office.

### **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.

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

Application: Contact the Biomedical and Health Sciences Department.

### **Kirkhof Engineering Scholarship**

Eligibility: Entering engineering freshman applying for admission by February 1. 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: \$1000 for the first year; up to \$2,000 per year as an upper-class student.

Selection: By faculty committee of the Padnos School of Engineering.

Application: Contact the Padnos School of Engineering.

### **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.

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.

### **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.

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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, 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 African-American Teacher Education Scholarship**

Eligibility: Full-time students of African-American descent, seeking certification or endorsement in teaching, financial need, high GPA, and admitted to the College of Education.

Amount: \$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.

### **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

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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.

Amount: \$500.

Selection: By Metro Detroit Chapter Scholarship Committee of the Advisory Board.

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.

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: Contact the Financial Aid Office.

### **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 February 15.

### **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.



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### **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.

### **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 State work.

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).

### **Barbara H. Padnos International Scholarship**

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 104 Student Services Building.

### **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 with 3.0 GPA based on 4.0 for 10th and 11th grades; ACT composite of 26.

Amount: \$1,500.

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Selection: By Padnos School of Engineering.

Application: Contact Padnos School of Engineering. Applications are due to the local MSPE chapter scholarship chair by the 2nd Monday in January.

### **Padnos 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 Padnos School of Engineering.

Application: Contact Padnos School of Engineering.

### **Seymour and Esther Padnos Engineering**

Eligibility: Entering engineering freshman with interest in environmental issues, applying for admission by February 1. Must have cumulative GPA of 3.0 or better, ACT math subscore 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.

Amount: \$2500. Renewable for an additional 3 years.

Selection: By faculty committee of the Padnos School of Engineering.

Application: Contact the Padnos School of Engineering.

### **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 Academic Resource Center.

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

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

Eligibility: Fulltime student entering their junior year seeking Bachelor of Science degree in core sciences (Biology, Biomedical Sciences, Geology, Chemistry, Mathematics, Physics) with 3.5 cumulative GPA and financial need. Must have submitted the Free Application for Federal Student Aid.

Amount: Varies. Renewable for one additional year.

Selection: Grand Valley Financial Aid Office

Application: No additional application is necessary.

### **Ross W. Perry Bachelor of Science/Pre-Physical Therapy Major Scholarship**

Eligibility: Fulltime student entering their junior year seeking a Masters of Science in Physical Therapy. Must be an active member in good standing of the GVSU Pre-Physical Therapy Club. Minimum 3.5 cumulative GPA and financial need. Must have submitted the Free Application for Federal Student Aid.

Amount: Varies. Renewable for one additional year.

Selection: Grand Valley Financial Aid Office.

Application: Grand Valley Financial Aid Office.

### **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.

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Amount: Up to \$500.

Selection: Recommendations by the Financial Aid Office; final approval by the 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.

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 February 1, 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: Padnos School of Engineering Scholarship committee.

Application: Padnos 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.

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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 descendents 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.

### **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.

### **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: Awards of Distinction Scholarship application, which is automatically sent to eligible students by the Admissions Office.

### **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 February 15.

### **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.

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Selection: By Financial Aid Office.  
Application: No additional application necessary.

### **Marilyn and Budge Sherwood Scholarship**

Eligibility: Female M.B.A. candidates.  
Amount: \$500.  
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.

### **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 2 letters of recommendation.

### **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 February 1.  
Amount: Up to \$2,000 per year. Renewable.  
Selection: By faculty committee of the Padnos School of Engineering.  
Application: Contact the Padnos 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.

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### **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.

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.

### **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: \$1500. Not currently renewable.

Selection: By the Financial Aid Office.

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

### **Mary J. Szczepanski "Never Give Up" Scholarship**

Eligibility: Full time undergraduate and graduate students participating in the raising of funds for MS during the annual fund raising event.

Amount: \$500 with engraved plaque to student. Randomly drawn from all students turning in donations to the Student Life Office.

Application: All students who turn in pledge sheets with collected donations for the MS fund raising event will be considered.

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### **TEI Accounting/Tax Scholarship**

Eligibility: Undergraduate accounting majors with an interest in tax.

Amount: up to \$1000.

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: Up to the equivalent of six credits of Michigan resident tuition.

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 GVSU 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 application (FAFSA).

Amount: Up to \$5,000.

Selection: Padnos School of Engineering.

Application: Padnos School of Engineering.

### **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.

### **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

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the NCAA. Financial need may be considered as shown by completing the Free Application for Federal Student Aid applications (FAFSA).

Amount: \$1000

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.

### **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 application (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 senior 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 application (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



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composite score of at least 26 or SAT score of at least 1150. 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.

### **The Samuel L. Westerman Foundation Scholarship for Nursing**

Eligibility: Junior- or senior-year nursing student with a 3.0 GPA or higher, financial need, student must be active participant in volunteer community service program.

Amount: \$375; renewable for a total of four semesters.

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

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

### **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.

### **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).

Selection: GVSU Women's Scholarship Committee.

Application: Contact Academic Resource 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.

### **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 February 15.

### **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](http://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 101 Student Services Building. Telephone: (616) 331-3238.

### Educational Loans

**Alternative Loan Programs.** Alternative loans are non-federal loans to supplement financial aid for credit-worthy students and their families. A student may borrow an amount up to the cost of education minus other financial aid already awarded. Both fixed and variable interest rates are available. Interest rates may vary depending on the student's decision to pay on the loan while in school versus deferring repayment until after graduation. Contact the Financial Aid Office 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 variable, with a cap of 8.25 percent. 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 3 percent origination fee from the total amount of the loan. Repayment of the loan principal begins six months after the student is no longer enrolled at least half-time. To be considered for the Unsubsidized Federal Direct Student Loan, students must first complete the Free Application for Federal Student Aid (FAFSA) and list Grand Valley as a college choice. 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 varies with the 91 day Treasury Bill rate with a cap of 9 percent and repayment begins 60 days after loan funds are disbursed. 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 \$1,500 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.

## Costs and Financial Aid

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) before 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.

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

### Educational Loans

1. **Federal Perkins Loans.** This federal loan program is for students who can establish financial need, are U.S. citizens, meet the 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 \$1,800 per year. Students must complete the Free Application for Federal Student Aid. Eligible students will be notified by the Grand Valley Financial Aid Office.

The interest rate is a simple annual 5 percent on the unpaid balance with repayment beginning nine months after the student is no longer enrolled at least half-time (6 credits for undergraduate students).

2. **Federal Direct Subsidized Loan.** This federal loan program operates through the U.S. Department of Education and provides loans to students to help meet their educational expenses. Interest rates are variable, with an 8.25 percent cap, and 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 \$2,625 for the freshman year of study, \$3,500 for the sophomore year, \$5,500 for the junior and senior years, and \$8,500 for each year of graduate study, although the total borrowing plus other available resources cannot exceed the calculated financial need of the student to attend Grand Valley. Students must complete the Free Application for Federal Student Aid (FAFSA). Eligible students will be notified by the Grand Valley Office of Financial Aid.
3. **Nursing Loans.** These federal loans are for students who are accepted into the nursing program at Grand Valley. Nursing loan criteria closely follow those of the Federal Perkins Loan Program.
4. **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.
5. **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.
6. **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.

## Costs and Financial Aid

7. **Grand Valley Tuition Loans.** Tuition loans allow students to pay tuition in four monthly payments for a \$30 service fee per semester. Applications and general policies regarding tuition loans are sent with the initial tuition billing each semester and are also available at the Financial Aid Office.
8. **Employee Deferred Tuition 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.

## 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 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 1-800-827-1000.

**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) 335-1343. 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.fastaid.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

New 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 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.

### Academic Progress

It is the policy of Grand Valley State University to provide financial aid awards to students who are capable of remaining in good academic standing and who make adequate progress toward their degrees while receiving financial aid. Adequate progress required to remain eligible for aid is defined according to the table below and applies to credits earned at Grand Valley. In addition, the Academic Progress

## Costs and Financial Aid

Standards require a minimum 2.0 GPA after four semesters of attendance at Grand Valley, regardless of whether financial aid was received or not. Undergraduate students may receive financial aid for a maximum of 12 semesters, graduate students for eight semesters. There will be a prorated adjustment in the academic progress criteria for part-time students.

Semesters on Aid	Credits Needed to Remain Eligible and to Continue on Financial Aid		Full-time Normal Progress	
	Grad	Ungrad	Grad	Ungrad
1	5	10	9	15
2	10	20	18	30
3	15	30	27	45
4	20	40	36	60
5	25	50	45	75
6	30	60	54	90
7	35	70		105
8	40	80		120
9		90		135
10		100		150
11		110		165
12		120		180

Students will be responsible for knowing and understanding the academic progress policy. Federal regulations governing all Title IV funds require institutions to monitor the academic progress of all financial aid applicants. This will be done when students apply for aid. If you do not meet the above criteria, you will be ineligible to continue to receive financial aid until you again earn sufficient credit to meet the criteria. You may submit a written appeal to the Financial Aid Office if there are special circumstances that warrant a continuation of aid. If you receive approval of your appeal, you will be sent a letter that indicates the conditions governing continued approval of financial aid. Students will normally be given one additional semester to demonstrate their ability to meet the conditions indicated. Students who fail to meet the conditions will be denied further financial aid.

## Conditions Governing Acceptance of Your Award

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

1. The information submitted by you (and your parents or spouse, if applicable) is true, correct, and complete to the best of your knowledge.
2. You will use the financial aid awarded to you only for payment of tuition, books, room and board, transportation, and other related educational expenses.
3. If you completely withdraw from Grand Valley before the 60 percent point of the enrollment or payment period, you 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.

## Costs and Financial Aid

5. You will maintain sufficient 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, 1959, 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 prior to disbursement of your first Direct Loan at Grand Valley to receive 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.



# General 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	Quality Points	Grade	Significance
A	4.0	CR	Credit
A–	3.7	NC	No Credit
B+	3.3	I	Incomplete
B	3.0	W	Withdrawal
B–	2.7	AU	Audit
C+	2.3	X	Deferred
C	2.0	NR	NoReport
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 warning, probation, suspension, 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

## General Academic Policies

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 drop slip is presented to the registrar by the end of the eighth week. 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.

## General Academic Policies

### 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 Dean of Academic 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 does not apply to the minimum 120 credits required for graduation.
100–199	Introductory courses generally without prerequisites, primarily for first-year students.
200–299	Courses primarily for second-year students.
300–399	Courses primarily for third- and fourth-year students.
400–499	Advanced courses primarily for fourth-year undergraduate students. Appropriate 400-level courses may be designated for credit in a graduate program.
500–699	Courses for graduate students. Selected courses may be available to undergraduate students by permission.

#### 2. Reserved Undergraduate Course Numbers

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

#### 3. Reserved Graduate Course Numbers

- The number 680 is to be used for graduate special topics courses.
- The number 690 is to be used for graduate research preparation courses.
- The number 693 is to be used for graduate project courses.
- The number 695 is to be used for graduate thesis courses.
- The number 699 is 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 mailed to the student's local address 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 mailed to the

## General Academic Policies

student's permanent address within one week of the last day of the examination period unless interrupted by university closure for holidays.

### Transcripts

Transcripts of students' academic records are available from the Student Assistance Center. Requests for an official transcript, bearing the signature of the registrar and the university seal, will be prepared and mailed within 24 hours after the request. Unofficial transcripts will be prepared immediately for currently enrolled students. Unofficial transcripts are available at anytime on the Web at no charge. No transcripts will be released if a student has an encumbrance or indebtedness to Grand Valley State University.

To comply with the federal mandate, transcripts will not be released without a signed, written request from the student.

### 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

## General Academic Policies

give credit in written or oral work for the ideas or materials that have been taken from another is guilty of plagiarism.

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

**Policy on Research Integrity.** The university has developed policies and procedures to comply with the Federal Government regulations regarding dealing with and reporting possible misconduct in science. Allegations of misconduct in science should be referred to the appropriate dean or appointing officer and the Provost and Vice President for Academic Affairs (excerpted from *Grand Valley State University Policy and Procedures for Handling Allegations of Misconduct in Science*; for the complete policy refer to the *Faculty Handbook*). Students involved in research who suspect that an incident of misconduct in science has occurred should report the incident to the dean of their academic college.

## Student Academic Grievance Procedures

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

a. Resolution of an academic grievance involving procedures, policies, and grades in individual courses. The resolution of academic grievances is based on two principles: first, that the resolution of a grievance should be sought at the lowest possible level, and second, that pathways for appeal exist for both faculty and students. Resolution should be pursued as follows:

1. An appeal to the instructor.
2. If the grievance is not resolved to the student's satisfaction, a further appeal could be made to the unit head who may request that the appeal be put in writing. Both the student and the faculty member will be notified in writing of the unit head's decision.
3. If the disposition by the unit head is not acceptable to either party, an appeal, in writing, may be made by either party to the dean of the college. If the dean feels that there is some merit in the written grievance, he or she shall establish a committee to review the grievance and make a recommendation within 60 days to the dean.

Such a committee shall include a representative of the dean's office, a faculty representative from the college of the course under appeal, and a student representative. Upon receiving the committee's recommendation in the latter procedure, the dean shall rule on the grievance. Both the student and the faculty member will be notified in writing of the dean's decision.

4. If the disposition by the dean is not acceptable to either party, an appeal, in writing, may be made to the Provost. The Provost's review and judgment

## General Academic Policies

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

## General Academic Policies

a credit. Under exceptional circumstances a student may be allowed to add a course after the deadline. The completed transaction, accompanied by support from the instructor, department chair, and collegial dean, must include a \$25 late add fee and any additional tuition.

Specific dates and times for all registrations are set by the registrar and published in the schedule of courses.

## Michigan Residence Requirements

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

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

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

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

Aliens who have been lawfully admitted for permanent residence in the United States shall not, by reason of that status alone, be disqualified from classification or reclassification as resident, provided, however, that aliens who are present in the United States on a temporary or student visa shall not be eligible for classification or reclassification as residents.

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

Application for reclassification must be filed no later than 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.

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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 printed in the schedule of courses. 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.



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### 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 will be 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.
4. **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.
5. **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 support the application for readmission. The Petition to Return Form and supporting documentation must be submitted to the Registrar not less than 30 working days before the first day of classes for the chosen semester. The petition will be considered by the Academic Review Committee. Approval of a petition allows the student to enroll on a conditional basis, as stipulated by the Academic Review Committee. The academic standing for a readmitted student will be jeopardy of dismissal.
6. **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

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of the subsequent semester. All appeals will be considered by the Academic Review Committee.

	Semester Hours Earned*	GPA for Dismissal	GPA for Probation	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 2004, winter 2005, and summer 2005:

*Cum laude*—3.770–3.868

*Magna cum laude*—3.869–3.999

*Summa cum laude*—4.000

### 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 Academic Resources and Special Programs.

## General Academic Policies

### 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 examination. Required minimum scores are available on request from the Admissions Office or the Student Assistance Center. Native speakers of a language other than English will not be granted CLEP or AP exam credit for that language.

### Defense Activity for Non-Traditional Educational Support (DANTES).

Grand Valley will accept for credit certain DANTES college-level courses and college subject matter examinations. Specifics are available upon request from the Office of Admissions or the Student Assistance Centers.

### International Baccalaureate (IB).

Credit is granted for higher level ID 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.

New freshman students are urged to continue their orientation to Grand Valley by enrolling in FS 100, **Freshman Seminar**. This one-credit course helps students consider the nature of education and the range of intellectual and support resources available at the university.

## 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.

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### 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.

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 contact the Academic Resource Center at (616) 895-3588 for information on scheduled test dates and to register to take the exam.

### 6. General Education Requirements

At Grand Valley State University, all students, regardless of their major, must complete the same general education curriculum. This program enriches and complements the student's major and electives and is a significant part of the baccalaureate experience. Grand Valley State University maintains that a complete education involves more than preparation for a particular degree. A career occurs in the context of a life, and a sound general education helps one "make a life" as

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well as “make a living.” 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. 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 coexist 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 mission of the General Education Program is to provide 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 both the skills and the general body of knowledge needed for students to intelligently participate in public discourse.

#### 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 Categories, the Cultural Emphasis Requirements, and the Thematic Group.

#### The Foundations Categories

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 Categories helps students develop the essential skills of creative and critical thinking, articulate expression, and information literacy.

#### The Cultural Emphasis Requirements

An important component of education is realizing that how we know is as important as what we know. The study of culture prompts students to recognize themselves as cultural beings, and to understand the diverse ways in which people organize life and perceive the world. Courses that receive the **Cultural Emphasis**

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**Designations** focus on the values, perceptions, history, and social life of various cultures and subcultures in the United States and in other countries or regions. All classes also help students develop the skills of creative and critical thinking, articulate expression, and information literacy.

### The Thematic Group

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. The thematic component of the General Education Program builds on the knowledge gained in the Foundation Categories. Each thematic group consists of interrelated courses that explore an idea from three different perspectives and examines the connections that exist, actually or potentially, among our various ways of understanding major ideas. The thematic courses continue to address creative and critical thinking, articulate expression, and information literacy. In addition, these courses focus on integrative skills.

### General Education Requirements

#### Foundation Categories

- 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)

#### Cultural Emphasis Requirements

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

#### Thematic Group

- Each student will select a theme and choose three courses from that theme. The courses must come from three different disciplines.

## I. Foundation Categories

### The Arts—select one

ART 101	Introduction to Art
CLA 250	Classical Art and Archaeology
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

CLA 201	Classical Literature
COM 202	Critical Interpretation
ENG 203	World Literature
ENG 205	Literatures in English
ENG 212	Introduction to Shakespeare

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LIB 100	Introduction to Liberal Studies
PHI 101	Introduction to Philosophy
PHI 102	Ethics
RST 331	Russian Literature in Translation (1800–1880)
RST 333	Russian Literature in Translation (1932 to present)

### Historical Perspectives—select one

ANT 215	Origins of Civilization
CLA 121	Greek Civilization
HST 101	Introduction to World Civilizations
HST 102	Introduction to European Civilizations
HST 103	Introduction to American Civilizations
HST 203	World History to 1500
HSC 201	The Scientific Revolution
HSC 202	The Technological Revolution

### Mathematical Sciences—select one

CS 160	Programming with Visual Basic
MTH 122	College Algebra
MTH 123	Trigonometry
MTH 125	Survey of Calculus
MTH 131	Introduction to Mathematics
MTH 201	Calculus I
MTH 221	Mathematics for Elementary Teachers I
PHI 103	Logic
STA 215	Statistics I

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

CHM 102	Chemistry and the Environment
GEO 100	Environmental Geology
GEO 103	Oceans
GEO 105	Living with the Great Lakes
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
HS 100	Human Health and Disease
BIO 103	The Biology of People
BIO 107	Great Lakes Changing Systems
BIO 109	Plants in the World
BIO 120	General Biology I
HS 202	Anatomy and Physiology
SCI 225	Integrated Life Sciences for K-8 Teachers

### Social Sciences—Select two from different disciplines.

ANT 204	Introduction to Cultural Anthropology
ANT 220	Introduction to Archaeology
CJ 101	Justice and Society



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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 Administration
PLS 102	American Government and Politics
PLS 103	Issues in World Politics
PSY 101	Introduction to Psychology
SOC 201	Introduction to Sociology
SOC 280	Social Problems
SW 150	Human Needs in a Complex Society
WGS 200	Introduction to Gender Studies

## II. Cultural Designations

### World Perspectives Designation—select one

AAA/ENG 231	Early African American Literature
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	Ethnography of Mesoamerica
ANT 370	Cross-cultural Perspectives on Gender
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	Mythology
FRE 202	Intermediate French II
GER 202	Intermediate German II
GPY 235	World Regional Geography
GPY 351	Geography of Africa
GRK 202	Intermediate Greek II
HST 210	Empire, Culture, and Conflict
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
PLS 281	Comparative Political Systems: Canada
PLS 282	Government and Politics of Russia and Eastern Europe
PLS 283	Chinese Politics and U.S.—China Relations
PLS 284	Latin American Politics
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

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- SPA 311 Spanish American Civilization and Culture I  
SS/WGS 351 Family and Gender in the Developing World

### U.S. Diversity Designation—select one

- AAA/WGS 352 Black Women's Cultures and Communities  
ANT 311 Native Peoples of North America  
ED 225 Diversity in Education  
LIB 320 Social Autobiography in the Civil Rights Era  
LIB 350 The Immigrant Experience  
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 US 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 and Witch-Hunting  
LIB 350 The Immigrant Experience  
MGT 355 The Diversified Workforce  
SOC 250 Perspectives on Madness  
SOC 385 Social Class Inequality

#### Theme 02—Changing Ideas: Changing Worlds

- ENG 383 Make It New: Literary Modernism  
GEO 310 Plate Tectonics  
HSC 201 The Scientific Revolution  
HST 364 Renaissance and Reformation Europe  
PHY 303 The World after Einstein

#### Theme 03—Society and the Media

- COM 220 Media Literacy  
COM 372 Global Communications  
LIB 373 American Society and Mass Culture  
PLS 340 American Politics and the Mass Media  
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 340 Mind, Brain and Consciousness  
PSY 364 Life Span Development  
PSY 377 Psychology of the Quest

#### Theme 05—Making War and Peace

- CJ 405 Terrorism  
ENG 384 Literary Responses to War and Peace  
HST 317 History of American Foreign Policy

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HST 377	History of Warfare
LIB 345	War in the Nuclear Age
PLS 211	International Relations
PLS 311	International Conflict and Conflict Resolution

### Theme 06—Gender and Identity

Theme 06 has been merged with Theme 08, effective Fall 2004

### Theme 07—Revolution and Evolution in the Americas

ANT 355	On the Move: Migration in the Americas
ANT 360	Ethnography 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

### Theme 08—Gender, Society and Culture

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

### Theme 09—Religion

ANT 315	Comparative Religions
CLA 315	Ancient Religions
HST 211	History of Islamic Civilization
HST 342	History of East Asian Religions
LIB 335	Scripture as Literature
PHI 302	Medieval Great Philosophers
PHI 310	Philosophy of Religion
PLS 330	Religion and Politics in America
SOC 357	Sociology of Religion

### Theme 10—Ethics

BIO 328	Biomedical Ethics
BIO 338	Environmental Ethics
COM 438	Communications Ethics
MGT 340	Business, Social Change, and Ethics
MGT 438	Business Ethics
PHI 325	Ethics in Professional Life
PLS 338	Citizenship

### Theme 11—Earth and Environment

ANT 340	Culture and Environment
BIO 105	Environmental Science
ECO 345	Environmental and Resource Economics
ENG 382	Nature Writing
GEO 300	Geology and the Environment

## General Academic Policies

- GPY 412 Global Environmental Change
- LIB 330 The Idea of Nature
- NRM 451 Natural Resource Policy

### Theme 12—Freedom and Social Control

- BIO 311 The Biological Bases of Society
- CJ 325 Criminal Justice and Human Rights
- 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 on the Civil Rights Movement
- HST 316 History of the Civil Rights Movement
- LIB 320 Social Autobiography
- 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
- ENG 386 Literary Responses to Death and Dying
- HS 374 Physiological Aspects of 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

- CTH 373 Global Arts Performance and Management
- ECO 369 International Economic Issues
- GPY 335 Geographic Patterns of Global Development
- HST 386 Europe since 1945
- HTM 202 International Tourism
- MGT 466 International Management and Multinational Corporations
- PLS 315 International Political Economy

### Theme 16—Health, Illness, and Healing

- ANT 320 Culture and Disease
- BIO 309 Plants and Human Health
- 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 From Field to Factory: The Great African American Migration
- ECO 435 Urban Economics
- ECO 436 Real Estate Economics
- HST 327 History of the American Urban Society
- PA 307 Local Politics and Administration
- SOC 351 Urban Sociology
- SS 324 Urbanization

### Theme 18—Creativity: Ideas and Innovation

- CAP 315 Advertising Copywriting

## General Academic Policies

CTH 300	Storytelling
ECO 342	Game Theory
EGR 304	Creativity and Innovation
LIB 310	Creativity
MGT 345	Teambuilding
WRT 219	Introduction to Creative Writing

### Theme 19—Perception

HST 320	American Indians
PHI 440	Epistemology
PHY 307	Wave Physics
PSY 361	Perception

### Theme 20—The American Mosaic

ANT 311	People of Native North America
HST 315	Latinos: Forging of Ethnic Identities
LIB 401	Visionary Thinkers in the American Mosaic
MUS 300	Exploring American Music
SOC 381	Class, Race, Gender, and Sexuality
SW 300	Pluralism in the Human Services
US 201	Diversity in the United States

### Theme 21—The New Third World

Theme 21 has been discontinued, effective Fall 2004

### Theme 22—Sport and Life

CAP 305	Sports Promotion
ECO 330	Sports Economics
HST 325	History of American Sports
PED 315	Sport: Psychosocial Aspects
PHY 306	The Physics of Sports
STA 345	Statistics and 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 1
PLS 339	Comparative Democratization

### 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 Writing 150 with a grade of C (not C-) or better as a prerequisite, are designated SWS in each semester's course schedule. *Please read the schedule carefully, because not all sections of a multisection course are necessarily SWS sections. Those that are not designated SWS do not result in SWS credit.* The SWS courses need not add to a student's program because they may also count as courses in general education or the major.

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

## General Academic Policies

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 are dealt with by the director, through the Academic Resource Center.

### University Honors College

University Honors College Students may satisfy the General Education program 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 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); and one SWS course in their major or college. 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.

### 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.

## General Academic Policies

### 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).

## General Education Transition Policy

1. Freshmen and transfer students who enter Grand Valley for the first time during or after the Fall 2000 semester must complete the new general education requirement.
2. Freshmen and transfer students who entered Grand Valley for the first time before the Fall of 2000 will have through Summer 2007 to graduate using the old general education requirements.
3. The following transition document will apply to those freshmen and transfer students who entered Grand Valley before the Fall of 2000 and who either do not graduate before the end of Summer 2007 or who choose to graduate using the new general education requirements.
4. Reasonable substitutions for old general education requirements can be proposed to the Dean of the Academic Resource Center.
5. Appeals to this policy and/or the identified deadlines for completion of general education requirements are to be made to the Academic Resource Center and require the approval of the Dean of Academic Resources.

### Foundations Categories

The Arts	Arts and Humanities Group A (AH/A)
Philosophy and Literature	Arts and Humanities Group B (AH/B)
Historical Perspectives	College Section C: History of Western Civilization (CGE/C)
Mathematical Sciences	College Section A: Logical and Quantitative Reasoning (CGE/A)
Physical Sciences	Natural Sciences: Group A Physical Sciences (NS/A)
Life Sciences	Natural Sciences: Group B Life Sciences (NS/B)

### Cultural Designations

World Perspective Designation	College Section B: Foreign Culture and Multicultural Approaches (CGE/B)
U.S. Diversity Designation	College Section B: Foreign Culture and Multicultural Approaches (CGE/B)

Themes	N/A
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## Degree Requirements

These degree requirements apply to students who began their studies at Grand Valley State University no later than the Spring/Summer semester 2000 AND to those students who enter through Spring/Summer semester 2001 with a completed MACRAO.

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.



## General Academic Policies

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

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

The junior-level writing requirement should be fulfilled within the first three years or ninety 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. Contact the Academic Resource Center at (616) 895-3588 for more information.

### 6. General Education Requirements.

At Grand Valley State University, all students, regardless of their major, must complete the same general education curriculum. This program enriches and complements the student's major and electives and is a significant part of the baccalaureate experience.

Grand Valley's general education program consists of offerings in two broad sections: college offerings and college offerings.

The college section is divided into four groups, and students select one course from each group. The courses in Group A are designed to teach students to reason formally. Courses in Group B are designed to provide students with an intellectual encounter with foreign and multicultural perspectives. The courses in Group C explore the history of Western civilization. In the courses in Group D, students are encouraged to examine values and ideas critically.

The college section introduces students to the major areas of human knowledge and accomplishment. Students select two courses in the Natural Sciences, two in the Social Sciences, and two in Arts and Humanities.

The general education requirements are designed to build into the baccalaureate degree of all students at Grand Valley an intellectual, aesthetic, and philosophical experience that will enrich their lives and enable them to be productive and responsible citizens of a democratic society. In order to graduate, each degree candidate must complete the general education program described below. The specific courses in the college and sections are listed here. The course descriptions are found in the departmental listings in the catalog.

#### The College Section (one course in each group)

- A. Study of logical and mathematical quantitative reasoning.
- B. Foreign culture and multicultural approaches.
- C. History of Western civilization.
- D. Critical examinations of values and major ideas.

## General Academic Policies

### Group A (CGE/A): Quantitative and Logical Reasoning

CS 160	Programming with Visual BASIC
CS 162	Computer Science I
MTH 122	College Algebra
MTH 123	Trigonometry
MTH 125	Survey of Calculus
MTH 131	Introduction to Mathematics
MTH 201	Calculus and Analytic Geometry I
STA 215	Introduction to Applied Statistics
MTH 221	Mathematics for Elementary Teachers I
PHI 103	Logic

### Group B (CGE/B): Foreign Culture and Multicultural Approaches

AAA 340	African American Culture and Social Thought
ANT 111	Peoples of the World
ANT 215	Origins of Civilization
ANT 315	Comparative Religions
ANT 370	Cross-cultural Perspectives on Gender
CHI 102	Elementary Chinese II
EAS 201	East Asia in the Contemporary World
ENG 204	Mythology
FRE 102	Elementary French II
FRE 150	Intensive Elementary French
FRE 225	Exploring France
GER 102	Elementary German II
GPY 235	World Regional Geography
GRK 102	Elementary Greek
HST 210	Empire, Culture, and Conflict
JPN 102	Elementary Japanese II
LAS 210	Exploring Latin America
LAT 102	Elementary Latin II
LAT 150	Intensive Elementary Latin
LIB 210	Immigrant Experience in the United States
MES 201	Introduction to the Middle East
MGT 355	The Diversified Workforce
PLS 281	Comparative Politics: Canada
PLS 282	Government and Politics of Russia and Eastern Europe
PLS 283	Chinese Politics and U.S.-China Relations
RST 225	Introduction to Russian Culture
RUS 102	Elementary Russian II
SPA 102	Elementary Spanish II
SPA 150	Intensive Elementary Spanish
SOC 323	Families in Society
SS 270	Family & Gender in the Developing World
SS 311	Native People of North America
SS 324	Urbanization
US 201	Diversity in the United States

### Group C (CGE/C): History of Western Civilization

HSC 201	The Scientific Revolution
HSC 202	The Technological Revolution
HSC 206	Science and Culture in the West
HSC 101	Introduction to World Civilizations
HST 102	European Civilization
HST 103	American Civilization
HST 203	World History to 1500 A.D.
HST 204	World History since 1500 A.D.

## General Academic Policies

HST 205	American History to 1877
HST 206	American History since 1877
HST 365	Early Modern Europe

### Group D (CGE/D): Critical Examination of Values and Major Ideas

BIO 336	Bioethics
LIB 100	Introduction to Liberal Studies
LIB 340	Utopias
LIB 345	War in the Nuclear Age
PHI 102	Ethics
PHI 325	Ethics in Professional Life
PHY 120	Einstein's Universe
PSY 311	Controversial Issues in Psychology
SOC 379	Love, Sex, and Gender
SOC 385	Social Class Inequality
SS 101	The Idea of a Social Science
SS 381	Death and Dying
SS 383	Education and American Society
WGS 200	Introduction to Gender Studies

### Arts and Humanities Section (one course in each group)

- A. Exploration of art, music, and theatre.
- B. Exploration of literature.

#### Group A (AH/A): Exploration of Art, Music, and Theatre

ART 101	Introduction to Art
COM 348	Film Theories
CTH 101	Introduction to Theatre
MUS 100	Introduction to Music Literature
MUS 129	Fundamentals of Music
PHI 220	Aesthetics

#### Group B (AH/B): Exploration of Literature

COM 202	Critical Interpretation
CLA 201	Classical Literature
ENG 203	World Literature
ENG 205	Literatures in English
ENG 212	Introduction to Shakespeare
LIB 314	Life Journey
PHI 101	Introduction to Philosophy
RST 331	Russian Literature in Translation, 1800–1880
RST 333	Russian Literature in Translation, 1932 to Present

### Natural Sciences Section (one course in each of the two groups. One of the courses selected must include a laboratory component)

- A. Physical sciences.
- B. Life sciences.

#### Group A (NS/A): Physical Sciences

CHM 102	Chemistry and Society
CHM 109	Introductory Chemistry (lab)
CHM 115	Principles of Chemistry I (lab)
CHM 201	Introduction to Chemical Sciences (lab)
GEO 100	Environmental Geology
GEO 105	Living with the Great Lakes
GEO 111	Exploring the Earth (lab)
NRM 140	The Climatic Factor (lab)
PHY 105	Descriptive Astronomy (lab)

## General Academic Policies

PHY 201	Inquiry: The Mechanical and Thermal World (lab)
PHY 204	Inquiry: Electricity, Magnetism, and Optics (lab)

### Group B (NS): Life Sciences

ANT 206	Human Origins
BIO 103	The Biology of People (lab)
BIO 105	Environmental Science
BIO 107	The Great Lakes and Other Water Resources (lab)
BIO 120	General Biology I (lab)
HS 100	Human Health and Disease
HS 202	Anatomy and Physiology (lab)

### Social Sciences Section (two courses, each from a different group and from a different discipline)

- A. Human behavior and experience.
- B. Social and cultural phenomena.
- C. Formal institutions.

### Group A (SS/A): Human Behavior and Experience

PSY 101	Introduction to Psychology
PSY 315	Psychology of Sex Differences
SOC 250	Perspectives on Madness

### Group B (SS/B): Social and Cultural Phenomena

ANT 204	Introduction to Cultural Anthropology
ECO 100	Current Economic Issues
ECO 211	Introductory Microeconomics
GPY 220	Cultural Geography
SOC 201	Introduction to Sociology
SOC 280	Social Problems

### Group C (SS/C): Formal Institutions

CJ 101	Justice and Society
ECO 210	Introductory Macroeconomics
MGT 339	Business and Society
PLS 102	American Government and Politics
PLS 103	Issues in World Politics
SW 150	Human Needs in a Complex Society

### 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 Writing 150 with a grade of C (not C-) or better as a prerequisite, are designated SWS in each semester's course schedule. *Please read the schedule carefully because not all sections of a multi-section course are necessarily SWS sections. Those that are not designated SWS do not result in SWS credit.* The SWS courses need not add to a student's program because they may also count as courses in general education or the major.

The two SWS courses may not be taken from the same department or school. One must be from outside the student's major unit. The first SWS course, normally part of the general education requirement, must be taken before completing the junior-level writing requirement. The second course, normally taken in the student's major and normally at the 300 or 400 level, is taken after completing the junior-level writing requirement. Transfer students with a MACRAO associate's degree must take one SWS course (normally in the student's major).

## **General Academic Policies**

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 upon 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 director, through the Academic Resource Center.

### **University Honors College**

University Honors College students may satisfy their general education requirements 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 a 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

## General Academic Policies

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.

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

### Second Bachelor's Degree

Under certain circumstances a student may earn two baccalaureate degrees. Students with a Grand Valley baccalaureate degree or Grand Valley students pursuing two degrees simultaneously at Grand Valley should note the following information:

1. They must meet all specified requirements for both degree programs.
2. They must complete a minimum of 30 semester hours in residence at Grand Valley beyond that required for the first degree.
3. A student who meets the separate requirements for each of the two degree programs but not the additional residence requirement may have both majors certified and recorded on his/her academic record.
4. A student holding a baccalaureate degree from Grand Valley may not modify his or her undergraduate GPA for degree by pursuing additional coursework.

Students holding a baccalaureate degree from another regionally accredited institution should note the following information:

1. They must meet all specified requirements for a new major degree program.
2. General Education requirements are regarded as satisfied by the first degree.
3. They must complete a minimum of 30 semester hours in residence at Grand Valley.
4. Transfer students must complete a minimum of 12 hours in the unit conferring the major (six for the minor).

### Catalog Limitations and Guarantees

A student may graduate under the catalog in effect at the time of his or her initial registration as a degree-seeking student at Grand Valley or under any succeeding catalog. However, no student may graduate under the requirements of a catalog that is more than eight years old. A student 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.

## General Academic Policies

3. The student must fulfill all requirements for the degree within a period of eight consecutive years. The date of entry into the first graduate course at Grand Valley is viewed as the starting point of the eight-year period. If a course taken to complete the requirements for the master's degree does not fall within the eight-year period allowed for the degree, the course may be retaken for credit, with departmental approval. Otherwise another course of equivalent semester hours must be substituted in the program.
4. Graduate credit from graduate institutions with appropriate regional accreditation may be considered for transfer to a degree program at Grand Valley State University. Only coursework completed in the five years prior to application will be considered for transfer. Transfer credits must apply directly to the student's program as determined by the director of the graduate program. Only courses with grades of B (3.0) or above will be considered for transfer. Correspondence courses will not transfer into graduate programs at Grand Valley State University.
5. All graduate students must complete a minimum of 24 hours in residency at Grand Valley State University.
6. Master's programs may include some courses that are dual numbered at the senior undergraduate and graduate level. Such courses must be approved for dual listing by the University Curriculum Committee and the Provost. Students registering for graduate credit will be required to perform at the graduate level. Graduate students may not repeat for graduate credit dual-listed courses that were taken in their undergraduate program. If such a course is a master's program requirement, the department will make an appropriate substitution.
7. Candidates for advanced degrees must demonstrate not only their mastery of the subject matter but also their ability to integrate and synthesize it. They must also demonstrate their ability to generate new knowledge and/or apply existing knowledge to specific practical situations. This demonstration may take the form of a thesis, comprehensive examination, or an appropriate project. A specific course may also be used to fulfill this requirement as long as it is structured as a capstone experience. In such a course there must be a written product that meets the objectives and is evaluated by the faculty in the program.

### Second Master's Degree

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

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



## Academic Resources and Special Programs

### 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.

## Academic Resources and Special Programs

The Academic Resources and Special Programs Division (ARSP) supports student learning by providing a wide range of services in a central location. ARSP coordinates orientation for all freshman students and provides matriculation intake, orientation, and scheduling for all transfer students. ARSP coordinates university wide academic advising and provides advisors for students who have not decided on their majors or who have been admitted through committee action. ARSP's support services include assisting individual students with study skills, test anxiety, and time management; College Level Examination Program (CLEP) testing, testing of international students, departmental extended time testing, and in-house placement testing. ARSP has several programs that provide specialized support services to targeted student populations. These programs include: EXCEL (minority students), Office of Academic Support (those with physical and learning disabilities), Tutoring (those experiencing academic difficulties), Athletic Programs Advising (for student athletes). Five federal grant (TRIO) programs support students from first-generation, low-income backgrounds. These programs are: Upward Bound, Upward Bound Math Science (high school level), Educational Connections (6<sup>th</sup> grade through community education levels), Educational Support (college undergraduate level), and McNair Scholars (preparation for graduate studies).

The ARSP has several programs that provide specialized support services to targeted student populations. These special programs include the following:

### EXCEL Program

The EXCEL Program provides individualized academic support services that lead to a more successful college experience for the diverse Grand Valley State student community, with a specific focus on minorities. In addition to regular services provided by Grand Valley, the EXCEL Program provides its participants with assessment testing, study skill development, academic and career advising, specialized tutoring, survival skills seminars, individualized academic plans, peer mentoring, and counseling.

### Muskegon Partnership Program

Located on the Muskegon Community College campus, the Muskegon Partnership Program provides support for the under-represented community college students to facilitate their completion of associates degrees and the transfer to Grand

## Academic Resources and Special Programs

Valley. The program provides academic and financial aid advising to qualified participants.

### **Office of Academic Support (Disability Services)**

The Office of Academic Support (OAS) provides services and accommodations that enhance the learning environment for students with disabilities. Grand Valley State University students who qualify and have a documented disability may take advantage of a variety of services that make possible the full participation of disabled students in Grand Valley educational programs.

### **TRIO Programs**

The TRIO programs include Educational Connections, Educational Support Program, The McNair Scholars Program, TRIO Upward Bound Math and Science, and Upward Bound. The programs provide assistance for qualified under-represented students who need supplemental instruction or other support services at Grand Valley.

### **Educational Connections**

Educational Connections is a project designed to provide information on educational programs and services for persons interested in continuing their education. The staff, located in downtown Grand Rapids, provides information on various educational programs that meet the participant's needs and interests including high school completion, college programs, or technical/vocational training. The staff helps clients explore career possibilities and provides guidance on how to achieve their educational and career goals. The staff also offers assistance in identifying sources and applying for financial aid, referrals to social service agencies, administration and evaluation of interest inventories and academic testing, bilingual services (Spanish) such as counseling, financial aid forms, program applications, etc., and arranging for school visitations.

### **Educational Support Program**

The Educational Support Program is designed to assist students in their pursuit of a degree through an individualized approach to the variety of concerns that all college students have. Such concerns include finding the time to study, better ways to take tests, or improvement in any of the areas known as study skills. Counselors are available for academic advising, career selection, and any personal issue that may concern a student.

### **McNair Scholars Program**

This program is designed to help members of groups who are under-represented in graduate education gain admission into a program leading to a doctoral degree. During the academic year students are teamed with a mentor who will help them throughout their undergraduate experience. Students work on several areas including research, writing, computer applications, time management, GRE preparation, exploration of financial resources, application to graduate programs, and participation in local and national research symposia throughout the academic year. During the summer residential program, students work with faculty and mentors on research activities as well as refining, writing, and proofing research documents for publication.

## Academic Resources and Special Programs

### **TRIO Upward Bound Math and Science**

TRIO Upward Bound Math and Science provides support to first-generation, low-income high school students from a five-state region who have demonstrated an interest and have the aptitude to pursue a degree in math and science or a related field at the college level. Traditional support services as well as seminars and instruction in service-learning, research, college selection, college entrance preparation, and financial aid are provided during the academic year. During the summer, participants attend a residential program on Grand Valley's campus.

### **Upward Bound**

The Upward Bound program helps eligible high school students prepare for college-level studies. The program staff works closely with high school teachers and administrators as well as the parents of program participants. Grand Valley State University selects ninth-grade students who continue in the program until they graduate from high school. During the academic year, the program staff helps these students select college preparatory courses, provides students with academic, personal, and career counseling, and conducts tutorial sessions for students who are experiencing difficulties in their coursework or who want to sharpen their study skills. Students in the Upward Bound program contribute to their community by volunteering time to various service organizations and agencies. During the summer, students become familiar with college life by living in dormitories on campus, taking accelerated courses in math, English, and science, and participating in internships in various departments on the Grand Valley campus.

### **Rise Above It Program**

Grand Valley requires students to have a grade point average of 2.0 to be in good standing. Rise Above It is an outreach program designed to provide the tools, strategies, and resources necessary to help students raise their grade point average above a 2.0 and improve academic status.

### **Student Athlete Advising**

The athletic advisor provides one-on-one academic advising and support to student athletes. Students maintain a regular schedule of appointments to assist with academic success and ensure athletic eligibility.

### **Testing Services**

Testing Services offers Grand Valley Math Placement Testing, WRT 305 (formerly ENG 305) placement testing, College-Level Examination Program (CLEP), Comprehensive English Language Testing (CELT) for speakers of English as a second language, and accommodated testing for participants of the Office of Academic Support (Disability Services).

### **Tutoring**

ARC's Tutoring Center provides free tutoring to all Grand Valley State University students in most 100- and 200-level courses. Tutorials are done in one-on-one and group settings. Tutoring services are available at the Allendale, Pew, and Holland campuses.

### **Math Lab**

The math lab provides walk-in tutoring for students enrolled in Math 097, 110, 122, 123 and 201 (elementary algebra through calculus I). Group tutoring sessions are also provided for Statistics 215 (introductory applied statistics). Whenever appropriate and achievable, tutoring is available on an individual basis. The math lab is located in 2250 MAK.

## **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 & 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.

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 [www.ace.coe.wayne.edu](http://www.ace.coe.wayne.edu).

## **College of University-wide Interdisciplinary Initiatives (CUII)**

The College of University-wide Interdisciplinary Initiatives (CUII) fosters and supports interdisciplinary initiatives and university-wide support services in teach-

## College of University-wide Interdisciplinary Initiatives

ing and research. 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; the Honors College; and Freshman Studies. 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 College's mission is to raise the level of faculty collaboration across the campus as well as provide a place for the development of new interdisciplinary initiatives.

## International Education

Grand Valley State University's mission, values, and vision statement include several references to educating students in the global community beyond Michigan or the USA. 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 Office of International Education (OIE) 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 Office of International Education, which includes the Padnos International Center, organizes and coordinates the university's international programs and activities, working with all academic departments, divisions, schools and other units. International Education oversees international partnership agreements, global 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.

International Education 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, divisions and schools, 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

## International Education

nations. Partnerships also increase the presence of international students and faculty at Grand Valley State University. Currently, Grand Valley has agreements with the following institutions, which offer summer, semester, and year long study abroad opportunities for students:

Bosnia, University of Sarajevo  
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 Superieure Des Sciences Commerciales of Angers  
Ghana, University of Cape Coast  
Japan, International Christian University, Tokyo; The Japan Center for Michigan Universities, Hikone  
Mexico, Universidad De Las Americas-Puebla  
Poland, Krakow University of Economics  
Spain, University of Deusto, Bilbao  
Sweden, Uppsala University  
Various locales, Consortium for Overseas Student Teaching (COST)  
West Indies, University of West Indies, Barbados, Jamaica, Trinidad

Grand Valley is also a member of COUNCIL:CIEE, a worldwide consortium sponsoring overseas study opportunities, work abroad, and volunteer opportunities.

### Study Abroad

International Education 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 Padnos Study Abroad Scholarship (year long study with preference given to majors in the 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.

IE maintains a fully staffed overseas programs Resource Room in the Student Services Building, Room 105, 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 Office of International Education also houses the US Office for John Cabot University of Rome, Italy, and provides information on JCU to students across the USA.

### 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

## **International Education**

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 1–16 credits of IS 380 per academic term, if approved for study abroad through an application process administered by the Padnos International Center.

### **IS 680**

International Studies 680 is similar to IS 380, but serves the role of placeholder for graduate credit, for Grand Valley graduate students participating in study abroad programs.

## **Global Programs**

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

- Central London, England — accounting and British culture
- Central London, England — urbanization/geography and British Culture
- Egypt — communications and Middle Eastern studies
- El Salvador, Central America — social work
- Guadalajara, Mexico — Spanish language and culture
- Kingston, England — nursing
- 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 the 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**

International Education organizes various academic activities—lecture series, roundtables, conversation series and research forums—during the fall and winter semesters. Also, IE 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 Office of International Education, Padnos International Center, Room 105C, Student Services Building, 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 annual Fall Teaching Conferences, an ongoing program of workshops, mentoring for new faculty, and grant administration. The director, assistant director, and graduate assistant are available for consultation with individual faculty and academic units. The Pew FTLC is located in 2328–2332 Mackinac 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 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.

## Continuing Education

Continuing Education provides programs and services that link Grand Valley State University to diverse communities, regions, and generations through creative enterprises. Continuing Education is committed to providing educational access through collaboration with academic departments and the development and maintenance of an infrastructure that supports academic outreach. Continuing Education provides degree completion, non-credit professional development, distance education, and community outreach programs at the Meijer Campus in Holland and at regional sites in Muskegon and in Northern Michigan including Traverse City, Petoskey, Cadillac, and Sault Ste. Marie. For additional information about regional programs and services, visit the Continuing Education Web site at [www.gvsu.edu/ce](http://www.gvsu.edu/ce).

### Programs

At the Meijer Campus in Holland, Grand Valley offers the 100 and 200 level freshman and sophomore classes for those just beginning a degree completion program as well as undergraduate degrees in business administration, criminal justice, teacher certification (language arts/elementary education), and sociology. Graduate degrees are offered in business administration, public administration, and education. Personal and professional development workshops are also offered at the Meijer Campus. Individuals and organizations seeking additional



## **Continuing Education**

information about Grand Valley in Holland should call (616) 394-4848 or (616) 331-3910.

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), and the core requirements for a bachelor of business degree. Graduate degrees include education, public administration, and social work. For more information about Grand Valley in Muskegon call (231) 777-0505.

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 Petoskey, Saulte Ste. Marie, and Cadillac. For information about Grand Valley in Northern Michigan call (888) 995-1785.

## **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.

### **Interactive Television Courses**

Interactive television courses allow learners in two or more locations to see and hear one another on a closed-circuit television system. This system allows the university to offer a wider selection of courses and degree programs to students in such locations as Traverse City, Muskegon, and Petoskey.

Grand Valley's video conferencing facilities are also used by corporations and other educational institutions for training, national or statewide meetings, workshops, and seminars. Please direct questions to the Distance Education Office at (616) 331-6616.

### **Online Courses**

Grand Valley State University offers courses and programs via the Internet. Information about the courses and programs is available at [www.gvsu.edu/gvonline](http://www.gvsu.edu/gvonline).

### **Noncredit Services**

Continuing Education sponsors selected activities to serve the business and professional communities as well as individuals in West Michigan. These include providing training to businesses and other organizations as well as international travel opportunities. Seminars and workshops are available online and at the Meijer Campus in Holland. Information about noncredit services and seminars can be found on the Division's Web page ([www.gvsu.edu/ce](http://www.gvsu.edu/ce)) 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) 331-6804.

### **Grand Forum**

Continuing Education, through Grand Forum provides lifelong learning programs for older adults. Information on Grand Forum is available by calling (616) 331-6615.

## **Office of Graduate Studies and Grants Administration**

The Office of Graduate Studies and Grants Administration is located in the Richard M. DeVos Center on the Pew Grand Rapids Campus. The Pew Campus is now home base for most of Grand Valley's graduate degree programs. Many graduate programs and courses are now 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.

The Dean of Graduate Studies works on behalf of all graduate students to ensure that Grand Valley'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 Office of Admissions, Academic Deans, Department Chairs, the Council of Graduate Program Directors, 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 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. Many graduate program directors are also located at the Pew Campus. Programs in communication and computer information systems are located in Allendale. The graduate program directors in health professions (occupational therapy, physical therapy), Physician Assistant Studies, and the Kirkhof College of Nursing are located in the Cook-DeVos Center for Health Sciences on the Pew Grand Rapids Campus.

The Office of Graduate Studies and Grants Administration also 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 actually submitting grant proposals to funding sources. We also work with the project directors of such grants in managing and monitoring their grant awards. To

### **Hauenstein Center for Presidential Studies**

foster the quality of the grants submitted and the quality of our management of these awards, this office offers workshops on grantsmanship and project management.

## **Hauenstein Center for Presidential Studies**

The Hauenstein Center for Presidential Studies exists to increase informed discussion of the American presidency among scholars, students, government leaders, and engaged citizens. The Center sponsors lectures and conferences to examine U.S. presidents and their impact on domestic and world affairs. The Center also provides a forum for present and future leaders who are committed to public service. The Hauenstein Center works in partnership with the Gerald R. Ford Foundation and the Gerald R. Ford 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 mission of the Johnson Center is to promote effective philanthropy, community improvement, and excellence in nonprofit leadership through teaching, research, and service.

The Johnson Center encourages an understanding of the historical roots and contemporary practices of philanthropy; promotes and supports service learning and community engagement; and encourages best practices in management, leadership, and governance of nonprofit organizations.

The Johnson Center provides grants to Grand Valley faculty for course development and research related to philanthropy, civic engagement, and the nonprofit sector. Faculty may also apply for grants to facilitate service-learning in their courses.

Continuing education opportunities are available to nonprofit professionals through the Johnson Center's workshops, seminars, research, and consultation services.

Students have opportunities to participate in Johnson Center activities as paid assistants, interns, or research associates. The Johnson Center for Philanthropy is located on the second floor of the Richard M. DeVos Center.

The Michigan Alternative and Renewable Energy Center (MAREC)

## The Michigan Alternative and Renewable Energy Center (MAREC)

The Michigan Alternative and Renewable Energy Center is a 25,000 square foot facility located on Muskegon Lake in the Muskegon 34-acre SmartZone. The facility features incubator space, research laboratories, a conference center, energy resource center, offices, and meeting space. The building is energy self-sufficient with electricity produced by a fuel cell and solar photo-voltaics, heating and air conditioning utilize “waste heat” from the fuel cell and “peak” power available from a nickel metal hydride battery storage system. In addition, the building is the first newly constructed facility in Michigan to receive “gold certification” as a LEED (Leadership in Energy and Environmental Design) building. It is the tenth in the country.

MAREC supports multidisciplinary research and education concerning energy innovations. It offers a variety of educational outreach programs with a special emphasis for K-12 schools and community groups. It also serves as a demonstration site for new energy technologies in partnership with corporations.

Grand Valley students and faculty have the opportunity to participate in MAREC activities as volunteers, paid assistants, interns, or research associates. The MAREC office is located at 200 Viridian Drive, Muskegon, Michigan.

## 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 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 Leaders.

Robert B. Annis Water Resources Institute

## 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 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, 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 Geographic Information Services 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 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](http://www.gvsu.edu/wri).

## 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

## Van Andel Global Trade Center

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 West Michigan community.

Named after Jay Van Andel, co-founder of Amway and a pioneer of international business, the Van Andel Global Trade Center was established as a core facility dedicated to advancing international trade and supporting West Michigan businesses as they prepare to enter and prosper in the era of international business competition.

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 West Michigan. The Center enters into strategic partnerships with members of the University and the business community to accomplish this objective.

Center 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 a clearinghouse for international trade resources, including an electronic resource room and an extensive Web site. The VAGTC has a corporate membership program that offers high value, high quality services to companies from Battle Creek to Traverse City, and Lansing to the Lakeshore.

The VAGTC is now offering training programs in eight different states, while providing training to over two thousand employees over the last two years. Since its inception in 1999, the VAGTC has offered consulting services to over 200 companies in the West Michigan area. With a fast growing membership base, the VAGTC is poised to expand 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 the Right Place Program and a pioneer of international trade for Amway, Jay Van Andel is an inspiration for those in West Michigan seeking to

## **Van Andel Global Trade Center**

prosper in expanding overseas markets. It is in this spirit that the Trade Center, named after Jay Van Andel, is quickly becoming the core facility dedicated to advancing international trade and supporting West 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 West Michigan's most outstanding entrepreneurs.

## **Global Advisory Board**

The Center's Global Advisory Board is composed of the Executive Director of the Van Andel Global Trade Center and leaders from the business and economic development communities. The Board serves to sustain a collaborative environment between the Center and the West Michigan community. The Board meets to advise the Center on the programs and services offered to the West Michigan community as well as to provide guidance on future initiatives.

## **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). It 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: R. Stephens.

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, womens 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

African/African American Studies encourages students to participate in study abroad programs. Opportunities are available 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 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. Three credits. Offered fall semester.

**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. Three credits. Offered winter semester.

**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. Three credits. Offered fall semester of even-numbered years.

**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. Three credits. Offered winter semester.

**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. Three credits. Offered fall semester.

**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. Three credits. Offered winter semester.

**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. Three credits. Offered winter semester.

**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 Africa American males. Three credits. Offered winter semester of odd-numbered years.

**AAA 352/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. A dual listing of AAA 352. Gender and Identity theme. Fulfills U.S. Diversity requirement. Three credits. Offered fall semester.

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

**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. One to three credits. Offered on sufficient demand.

**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." Prerequisites: Three credits in any African/African American Studies course offering or US 101 or SOC 382. Offered fall and winter semesters.

**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 399 and 499 combined may count toward the minor. One to three credits. Offered fall and winter semesters.

**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. One to six credits. Offered fall and winter semesters.

**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 399 and 499 combined may count toward the minor. Prerequisite: Nine hours in the department and written permission of the instructor before registration. One to four credits. Offered fall and winter semesters.

## 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, Narayan, and Borges offer varied literary glimpses of foreign worlds. Fulfills Philosophy and Literature Foundation. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

**GPY 351 Geography of Africa.** Introduces students to a geographical and historical understanding of Africa. Focus will be on continent-level as well as regional and local-level phenomena. The political, economic, social, and environmental contexts associated with African cultures will be investigated. Three credits. Offered winter semester of odd-numbered years.

**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. Three credits. Offered fall and winter semesters.

**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.

**HST 335 African Civilizations before 1870.** Survey of African history, emphasizing the sub-Saharan region and its development from the Iron Age to the present. Offered winter semester of even years.

## Aging and Adult Life

**SS 313 The Africans.** An intensive study of the three traditions (Native, Christian, and Islamic) that have shaped Africa's past and that will have an impact on its future. A fundamental assumption of this course is that contemporary Africa can only be understood and appreciated in the total context of the triple heritage. Three credits. Offered winter semester.

## 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 HS 375 (Biology of Aging), PSY 332 (Adult Development and Aging), SOC 388 (Middle Age and Aging), and LIB 314 (Life Journey). Students must also complete three additional courses to be selected from courses such as REC 316 (Recreation for the Aging), SOC 323 (Families in Society), SOC 356 (Sociology of Health Care), or SS 381 (Death and Dying).

### Courses of Instruction

**HS 375 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. The course is articulated with SOC 388, Middle Age and Aging, and must be taken simultaneously with or subsequent to SOC 388. Emphasis will be placed upon the normal aging process as it occurs in the majority of the population. Prerequisites: A previous course in anatomy and physiology (HS 202 or HS 208 and 280), concurrent enrollment in SOC 388, or permission of the instructor. Offered on sufficient demand.

**LIB 314 Life Journey.** A study of life development from childhood through old age as perceived and expressed in works of literature, philosophy, art, and music. Focuses on insights drawn from the humanities concerning the nature of the phases of adult life. One aim of the course is to lead students to a fuller understanding of the potentials contained in their present period of life as well as a deeper understanding of what is likely to be most important to other people at a given point in their lives. Another aim of the course is to give the student increased understanding of how the humanities communicate human insight. Part of Human Journey Theme. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 101. Three credits. Offered once a year.

**REC 316 Therapeutic Recreation for the Elderly.** Involves the study of characteristics and needs of the aging and principles of program planning for them. Three credits. Offered winter semester.

**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

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patterns of health services. Race, class, and gender issues are examined. Part of Health, Illness, and Healing Theme. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered winter semester of odd-numbered years.

**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 the U.S. Diversity requirement. Three credits. Offered every semester.

**SS 381 Death and Dying.** An examination of mortality, its social and psychological consequences, and the problems it poses for Americans. Combining history and recent research findings, the course covers such topics as grief, euthanasia, suicide, the dying patient, and widowhood. Part of Death and Dying Theme. Three credits. Offered fall semester.

## Anthropology (ANT)

Chair: Hull. Professor: Brashler; Associate Professors: Hull, Rhoads; Assistant Professors: Corr, Holt, 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 or Minor 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; 206; 220; 310 or 346; 405; and 495.

**Cognate Degrees:** B.A.: Third-semester proficiency in a foreign language. B.S.: One year of science courses (either BIO 120 & 121, CHM 115 & 116, GEO 111 & 112 or PHY 220 and 221), and one upper level natural science course.

**Other Required Courses:** ANT 307 or ANT 490, ANT 300, and 3 credits in Sociology.

**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 (elective for B.S. only)

ANT 355 Migration in the Americas

## **Anthropology**

ANT 360 Ethnology of Mesoamerica  
ANT 370 Cross-Cultural Perspectives on Gender  
SS 313 The Africans

### **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 (elective for B.A. only)  
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.

A student who minors in anthropology is required to complete 21 hours in the department, including ANT 204 and 206 and either ANT 215 or ANT 220. The remaining 12 credit hours must come from 300 and 400 level courses.

## **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

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a collection of over 200,000 artifacts from more than 100 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*

ANT 204 Introduction to Cultural  
Anthropology  
ANT 206 Human Origins  
Electives/Gen Ed.

##### *Winter*

ANT 220 Introduction to Archaeology  
Electives/Gen Ed.

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### Second Year

#### *Fall*

First Semester Language  
STA 215 Introductory Applied Statistics  
Electives/general education.

#### *Winter*

ANT Subfield Requirement  
Second Semester Language  
Electives/general education

### Third Year

#### *Fall*

ANT 300 Research in Anthropology  
Third Semester Language  
ANT Subfield Requirement  
Electives/general education

#### *Winter*

ANT 346 Kinship and Culture  
ANT Subfield Requirement  
Electives/general education

### Fourth Year

#### *Spring/Summer*

ANT 307 Field Techniques and Laboratory  
Methods /OR/  
490 Practicum: Career Service

#### *Fall*

ANT 405 Anthropological Theory

#### *Winter*

ANT 495 Practicing Anthropology  
(capstone)

## B.S.

### First Year

#### *Fall*

ANT 204 Introduction to Cultural  
Anthropology  
ANT 206 Human Origins  
Electives/general education

#### *Winter*

ANT 220 Introduction to Archaeology  
Electives/general education

### Second Year

#### *Fall*

First Semester Science  
STA 215 Introductory Applied Statistics  
Electives/general education

#### *Winter*

ANT Subfield Requirement  
Second Semester Science  
Electives/general education

### Third Year

#### *Fall*

ANT 300 Research in Anthropology  
Upper Level Science  
ANT Subfield Requirement  
Electives/general education

#### *Winter*

ANT 310 Perspectives in Bioanthropology  
ANT Subfield Requirement  
Electives/general education

### Fourth Year

#### *Spring/Summer*

ANT 307 Field Techniques and Laboratory  
Methods  
/OR/  
490 Practicum: Career Service

#### *Fall*

ANT 405 Anthropological Theory

#### *Winter*

ANT 495 Practicing Anthropology  
(capstone)

## 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. Three credits. Offered fall and winter semesters.

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**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. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered winter semester of odd-numbered years.

**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. Three credits. Offered winter semester.

**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. Four credits. Offered fall and winter semesters.

**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. Prerequisites: STA 215; 9 credits in anthropology. Three credits. Offered fall semester.

**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. Prerequisite: Permission of instructor. One to nine credits. Offered spring and/or summer session.

**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. Prerequisites: ANT 206 and ANT 300. Four credits. Offered winter semester of even-numbered years.

**ANT 311 Native Peoples of North America.** A multifaceted examination of North American Indians and a comparison of that culture with the American. Focus on origin, early history, and present disposition of American Indian populations. Fulfills U.S. Diversity requirement. Part of American Mosaic theme. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**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.



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Prerequisites: ANT 204, ANT 206, or ANT 220, or permission of instructor. Part of Death and Dying theme. Three credits. Fulfills World Perspective requirement. Offered fall semester.

**ANT 320 Culture and Disease.** Introduces students to the anthropological study of disease ecology and medical systems cross-culturally. Explores the impact of disease, ecology, and sociocultural behavior throughout human evolution. Investigates the efficacy and nature of non-Western curing procedures and the cultural and psychodynamic features of illness. Prerequisites: Junior standing and fulfillment of a course in US Diversity or World Perspectives (not including this course). Part of Health, Illness, and Healing theme. Three credits. Offered fall semester.

**ANT 325 Archaeology of North America.** A survey of prehistoric developments from Alaska to Central America, including the Mesoamerican civilizations. Three credits. Offered winter semester of odd-numbered years.

**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. Three credits. Offered on sufficient demand.

**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. Prerequisites: Completion of ENG 150 and either World Perspectives (not including this course) or US Diversity. Part of Earth and Environment theme. Three credits. Fulfills World Perspective requirement. Offered winter semester.

**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. Prerequisites: ANT 204 and ANT 300. Fulfills World Perspectives requirement. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisite: Junior or senior status in anthropology, biology, geology, resource management, or sociology. Three credits. Offered on sufficient demand.

**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. Three credits. Prerequisites: ANT 215, ANT 220, MES 201, or prior approval of the instructor. Offered winter semester of odd-numbered years.

**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. Prerequisite: At least one general education diversity (World Perspective or US Diversity) course. Three credits. Offered fall semester of odd-numbered years.

**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. Three credits. Offered fall of even-numbered years.

**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 Gender, Society, and Culture theme. Prerequisite: 204 or 206. Three credits. Offered winter semester.

**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. Three credits. Offered on sufficient demand.

## Art and Design

**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. Prerequisites: 204 or 206 and the written consent of the instructor before registration. One to three credits. Offered every semester.

**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. Three credits. Prerequisite: Senior standing as an anthropology major. Offered fall semester.

**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. Prerequisites: 15 hours of course preparation and permission of instructor. One to nine credits. Offered on a credit/no credit basis. Offered every semester.

**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. Prerequisites: Senior standing and ANT 405. Three credits. Offered winter semester.

**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. Prerequisites: ANT 300 and ANT 405 (may register concurrently with ANT 405), acceptance of formal written proposal and permission of faculty member. Three credits. Offered every semester.

**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. Prerequisites: Nine hours in the department and written permission of instructor before registration. One to four credits Offered every semester.

## Social Science Courses

The following are interdisciplinary social science courses that may be used for an anthropology major or minor. Consult with your advisor for further information.

**SS 300 Research Methods in the Social Sciences.** 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. Prerequisite: STA 215. Three credits. Offered every semester.

**SS 313 The Africans.** An intensive study of three traditions (Native, Christian, and Islamic) that have shaped Africa's past and that will have impact on its future. It is fundamental assumption of this course that contemporary Africa can only be understood and appreciated in the total context of the triple heritage. Three credits. Offered on sufficient demand.

**SS/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 New Third World theme. Three credits. Offered winter semester.

## Art and Design (ART)

Chair: McGee. Professors: Seley, Wong-Ligda; Associate Professors: Bowers, Eggers, Henke, Keister, McGee, Thomas, Van Gent, Weis, Assistant Professors: Colley, Danielson, Fisher, Hosterman, Strom, Theriault, Wittenbraker, Zaszlavik, Zettle-Sterling.

## **Art and Design**

The Department of Art and Design offers courses in studio art and art history with degree programs leading to a Bachelor of Arts or Bachelor of Science degree in studio art and a Bachelor of Fine Arts degree in studio art with an emphasis in ceramics, graphic design, illustration, jewelry and metalsmithing, painting, printmaking, or sculpture. In conjunction with the College 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 art studio classes at final registration.

Course work is augmented by field trips, a campus exhibition program, and visiting artists. 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 and courses 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 based on a review of work in the six courses in the foundation program and general academic performance.

## **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.
3. 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:

## Art and Design

1. 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.
2. A 2.75 GPA must be maintained in the upper level courses for a BFA.
3. Foundation and Junior Reviews.
  - a. 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.
  - b. 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.
  - c. 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.
  - d. See the B.F.A. Handbook for scheduling details and specific requirements.
4. 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 in the Art Gallery. 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 (must be taken during freshman year):		Art History	
ART 150 2-D Design	3	ART 221 Survey of Art History I	3
ART 151 3-D Design	3	ART 222 Survey of Art History II	3
ART 152 Color and Design	3	Art history electives	6
ART 153 Creative Problem Solving	3		<hr style="width: 100%;"/>
ART 155 Introduction to Drawing I	3		12
ART 157 Introduction to Drawing II	3		
	<hr style="width: 100%;"/>		
	18		

Note: Completion of the art history component of the B.F.A. program is a prerequisite for ART 495 Issues in Art.

### Emphases

Ceramics		Graphic Design	
Ceramics 275, 376-7, 477-8	15	Graphic Design 210-1, 310-312, 410	15
Ceramics 479	3	Photography CPH 171 or 175 <sup>2</sup>	4/3
Metals 245	3	Drawing 257	3
Sculpture 270	3	Portfolio 413	3
Studio electives	18	Senior Project: Graphic Design 415	3
Senior Seminar 401	3	Practicum/Internship 417, 418, or 491	3
Issues in Art (capstone) 495	3	Issues in Art (capstone) 495	3
Senior Project B.F.A. 498	6	Six studio electives <sup>3</sup>	18
	<hr style="width: 100%;"/>	Business practice course <sup>4</sup>	3
	54		<hr style="width: 100%;"/>
			54

## Art and Design

### Illustration

Illustration 280, 381–2, 482–3	15
Drawing 257, 258	6
Graphic Design 210	3
Painting 260, 361	6
Figure Painting 385	3
Printmaking 265	3
Portfolio 413	3
Senior Project 415	3
Issues in Art (capstone) 495	3
Three studio electives	9
	<hr/>
	54

### Jewelry/Metalsmithing

Jewelry/Metals 245, 346–7, 447–8	15
Jewelry/Metals 345, 445	3
Sculpture 270	3
Ceramics 275	3
Studio electives	18
Senior Seminar 401	3
Issues in Art (capstone) 495	3
Senior Project B.F.A. 498	6
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### Painting

Painting 260, 361–2, 462–3	15
Drawing 257, 258, 355, 356	12
Printmaking or Illustration	6
Metals, Sculpture, or Ceramics	6
Studio elective	3
Senior Seminar 401	3
Issues in Art (capstone) 495	3
Senior Project B.F.A. 498	6
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	54

### Printmaking

Printmaking 265, 366–7, 467–8	15
Drawing 257, 258, 355, 356	12
Painting 260, 361	6
Metals, Sculpture, or Ceramics	3
Two studio electives	6
Senior Seminar 401	3
Issues in Art (capstone) 495	3
Senior Project B.F.A. 498	6
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### Sculpture

Sculpture 270, 371–2, 472–3	15
Metals 245	3
Ceramics 275	3
Digital 3D 321	3
Studio electives	18
Senior Seminar 401	3
Issues in Art (capstone) 495	3
Senior Project B.F.A. 498	6
	<hr/>
	54

<sup>1</sup>The graphic design emphasis requires ART 218 for one of the two art history elective courses.

<sup>2</sup>CPH 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.

<sup>3</sup>Studio electives may be selected in art, photography, or film and video. Electives in other areas must be approved by an advisor.

<sup>4</sup>Business 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

### **B.A. and B.S. in Studio Art**

Art majors seeking a B.A. or B.S. degree must complete a minimum of 45 credits in art and design.

Students seeking a major in studio art can earn either the B.A. or B.S. degree. Requirements include completion of the following:

ART 150, Foundations: 2-D Design (3 credits)

ART 151, Foundations: 3-D Design (3 credits)

ART 152, Foundations: Color and Design (3 credits)

ART 155, Foundations: Introduction to Drawing I (3 credits)

ART 157, Foundations: Introduction to Drawing II (3 credits)

Art history electives (9 credits)

ART 495, Issues in Art (3 credits)

Two courses in different 2-D areas (Prints, Painting, Graphic Design, Drawing, or Illustration) (6 credits)

Two courses in different 3-D areas (Ceramics, Metals, or Sculpture) (6 credits)

Two intermediate level studio courses in one area (6 credits)

B.A. degree cognates: Foreign language (third-semester proficiency in a foreign language).

B.S. degree cognates: Science (three courses)

1. CS 150 Introduction to Computing or PHI 103 Logic.
2. STA 215 Introductory Applied Statistics.
3. STA 216 Intermediate Applied Statistics or SS 300 Research Methods in the Social Sciences.

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.

### **Studio Minor**

Students seeking a minor in studio art are required to take 101, 150, 151, 155, 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.

### **B.A. and B.S. in Art Education (Teacher Certification)**

All students entering art education in Fall 2003 and after must follow the program leading to LQ certification (K-12 comprehensive with no teachable minor), while students entering previously may finish LX certification (as outlined in their catalog of record), but must complete all coursework and state examinations by July 2006. Students currently pursuing LX certification may, instead, elect to meet the standards for LQ certification; however, it is imperative that you see your advisor for assistance.

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

## Art and Design

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 a 3.0 minimum GPA in art in order to become eligible for entrance into the College of Education and for teacher assisting. The methodology courses, ART 332 and 333, must be taken before arranging for teacher assisting and directed teaching. Students should consult the College of Education for the specific requirements concerning teacher assisting and directed teaching.

### Required Curriculum for Art Education

ART 150 2-D Design (3 credits)

ART 151 3-D Design (3 credits)

ART 152 Color and Design (3 credits)

ART 153 Creative Problem Solving (3 credits)

ART 155 Introduction to Drawing I (3 credits)

ART 157 Introduction to Drawing II (3 credits)

Four introductory studio courses (12 credits)

Two drawing courses (6 credits)

Two intermediate studio emphasis courses (6 credits)

One advanced studio emphasis course (3 credits)

Two studio/art education electives (6 credits)

ART 221 Survey of Art History I (3 credits)

ART 222 Survey of Art History II (3 credits)

Two art history electives (6 credits)

ART 332 Introduction to Art Education (3 credits)

ART 333 Curriculum Development and Practice (3 credits)

ART 334 Teaching the Non-Traditional Canon (3 credits)

ART 495 Issues in Art (capstone) (3 credits)

B.A. degree cognates: Foreign language (third-semester proficiency in a foreign language).

B.S. degree cognates: Science (three courses)

1. CS 150 Introduction to Computing or PHI 103 Logic
2. STA 215 Introductory Applied Statistics
3. STA 216 Intermediate Applied Statistics or SS 300 Research Methods in the Social Sciences

## 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, elementary school teacher, gallery operator, graphic designer, high school teacher, illustrator, jeweler, master printer\*, metalsmith\*, museum curator\*, museum display designer\*, museum educator\*, painter\*, printmaker\*, sculptor\*, set designer, stylist in industry (sculptors), and supervisor museum school\*.

\*May require graduate training after the B.F.A. at the M.A. or M.F.A. level.

## 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.

## Art and Design

### First Year

ART 150 2-D Design  
 ART 151 3-D Design  
 ART 152 Color and Design  
 ART 155 Introduction to Drawing I  
 ART 157 Introduction to Drawing II  
 Five general education courses

### Second Year

Six courses from art history and studio requirements  
 Four general education courses or electives

### Third Year

Two courses from art history; six studio courses  
 Four general education courses or electives

### Fourth Year

ART 495 Issues in Art  
 Art electives  
 General electives

## Recommended Curricula for B.F.A. Program

### Freshman Year

#### Fall Semester

ART 150 2-D Design	3	
ART 151 3-D Design or ART 153 Creative Problem Solving	3	
ART 155 Introduction to Drawing I	3	
Two basic skill requirements (WRT 150/MTH 110)	8	
	17	

#### Winter Semester

ART 151 3-D Design or ART 153 Creative Problem Solving	3	
ART 152 Color and Design	3	
ART 157 Introduction to Drawing II	3	
Two general education courses	6	
	15	

### Sophomore Year—B.F.A. Fine Arts

#### Fall Semester

ART 221 Survey of Art History I	3	
Fine art studio of choice: ceramics, drawing, metals, painting, printmaking, sculpture	6	
Two general education courses	6	
	15	

#### Winter Semester

ART 222 Survey of Art History II	3	
Fine art studio of choice	6	
Two general education courses	6	
	15	

### Sophomore Year—B.F.A. Graphic Design

#### Fall Semester

ART 210 Graphic Design I	3	
ART 221 Survey of Art History I	3	
ART 257 Life Drawing	3	
CPH 171 or 175 Photography	4/3	
One general education course	3	
	15	

#### Winter Semester

ART 211 Graphic Design II	3	
ART 222 Survey of Art History II	3	
One studio elective	3	
Two general education courses	6	
	15	



## Art and Design

### Junior Year—B.F.A. Fine Arts

Fall Semester		Winter Semester	
Art history elective	3	Art history elective	3
Fine art studio of choice	6	Fine art studio of choice	6
Fine art studio: Follow emphasis program	3	One art studio course selected from emphasis listing	3
One general education course	3	One general education course	3
	<u>15</u>		<u>15</u>

### Junior Year—B.F.A. Graphic Design

Fall Semester		Winter Semester	
ART 310 Graphic Design III	3	ART 218 Design History	3
Art history elective	3	ART 312 Graphic Design IV	3
One studio elective	3	Two studio electives	6
Business practice course	3	One general education course	3
One general education course	3		<u>15</u>
	<u>15</u>		

### Senior Year—B.F.A. Fine Arts

Fall Semester		Winter Semester	
ART 401 Senior Seminar	3	ART 498 Senior Project (B.F.A. Exhibit)	6
ART 495 Issues in Art (capstone)	3	Fine art studio (choice)	3
Emphasis: Fine art studio	3	One general education course	3
One studio elective	3	One general elective	3
One general education course	3		<u>15</u>
	<u>15</u>		<u>122</u>

### Senior Year—B.F.A. Graphic Design

Fall Semester		Winter Semester	
ART 410 Graphic Design V	3	ART 415 Senior Project: Graphic Design	3
413 Portfolio	3	Two studio electives	6
ART 491 Internship/ART 417–418 Practicum	3	Two general education courses	6
ART 495 Issues in Art (capstone)	3		<u>15</u>
One general education course	3	Total	122
	<u>15</u>		

## 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. Three credits. Offered fall and winter semesters.

**ART 107 Reproduction Processes.** Covers equipment, materials, techniques and procedures of a design studio: how to interact with clients, assemble a job, mark it up for reproduction, shepherd it through printing, and solicit production bids. Responsibilities of the art director are explored. Prerequisite for all design practicum courses. Three credits. Offered fall and winter semesters.

**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

## Art and Design

and historical examples are presented through lectures and slides and applied to studio problems. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**ART 152 Foundations: Color and Design.** Fundamentals of design using more complex themes and including an in-depth study of color theory. Prerequisites: 150, 151, 155. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**ART 157 Foundations: Introduction to Drawing II.** A continuation of techniques and media from Introduction to Drawing I. Prerequisite: 155. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Admission to the Graphic Design or Illustration emphasis; permission of instructor. Three credits. Offered fall semester.

**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. Prerequisite: 210. Three credits. Offered winter semester.

**ART 218 Design History.** The history of design from the Industrial Revolution to the present. Discussions of the politics and ethics of design. Three credits. Offered fall and winter semester.

**ART 221 Survey of Art History I.** A survey of art history from prehistoric times to the Renaissance. Three credits. Offered fall semester.

**ART 222 Survey of Art History II.** A survey of art history from the Renaissance to the present day. Three credits. Offered winter semester.

**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. Four credits. Offered fall and winter semesters.

**ART 245 Introduction to Jewelry and Metalsmithing.** A study of the fundamentals of metal-smithing; fabrication techniques, surface embellishment, simple stone setting, and finishing placed within a conceptual context. Prerequisites: 152, 157; waived for non-majors. Three credits. Offered fall and winter semesters.

**ART 257 Life Drawing.** A continuation of techniques and media from Introduction to Drawing, with emphasis on the human figure. Prerequisite: 157. Three credits. Offered fall and winter semesters.

**ART 258 Intermediate Drawing.** An exploration of pictorial concepts in drawing in a variety of media with the emphasis upon individual expression. Prerequisite: 257. Three credits. Offered winter semester.

**ART 260 Introduction to Painting.** Fundamentals of painting in opaque media with a variety of subjects and styles. Prerequisites: 152, 157. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 152, 157. Three credits. Offered fall and winter semesters.

**ART 270 Introduction to Sculpture.** Direct modeling, carving, and construction as approaches to sculpture. Experimentation with plaster, clay, wood, and metal. Prerequisites: 152, 157; waived for non-majors. Three credits. Offered fall and winter semesters.

## Art and Design

**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. Prerequisites: 152, 157; waived for non-art majors. Three credits. Offered fall and winter semesters.

**ART 280 Introduction to Illustration.** An overview of the illustration field covering historical and contemporary perspectives, aesthetic sensitivity, and professional practicality. Prerequisite: Completion of Foundations. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 211. Three credits. Offered fall semester.

**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. Prerequisite: 211. Three credits. Offered fall semester.

**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. Prerequisite: 310. Three credits. Offered winter semester.

**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. Prerequisite: 210. Three credits. Offered winter semester.

**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. Prerequisite: Junior status. Three credits. Offered fall semester.

**ART 325 Nineteenth-Century Art.** A survey of art in Europe during the nineteenth century. Prerequisite: 222. Three credits. Offered fall semester of even-numbered years.

**ART 326 Twentieth-Century Art.** A survey of art in Europe and America in the twentieth century. Prerequisite: 222. Three credits. Offered winter semester of odd years.

**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. Four credits. Offered fall and winter semesters.

**ART 332 Art in the Elementary Classroom.** Gives prospective art teachers an opportunity to investigate some of the contemporary issues of public education and examine pertinent ideas of art education on the elementary level. Required for certification of art teachers for K—12th grades. Should be taken before the assistant teaching experiences. Restricted to art majors and minors. Prerequisites: 150, 151, 155. Four credits. Offered fall semester.

**ART 333 Art in the Secondary Classroom.** A further exploration of art materials, techniques, and methods of motivation relevant to the secondary classroom, with emphasis on the contemporary philosophy of art education. Required for certification of art teachers for K—12. Restricted to art majors and minors. Prerequisites: 150, 151, 155. Three credits. Offered winter semester.

**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. Prerequisite: 245 or permission of instructor. One credit. Offered fall semester every other year.

**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. Prerequisite: 245. Three credits. Offered winter semester.

## Art and Design

**ART 347 Intermediate Jewelry and Metalsmithing II.** The study of raising (angle and anticlastic), forging, patinations, hinges, connections and findings, and introduction to specialized equipment placed with the context of personal exploration and research. Prerequisite: 346. Three credits. Offered fall semester.

**ART 355–356 Advanced Drawing I and II.** Advanced exploration of drawing techniques with emphasis upon personal expression. Prerequisite: 258 or 355. Three credits. Offered fall and winter semesters.

**ART 361–362 Intermediate Painting I and II.** Intermediate projects using a variety of styles, subjects, and techniques. Prerequisite: 260 or 361. Three credits. Offered fall and winter semesters.

**ART 366–367 Intermediate Printmaking I and II.** A continuation of ART 265. Color and scale and combining printmaking media are emphasized. Prerequisite: 265 or 366. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 270. Three credits. Offered winter semester.

**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. Prerequisite: 371. Three credits. Offered fall semester.

**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. Prerequisite: 275. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 275. Three credits. Offered fall and winter semesters.

**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. Prerequisites vary. Variable credit. Offered on sufficient demand.

**ART 381 Intermediate Illustration I.** Fundamentals of illustration with an emphasis on digital imaging methods. Prerequisite: 280. Three credits. Offered fall and winter semesters.

**ART 382 Intermediate Illustration II.** Fundamentals of illustration with an emphasis on realistic representation. Prerequisite: 381. Three credits. Offered fall and winter semesters.

**ART 385 Figure Painting.** Introduction to painting the figure, with an emphasis on perceptual accuracy. Prerequisite: 361. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Permission of the instructor. Offered fall and winter semesters. One to four credits are available per semester.

**ART 401 Senior Seminar.** For studio artists and designers about to enter graduate school or professional design studios. Includes a required three-day field trip to Chicago, information concerning resume preparation, exhibitions, interviewing, portfolios, design agencies, galleries, museums, and analysis of the professional literature through written assignments. Students will learn how the professional art world works. Prerequisites: Art major and senior standing. Three credits. Offered fall semester.

**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. Prerequisite: 312; passage of Junior Review. Three credits. Offered fall semester.

## Art and Design

**ART 413 Portfolio.** Refinement and development of a body of work constituting a professional portfolio. Prerequisite: Senior standing in major; passage of Junior review. Three credits. Offered fall semester.

**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. Prerequisite: 410 or 483. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 310. Three credits. Offered fall and winter semesters. Offered on a credit/no credit basis.

**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. Prerequisite: 310. Three credits. Offered fall and winter semesters. Offered on a credit/no credit basis.

**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. Prerequisites: Art major/junior status. Two credits. Offered winter semester of even years.

**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. Prerequisite: 347. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 447. Three credits. Offered fall and winter semesters.

**ART 462-463 Advanced Painting I and II.** A continuation of ART 361 with advanced and more individual problems. 463 may be repeated for credit. Prerequisite: 362 or 462. Three credits. Offered fall and winter semesters.

**ART 467-468 Advanced Printmaking I and II.** A continuation of ART 367 with additional emphasis on quality printing, experimental printing and content issues. 468 may be repeated for credit. Prerequisite: 367 or 467. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 371 and 372. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 472. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 377. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 477. Three credits. Offered fall and winter semesters.

## Behavioral Science

**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. Prerequisite: 376 or 377 or 477. Three credits. Offered fall semester.

**ART 482 Advanced Illustration I.** Development of a personal style of illustration supported by an examination of historical trends. Prerequisite: 382. Three credits. Offered fall and winter semesters.

**ART 483 Advanced Illustration II.** Development of personal styles of illustration supported by an examination of contemporary trends. Prerequisite: 482. Three credits. Offered fall and winter semesters.

**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. Variable credit. Offered every semester.

**ART 491 Internship in Studio Art.** A special study opportunity that allows for advanced students to work for academic credit in a professional shop, gallery, or studio. Internships are prearranged by the department, are limited in number, and follow prescribed campus internship policy. Prerequisite: Variable; permission of department. Variable credit. Offered on sufficient demand. Offered on a credit/no credit basis.

**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. Prerequisite: Senior standing in B.A., B.S., or B.F.A. program. Three credits. Offered fall and winter semesters.

**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. Six credits. Offered fall and winter semesters.

**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. Prerequisite: Prior arrangement with a specific faculty. Variable credit. Offered fall and winter semesters.

## 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.

Students may earn either 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 Statistics 215, Social Science 300, and Psychology 400. The B.S. degree cognate sequence in the sociology concentration is Statistics 215, Social Science 300, and Sociology 360.

Students must complete a minimum of 36 hours, including SS 300. 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

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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 courses see the separate listings under Psychology and Sociology.

## Biology (BIO)

Chair: Menon. Professors: Bajema, Lombardo, Northup, Rogers, J. Shontz, N. Shontz; Associate Professors: Dunn, Griffin, Huizenga, Hunt, Luttenton, MacDonald, Menon, Morgan, Staves, Thorpe, Trier; Assistant Professors: Blackman, Burton, Dietrich, Dobson, Greer, Jacquot, Joseph, Kantz, Lopez, Matthews, McClinton, Nikitin, Ostrow, Rueth, Snyder, Thomasma, Vigna.

Degrees offered: Master of Science, 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, aquatic and fisheries biology, preveterinary medicine, and environmental health.

## Biology

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 and 376 Genetics\*
  - BIO 405 and 406 Cell and Molecular Biology
  - 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 HS 208 and 309, HS 212 and 213, and HS 290 and 291. One course must be taken from the Plant Biology category (BIO 303, 323, 333, 403, 413, 423; 573 with permission), and one course must be taken from the Animal Biology category (BIO 222, 232, 272, 302, 342, 352, 362, 372, 412, 422, 432; 572 with permission; HS 208 and 309, HS 290 and 291). BIO 103, 105, 107, 109, 205, 206, 310, 311, and 355 are excluded from the biology major.
4. Cognates (minimum of 23 credits):
  - a. CHM 115, 116 and either 231, and 232 or 241, and 242.
  - b. STA 215\* or MTH 125\* or MTH 201\*
  - c. PHY 200 or 220 or 230; 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.

### 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 2.8 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 Pre dental Emphasis:

Students planning careers as physicians and dentists may major in biology. There is no absolute list of required courses for persons seeking admission

\*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.

\*Satisfies B.S. degree cognates. B.A. students must take the listed courses and satisfy the foreign language requirement.



## Biology

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, 116, 241, and 242, and PHY 220 and 221. In addition, electives should be considered from among BIO 302, 357, 422, and 432; HS 208 and 309, 212 and 213, 290 and 291; and CHM 351, 461, 462, and 463.

3. **Preveterinary Medicine Emphasis:**  
Students preparing for careers as veterinarians may major in biology. Students should complete the following courses: CHM 115, 116, 241, 242, 461, and PHY 220, 221. Students must have competency in college algebra and trigonometry and must choose biology electives from 222, 232, 302, 303, 352, 422, 432, and HS 212, 213. This emphasis includes all the course requirements currently necessary for admission to the Michigan State University School of Veterinary Medicine. In addition, 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. 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.
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 pre-professional sample curriculum, which is printed in the Physical Therapy section of the catalog, are strongly recommended to ensure that all requirements are met in the most efficient manner. Students must take BIO 375 and 376 as well as BIO 121, 215, 405/406, 495, and a plant biology course (BIO 303, 323, 333, 403, 413, 423; 573 with permission) to complete the biology major.
5. **Plant Biology Emphasis** requires:  
BIO 303, 333, and 403 as biology electives.
6. **Animal Biology Emphasis** requires:  
BIO 222, 232, 302, and 432 as biology electives.
7. **Wildlife Biology Emphasis** requires:  
BIO 222, 333, 342, and 408 as biology electives and NRM 281 as a cognate.
8. **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. All students will complete BIO 440 and BIO 450. All students must also choose at least one course from each of the following three categories: BIO 362 or BIO 442, BIO 232 or BIO 372, BIO 323 or BIO

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413. Students will consult with their academic advisor to develop a plan of study that fits their interests and career goals.

### 9. Genetics and Cell/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/Molecular Biology Emphasis. The Genetics and Cell/Molecular Biology Emphasis requires CHM 241, 242, 461, 462, and either PHY 220 or 230 as cognates. PHY 221 (or 231) is highly recommended. 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 this 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 between the scientific disciplines, their relationship with technology, and their relevance to society. In order to be certified students must complete this major with at least a 2.8 GPA and the elementary teaching minor. See the Science section for details.

## Biopsychology Major

Students interested in this interdisciplinary major should consult the Psychology Department for specific requirements.

## Minor Requirements

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:

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Genetics category—BIO 355 or 375 and 376.

Animal Biology category—BIO 222, 232, 342, 352; (572 with permission only); HS 202 or 208 and 309.

Plant Biology category—BIO 303, 323, 333, 403; (573 with permission only).

HS 212 and 213, 290 and 291 count in the minor toward the required 24 credits in biology.

Cognate: CHM 109 Introductory Chemistry or CHM 115 Principles of Chemistry I.

Health science majors selecting a biology minor for teacher certification are not permitted to double count the following courses: HS 208 and 309, HS 212 and 213, and HS 290 and 291.

## 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 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 catalog description.

Upon admission to the program, the student and an advisor from the Biology Department or the Department of Biomedical and Health 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:

BIO 400-level courses with permission of advisor

BIO 525 Teaching Reproductive Health

BIO 557 Microbiology for Teachers

BIO 560 Productivity of Ecosystems

BIO 565 Modern Genetics

BIO 572 Field Zoology

BIO 573 Plants of the Great Lakes Area

BIO 575 Ecology of the Great Lakes

BIO 675 Methods for Aquatic Ecosystems

BIO 680 Special Topics in Biology

BIO 699 Graduate Research in Biology

HS 508 Advanced Human Physiology

HS 510 Immunology

HS 512 Medical Bacteriology

HS 680 Special Topics in the Health Sciences

### **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 catalog, candidates must satisfy all of the following admissions criteria:

Satisfactory GRE score.

Official transcripts submitted directly from each institution of higher education previously attended.

A 500-word essay detailing educational and professional goals.

Three letters of reference.

A baccalaureate graduate desiring acceptance as a candidate in the Master of Science in Biology Program should request a graduate admission packet for the Biology Program. Admission will be based on the materials submitted by the potential candidate and by the perceived ability of the University to successfully provide appropriate academic support for the candidate.

A minimum overall 3.0 GPA is required. Students may be given full or conditional admission. Conditional admission may be granted to students with identified deficiencies in their background, but who are otherwise qualified for program admission. Specific requirements to remediate any such deficiencies will be defined by the Biology Graduate Program Committee and the student's graduate committee chair. Note that prospective candidates are strongly encouraged to contact the Biology Graduate Program Coordinator as early as possible to begin the process of identifying a prospective graduate committee chair.

The Biology Graduate Committee will begin reviewing applications in January for admission during the following fall semester.

### **Transfer Credits**

See the Transfer of Credit portion of the Graduate Admission section in this catalog for general provisions. If a candidate wishes any courses taken prior to admission

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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 GVSU 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 Project Or Field Experience (POFE) consisting 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 POFE credits. The purpose of the qualifying exam is to ensure that students have adequate science knowledge and skills background to successfully complete their POFE. All students will be limited to a five-year period to complete their degree.

### 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.

\*The variable credits in components two and three are designed to allow for an extended POFE. The graduate program will consist of a minimum of 33 credits.

### Financial Assistance

Prospective students should review the Costs and Financial Aid section of the Grand Valley State University 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

Numbers in parentheses at the end of the course descriptions indicate the number of lecture, discussion, and laboratory hours per week.

**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). Four credits. Offered fall, winter, and summer semesters.

**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). Three credits. Offered fall, winter, and summer semesters.

**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). Four credits. Offered fall semester.

**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). Four credits. Offered every semester.

**BIO 120 General Biology I.** Introduction to cell structure and physiology, growth and development, and genetics. Prerequisite: High school chemistry, CHM 109, or CHM 115 (CHM 109 or 115 may be taken concurrently). Fulfills Life Sciences Foundation. (3-0-2). Four credits. Offered fall, winter, and summer semesters.

**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. Prerequisite: BIO 120. (3-0-2). Four credits. Offered fall and winter semesters.

**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,

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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. Prerequisites: BIO 120, BIO 121, MTH 110, (CHM 109 or CHM 201 recommended). (1-0-2). Two credits. Offered every semester.

**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. Prerequisites: BIO 120, 121. (1-0-2). Two credits. Offered fall semesters.

**BIO 215 General Ecology.** Population, communities, and ecosystems, including primary productivity and energy flow, materials cycling, succession, population dynamics, and systems modeling. Prerequisites: BIO 120 and sophomore standing (121 recommended). (3-0-3). Four credits. Offered fall and summer semesters.

**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. Prerequisite: BIO 121. (2-0-3). Three credits. Offered fall semester.

**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. Prerequisite: BIO 121. (2-0-3). Three credits. Offered winter semester.

**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. Prerequisites: BIO 121 (215 recommended). (2-0-3). Three credits. Offered fall semester.

**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. Prerequisite: BIO 121. (2-0-4). Four credits. Offered winter semester.

**BIO 303 Plants and Fungi.** Evolution, reproduction, and structure of algae, fungi, bryophytes, lower vascular plants, and seed plants. Prerequisite: BIO 121. (3-0-3). Four credits. Offered winter semester.

**BIO 307 Science Teacher Assistant Seminar.** Strategies for teaching science in secondary schools. Coordinated by and taken concurrently with ED 307. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Junior standing and completion of the Life Sciences General Education category. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: Junior standing and completion of the Life Science General Education Section.(3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: Junior standing and completion of the Life Science General Education Requirement. (3-0-0). Three credits. Offered winter semester.

**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. Part of the New Third World Theme. Prerequisite: Completion of the General Education Life Science Requirement. (3-0-0). Three credits. Offered Fall semester.

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**BIO 323 Aquatic Plants.** Aquatic vascular plants and algae of the Great Lakes region with emphasis on taxonomy, physiology, and ecological distribution. Prerequisite: BIO 121. (2-0-3). Three credits. Offered fall semester.

**BIO 325 Human Sexuality.** Introduction to the biological dimensions of human sexuality from physiological, ecological, and evolutionary perspectives. Part of Gender and Identity theme. (3-0-0). Three credits. Offered winter semester.

**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. Students who take BIO 328 may not also earn credit for BIO 338. Prerequisite: Junior standing. (3-0-0). Three credits. Offered fall, winter, and summer semesters.

**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. Prerequisite: Junior standing. One course in biology or psychology recommended. (3-0-0). Three credits. Offered winter semester.

**BIO 333 Systematic Botany.** Principles and methods of taxonomy of vascular plants. Prerequisite: BIO 121. (2-0-3). Three credits. Offered winter semester.

**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. Students who take BIO 338 may not also earn credit for BIO 328. Prerequisite: Junior standing. (3-0-0). Three credits. Offered fall, winter, and summer semesters.

**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. Prerequisite: BIO 121. (2-0-3). Three credits. Offered winter and occasional summer semesters.

**BIO 352 Animal Behavior.** Behavior of invertebrates and vertebrates with emphasis on adaptive significance. Prerequisites: Two courses in biology or psychology or permission of instructor. (2-0-3). Three credits. Offered winter semester.

**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. Prerequisite: BIO 120 or 103, or permission of instructor. (3-0-0). Three credits. Offered fall, winter, and occasional spring/summer semesters.

**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 HS 212 and 213. Prerequisites: BIO 120, 121, and 215 or permission of instructor. (3-0-3). Four credits. Offered fall semester.

**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. Prerequisites: BIO 121; 120 is recommended. (3-0-3). Four credits. Offered fall semester.

**BIO 372 Aquatic Insects.** Examines in detail the morphology, ecology, diversity, and significance of aquatic insects, with emphasis on the fauna of local streams and lakes. Students will also gain expertise in the collection, curation, and identification (through use of taxonomic keys) of aquatic insects. Prerequisites: BIO 120, 121, and 232 are recommended. (2-0-3). Three credits. Offered winter semester.

**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. Prerequisites: BIO 121 (or HS 208) and 120. (3-0-0). Three credits. Offered fall and winter semesters.

**BIO 376 Genetics Laboratory.** Laboratory exercises in classical and modern genetics. Required of all students taking BIO 375. Prerequisites: Concurrent enrollment in BIO 375 or successful completion of 355. (0-0-2). One credit. Offered fall and winter semesters.



## Biology

**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. (0-1-0). 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. Prerequisite: Permission of department chair. One to four credits are available per semester. Offered fall, winter, and spring/summer semesters.

**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. Prerequisites: BIO 120 and 121 and CHM 231 or 241. (3-0-2). Four credits. Offered fall semester.

**BIO 405 Cell and Molecular Biology.** Investigation of the structure and phenomena of cells at the macromolecular and cellular levels. Prerequisites: 375 and 376; CHM 232 or 242 (may be taken concurrently). (4-0-0). Four credits. Offered fall and winter semesters.

**BIO 406 Cell and Molecular Biology Laboratory.** A unified experimental approach to cell and molecular biology with emphasis on instrumentation and student initiative. Prerequisite: 405 (may be taken concurrently). (0-0-4). Two credits. Offered fall and winter semesters.

**BIO 408 Wildlife Management.** Wildlife population management; life histories, census techniques, and habitat evaluation. Prerequisites: 215; 222 and 333 recommended. (2-0-3). Three credits. Offered fall semester.

**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. Prerequisites: 375 and 376; a human genetics course, and CHM 232 may be substituted. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisites: BIO 121 and 215. (3-0-3). Four credits. Offered fall semester.

**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. Prerequisites: BIO 121 and 215. (2-0-4). Three credits. Offered winter semester.

**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. Prerequisites: 375 and 376 and CHM 232 or 461. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisites: 376; 411 or 414 recommended (may be taken concurrently). (0-0-4). Two credits. Offered winter semester.

**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 & 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. Prerequisites: Variable and with permission of instructor. One to four credits. Offered fall, winter, and spring/summer semesters.

*Note:* 400-level courses may be taken for graduate credit with prior approval.

## Biology

**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 & 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. Prerequisites: Variable and with permission of instructor. One to four credits. Offered fall, winter, and spring/summer semesters.

**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. Prerequisites: BIO 120 and 121, 355 or 375, and a course in zoology or anatomy, or permission of instructor. (3-0-2). Three credits. Offered fall semester.

**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 anther culture, protoplast preparation and fusion, embryogenesis, organogenesis, genetic transformation and developmental mutants. Prerequisite: 376. (2-0-2) Three credits. Offered winter semester.

**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. Prerequisites: 406. (0-0-4). Two credits. Offered fall semester.

**BIO 432 Comparative Animal Physiology.** Functions of the organ systems of animals, including their regulatory mechanisms. Prerequisites: BIO 121 (or HS 208), 120, CHM 232 or 242. (3-0-3). Four credits. Offered fall semester.

**BIO 440 Limnology.** Ecology of lakes and streams with emphasis on the physical, chemical, and biological factors affecting their productivity. Prerequisite: 215 or permission of instructor. (2-0-4). Four credits. Offered fall semester.

**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. Prerequisites: BIO 120, 121, and 215, or permission of instructor; 222, 352, or 362 recommended. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisites: BIO 121 and 215 or permission of instructor. (3-0-4). Four credits. Offered fall semester.

**BIO 452 Human Evolution.** An examination of the fossil, genetic, and behavioral evidence of human evolution within a Darwinian evolutionary perspective. Prerequisites: BIO 120 and 121; or ANT 206 or permission of instructor. (3-0-0). Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisites: 215; NRM 281 recommended. (3-0-3). Four credits. Offered fall and occasional summer semesters.

**BIO 470 Conservation Biology.** Theoretical concepts and research applications in the multidisciplinary and applied science of maintaining the planet's biodiversity at the genetic, species, and ecosystem levels. Topics include distribution, functions, and value of biodiversity; causes and consequences of biodiversity loss; conservation solutions; and social, political, legal, ethical, and economic aspects of biodiversity conservation. Prerequisite: 215. (3-0-0). Three credits. Offered fall semester.

**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.

## Biology

**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.

**BIO 494 Biology in the 21st Century** (capstone for Group Science–Biology Emphasis Majors). 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. Prerequisites: BIO 120, 121, and nine additional credits in biology (the last three credits may be taken concurrently). (2-1-0). Three credits. Offered fall and winter semesters.

**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. Prerequisites: Senior status and BIO 120, 121, 215, 375, 376, and CHM 231 or 241. (3-0-0). Three credits. Offered fall, winter, and occasional summer semesters.

**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. Prerequisite: A minimum grade point average of 3.0 in biology and permission of the department. One to four credits. Offered fall, winter, and summer semesters.

### Graduate Courses

500-level courses may be taken for undergraduate credit only with permission.

**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. (3-0-0). Prerequisites: bachelor's degree and teacher certification. Three credits. Offered summer semester of even-numbered years.

**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. Prerequisites: bachelor's degree, including a year each of biology and chemistry, and teacher certification. Four credits. Offered summer semester of odd-numbered years.

**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. Prerequisites: bachelor's degree and familiarity with Mendelian genetics. Three credits. Offered summer semester of even-numbered years.

**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. Prerequisites: One year of college-level biology; bachelor's degree. Three credits. Offered summer semester of odd-numbered years.

**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. Prerequisites: One year of college-level biology; bachelor's degree. Three credits. Offered summer semester of even-numbered years.

**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. Prerequisites: One year of college-level biology; bachelor's degree. Four credits. Offered summer semester.

**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

*Note:* 400-level courses may be taken for graduate credit with prior approval.

## Biomedical and Health Sciences

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. Prerequisites: Admission to the graduate program in biology. Three credits. Offered fall semester.

**BIO 675 Methods for Aquatic Ecosystems.** A survey of methods used in the study of aquatic ecosystems with an emphasis on large lake ecosystems. Discussions will include applications to the Great Lakes. Classes meet aboard the research vessel D. J. Angus in Grand Haven. Prerequisites: 575; bachelor's degree. Three credits. Offered summer semester of odd-numbered years.

**BIO 680 Special Topics in Biology.** Lecture and/or laboratory courses on topics of current interest to graduate students. Offered one time only. One to three credits. Prerequisites: Variable, and permission of instructor.

**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. Prerequisites: BIO 610 and successful completion of qualifying exams. Three, six, or nine credits. Offered each semester.

**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. Prerequisites: BIO 610 and successful completion of qualifying exams. Three, six, or nine credits. Offered each semester.

**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. Prerequisites: BIO 610 and successful completion of qualifying exams. Three, six, or nine credits. Offered each semester.

**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. Prerequisite: permission of instructor, student's committee chair, and department chair. One to three credits. Offered each semester.

## Biomedical and Health Sciences (HS)

Chair: Nieuwkoop. Professors: Kopperl, Strickler; Associate Professors: Capodilupo, Gerbens, Hecht, Nieuwkoop, Nizielski, Nochera; Assistant Professors: D. Burg, M. Burg, Graham, Hanna, Herman, Kipp, Pratt.

Degrees offered: Bachelor of Science in Biomedical Sciences; Bachelor of Science in Health Sciences; Master of Science in Health Science.

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 is also suitable for students seeking employment in areas such as academic, industry or government research, regulatory branches of government, pharmaceutical sales, etc.

The health science major prepares students for careers in the health professions. For information on the following health-related programs, refer to the respective sections in this catalog: biomedical and health sciences, movement science, nursing, occupational safety and health, physical therapy, physician assistant studies, and therapeutic recreation.

## **Biomedical and Health Sciences**

Students majoring in health sciences may select the general health sciences major or a health science major with an emphasis in anatomic laboratory science.

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 Health Science and Biomedical Science degrees. Contact the department for further information.

The Master of Science in Health 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.

## **Undergraduate Programs**

### **Biomedical Sciences Major**

Program Advisors: D. Burg, M. Burg, Hanna, Hecht, Nizielski, Strickler.

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. This major allows sufficient flexibility to accommodate additional specific professional school requirements. 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.

### **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.

## Biomedical and Health Sciences

### Major Requirements

1. General university degree requirements as identified in the General Academic Policies section of the catalog.
2. Required health sciences courses:
  - HS 208 Human Anatomy
  - HS 212, 213 Introductory Microbiology
  - HS 290, 291 Human Physiology\*
  - HS 301 Introduction to Research in the Health Sciences
  - HS 495 Concepts in Wellness\*\*
3. Required cognate courses:
  - BIO 120 General Biology I\*
  - BIO 355 Human Genetics or BIO 375/376 Genetics
  - 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 232 Biological Chemistry or
  - CHM 461 Biochemistry
  - MTH 122 College Algebra
  - MTH 123 Trigonometry
  - STA 215 Introductory Applied Statistics
  - PHY 220 General Physics I
  - PHY 221 General Physics II
4. Six additional hours of upper-division health sciences courses (BIO 422, BIO 405/406, or CHM 461 may be included in these six hours).

### Special Emphasis in the Biomedical Major

#### Microbiology Emphasis

Program Advisors: D. Burg, Hecht, Herman, 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 catalog.
2. Required Health Science Courses:
  - HS 208 Human Anatomy

\*B.S. cognate course sequence: STA 215; BIO 120; HS 290–291.

\*\*Capstone course.

## Biomedical and Health Sciences

HS 212, 213 Introductory Microbiology  
HS 290, 291 Human Physiology\*  
HS 312/313 Bacterial Genetics  
HS 322/323 Bacterial Physiology  
HS 499 Research in Health Sciences\*\*

3. Required cognate courses:  
BIO 120 General Biology I\*  
BIO 355 or BIO 375/376 Genetics  
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 232 Biological Chemistry  
or CHM 461 Biochemistry  
MTH 122 College Algebra  
MTH 123 Trigonometry  
STA 215 Introductory Applied Statistics\*  
PHY 220 General Physics I  
PHY 221 General Physics II
4. Six additional hours of upper-division science courses from the following:  
HS 410/411; HS 412/413; HS 431, BIO 414, and CHM 462.

### Nutrition Sciences 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 catalog.
2. Required Health Science Courses:  
HS 105 Basic Nutrition  
HS 208 Human Anatomy  
HS 212 Introduction to Microbiology  
HS 213 Laboratory in Microbiology  
HS 290 Human Physiology\*  
HS 291 Laboratory in Human Physiology\*  
HS 301 Introduction to Research

\*B.S. cognate course sequence: STA 215; BIO 120; HS 290–291.

\*\*Capstone course.

## Biomedical and Health Sciences

HS 306 Advanced Human Nutrition  
HS 307 Advanced Clinical Nutrition  
HS 407 Nutrition in the Life Cycle  
HS 495 Concepts in Wellness\*\*

Some new courses for this emphasis are still being developed. See the department for details.

3. Required Cognate Courses
  - BIO 120 General Biology II\*
  - BIO 355 or BIO 375/376 Genetics
  - 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 232 Biological Chemistry or CHM 461 Biochemistry
  - MTH 122 College Algebra
  - MTH 123 Trigonometry
  - STA 215 Introductory Applied Statistics\*
  - PHY 220 General Physics I
  - PHY 221 General Physics II

### Health Sciences Major

Program Advisors: Capodilupo, Herman, Kipp, Kopperl, Nochera.

This is a general curriculum that allows students to pursue a variety of interests. Students are encouraged to work closely with an advisor in choosing coursework. With appropriate course selections, a student may enter the health care network in governmental health services, sales in the pharmaceutical industry, or other businesses supplying health-related products. This major also prepares students for entry into the physical therapy program, graduate studies in public health, environmental health, the basic health sciences, or health care administration and management. This is also the appropriate program for a practicing health care professional with an associate's degree that wishes to receive baccalaureate-level credentials.

### Major Requirements

1. General university degree requirements as identified in the General Academic Policies section of the catalog.
2. 19 semester credit hours of health sciences core courses:
  - HS 208 Human Anatomy
  - HS 212 Introductory Microbiology
  - HS 213 Laboratory in Microbiology
  - HPR 220 Health Care Delivery
  - HS 290 Human Physiology
  - HS 291 Laboratory in Human Physiology\*
  - HS 301 Introduction to Research in the Health Sciences
  - HS 495 Concepts in Wellness\*\*

\* B.S. cognate course sequence: STA 215; BIO 120; HS 290–291



## Biomedical and Health Sciences

3. 27 semester credit hours of required science cognate courses:
  - BIO 120 General Biology I\*
  - BIO 355 Human Genetics or BIO 375/376 Genetics
  - CHM 109 Introductory Chemistry
  - CHM 231 Introductory Organic Chemistry
  - CHM 232 Biological Chemistry
  - PHY 200 Physics for the Life Sciences or PHY 220 and 221
  - STA 215 Introductory Applied Statistics
4. 10 additional semester credits in health sciences courses that must include six hours of upper-division (300- or 400-level) courses (Biology 405 and/or 422 and/or CHM 461 may be substituted for upper-division health sciences courses).

## Special Emphasis Areas in the Health Science Major

### Anatomic Laboratory Science Emphasis

Emphasis advisor: Goossen. Clinical Professors: A. R. Armin, M.D.; Reed, M.D. Clinical Associates: V. Narlock, Ph.D., MT (ASCP); P. Wenk, HTL (ASCP); G. K. Tong, M.D.

Anatomic laboratory science includes cytotechnology, cytogenetic technology, and histotechnology. Professionals in these areas use scientific methods to aid in the diagnosis, treatment, and prevention of diseases. With the growth of medical knowledge and the resulting demand for laboratory and other diagnostic tests, the role of the laboratorian has evolved from that of a technician to that of a scientist who analyzes problems and decides on a course of action based on a broad knowledge of scientific principles and theories.

Students in anatomic laboratory sciences may choose from three areas of specialty: cytotechnology, cytogenetic technology, and histotechnology. Within these specialties, students may choose either the “3+1” or the “4+1” plan. In the “3+1” program, students take the clinical practicum (30 semester hours) during their senior year. In the “4+1” plan, the clinical practicum is post-baccalaureate. Both plans have relative advantages. Students must work with their program advisors in making their selection.

Upon completion of the baccalaureate degree requirements and the clinical requirements, students are eligible to take the appropriate certifying examination (in cytotechnology, cytogenetic technology, or histotechnology).

### Career Opportunities

There are many employment opportunities for anatomic laboratory scientists in laboratories in university centers, hospitals, governmental agencies, industry, research, and sales (openings may vary with geographic locations). Advanced training opportunities in specialty areas are also available.

### Major Requirements

Completion of a major in health sciences with an emphasis in anatomic laboratory sciences requires the following:

\*B.S. cognate course sequence: STA 215; BIO 120; HS 290–291.

\*\*Capstone course.

## Biomedical and Health Sciences

1. General university degree requirements as identified in the General Academic Policies section of the catalog.
2. The health sciences core requirements:
  - HS 208 Human Anatomy
  - HS 212, 213 Introductory Microbiology
  - HS 290, 291 Human Physiology\*
  - HS 301 Introduction to Research in the Health Sciences
  - HS 490 Clinical Practicum in Clinical Laboratory Sciences\*\*
  - or HS 495 Concepts in Wellness\*\*
3. Required science cognate courses:
  - BIO 120 General Biology I\*
  - BIO 355 Human Genetics or BIO 375/376 Genetics
  - CHM 115 and 116 Principles of Chemistry I and II
  - CHM 231 Introductory Organic Chemistry
  - or CHM 241 and 242 Organic Chemistry for Life Sciences I and II
  - CHM 232 Biological Chemistry
  - PHY 200 Physics for Health Sciences
  - or PHY 220 and 221 General Physics I and II
  - STA 215 Introductory Applied Statistics\*
4. Anatomic laboratory Sciences Emphasis requirements:
  - HS 102 Introduction to Clinical Laboratory Sciences
  - HPR 111 Medical Terminology
  - HS 410 Immunology
  - HS 416 and 417 Hematology
  - Additional requirements for cytotechnology and histotechnology:
    - HS 310 Basic Pathophysiology
    - HS 450 Human Histology
  - Additional requirements for cytogenetic technology:
    - BIO 376 Genetics Laboratory
    - BIO 411 Genetics of Development and Cancer
    - BIO 414 Molecular Biology of the Gene
  - Recommended: BIO 405/406 Cell and Molecular Biology

Students in the “3+1” program receive a baccalaureate degree upon completion of the required courses and clinical experience (HS 490). Students in the “4+1” program receive no college credit for the clinical practicum, since it is completed after they receive their baccalaureate degree. In order to become certified in a specialty, students must take their clinical practicum at a school/hospital that has been accredited by the appropriate agency.

### Master of Health Sciences

The graduate program of the Department of Biomedical and Health Sciences at Grand Valley State University offers a Master of Health Sciences 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.

\*B.S. cognate course sequence: STA 215; BIO 120, HS 290–291.

\*\*capstone course.

## Biomedical and Health Sciences

The program is designed to accommodate either part-time or full-time students.

### Admission Requirements

1. Completed graduate application, \$30 application fee, and official transcripts from all institutions of higher education previously attended.
2. GPA of 3.0 (B) from all undergraduate coursework and satisfactory score from the General Test of the Graduate Record Examination.
3. Three letters of reference.
4. Completion of undergraduate courses in anatomy, physiology, microbiology, and statistics. Coursework in chemistry is highly recommended.

### Degree Requirements

1. Students must complete a minimum of 33 semester hour credits, including the health science graduate core (12 credits) and formal thesis (six credits).

Core (12 credits):

HS 508 Advanced Human Physiology

HS 523 Epidemiology

HS 460 Regional Human Anatomy

HS 601 Experimental Design

Thesis (six credits)

HS 695 Master's Thesis Research

Electives (15 credits):

Electives may be chosen from courses offered in the Biomedical and Health Sciences Department or from other departments' graduate courses upon approval of the program director or the student's graduate committee.

### Emphasis in Physical Therapy

Baccalaureate-prepared physical therapists may select an emphasis in physical therapy within the Master of Health Sciences program.

Emphasis requirements:

1. Graduate core courses (12 credits)
2. Additional requirements (9–12 credits):
  - HS 528 Neuropathology
  - NUR 642 Teaching Health Professionals
  - HS 679 Clinical Practicum
3. Physical Therapy electives
  - PT 565 Geriatric Physical Therapy
  - PT 670 Pediatric Physical Therapy
  - PT 671 Advanced Topics: Cardiac Rehabilitation
  - PT 672 Advanced Topics: Advanced Spinal Manual Therapy
  - PT 673 Advanced Topics: Manual Therapy II
  - PT 674 Advanced Topics: Sports Medicine
  - PT 676 Advanced Topics: Rehabilitation

### Courses of Instruction

HS 508 Advanced Human Physiology

HS 523 Epidemiology

HS 528 Neuropathology

HS 601 Experimental Design

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HS 608 Pathologic Physiology  
HS 611 Theory and Practice of Infection Control  
HS 612 Mechanism of Microbial Pathogenicity  
HS 655 Advanced Human Anatomy  
HS 679 Clinical Practicum  
HS 680 Special Topics in the Health Sciences  
HS 693 Project in the Health Sciences  
HS 695 Master's Thesis Research

### Courses of Instruction

Numbers in parentheses at the end of the course descriptions indicate the number of lecture, discussion, and laboratory hours per week.

**HS 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. (3-0-0). Three credits. Offered fall, winter and occasionally summer semesters.

**HS 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. One credit. Offered winter semester.

**HS 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. Three credits. Offered fall, winter, and occasionally summer semesters.

**HS 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). Four credits. Offered fall and winter semesters.

**HS 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. Three credits. Offered winter semester.

**HS 208 Human Anatomy.** A lecture course on the gross anatomy of human tissues and organ systems, including pertinent embryology. Prerequisites: C or better in both CHM 109 (or CHM 115) and BIO 120, or in HS 202. (3-0-0). Three credits. Offered fall, winter, and summer semesters.

**HS 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. Prerequisites: BIO 120, CHM 231 and 232, or permission of instructor (3-0-0). Three credits. Offered fall, winter, and summer semesters.

**HS 213 Laboratory in Microbiology.** Laboratory investigation into the morphology, isolation techniques, growth, and identification of bacteria. Prerequisite: 212 or concurrent enrollment. (0-0-4). One credit. Offered fall, winter, and summer semesters.

**HS 222 Introduction to Public Health.** Introduction to the history, philosophy, current concepts, practice, and administration of public health in the United States. Three credits. Offered fall semester.

**HS 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. Three credits. Offered winter semester.

**HS 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 HS 290 should be enrolled simultaneously in HS 291. Prerequisites: HS208

## Biomedical and Health Sciences

and CHM 231 or 241; prerequisite or co-requisite: CHM 232 or 242. A physics course is recommended. (3-0-0). Three credits. Offered fall, winter, and summer semesters.

**HS 291 Laboratory in Human Physiology.** Laboratory in Human Physiology (HS 291) is designed to practically demonstrate the principles that govern functions of the human body. The content of HS 291 will emphasize and introduce students to normal physiological values and, therefore, set the framework for future courses for students pursuing a career in health related fields. Prerequisite or co-requisite: HS 290 or the equivalent. (0-0-3). One credit. Offered fall, winter, and summer semesters.

**HS 301 Introduction to Research in the Health Sciences.** Introduces students majoring in any of the science programs to basic steps in carrying out research, literature searching, critical reading of the literature, experimental design, data analysis, and scientific writing. Published papers and experiments will be analyzed. Students will write a variety of papers and reports. Prerequisites: CHM 231 or 241, STA 215, and one 200-level health sciences course. Three credits. Offered fall and winter semesters.

**HS 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. Prerequisites: 290/291 and CHM 232. Three credits. Offered fall and winter semesters.

**HS 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. Prerequisites: HS 290/291 or MOV 304, and CHM 232 or 461. Three credits. Offered fall and summer semester.

**HS 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. Prerequisite: HS 306. Three credits. Offered winter semester.

**HS 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. Prerequisites: B- or better in HS 208 (0-0-3). One credit. Offered every semester.

**HS 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. Prerequisites: 212 and 290/291 or permission of instructor. Three credits. Offered fall, winter, and occasionally summer semesters.

**HS 311 Pharmacological Aspects of Health Science.** A lecture course designed to introduce nursing and health 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. Prerequisite: 310 or equivalent or instructor's permission. Three credits. Offered fall, winter, and summer semesters.

**HS 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. Prerequisites: 212/213 or BIO 357, and BIO 355 or 375. Offered fall semester of even-numbered years. (3-0-0). Three credits.

**HS 313 Bacterial Genetics Laboratory.** A selected set of experiments to demonstrate important principles of bacterial genetics, including basic microbial methodology, mutagenesis, and gene transfer. Prerequisite: 312 or concurrent registration. Offered fall semester of even-numbered years. (0-0-4). One credit.

**HS 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

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to human physiology, disease, antibiotic production and resistance, and biotechnology. Prerequisites: 212/213 or BIO 357 or permission of instructor. Offered fall semester of odd-numbered years. (3-0-0). Three credits.

**HS 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. Prerequisite: 322 or concurrent registration. Offered fall semester of odd-numbered years. (0-0-4). One credit.

**HS 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. Prerequisite: 208 and 309 or equivalent human anatomy course. (1-0-2). Two credits. Offered winter semester.

**HS 365 Applied Human Physiology.** Subcellular approach to the study of the acute and chronic effects of activity on the systems of the body. Prerequisites: HS 208 and 290, CHM 232. (2-0-2). Three credits. Offered winter semester.

**HS 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). Three credits. Part of Death and Dying Theme. Not counted as an elective for HS and BIOS majors. Offered fall semester (and summer semester upon demand).

**HS 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. Prerequisites: 202 or 208 and 290; credit or concurrent enrollment in SOC 388 or permission of the instructor. Three credits. Offered fall and winter semesters.

**HS 380 Special Topics in the Health Sciences.** Special topics not regularly offered, but of interest to students in the health sciences. Courses will be listed in the class schedule. Variable credit. Offered fall and winter semesters.

**HS 399 Readings in the Health 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 health sciences program, or with permission for group science or biology majors. Prerequisite: Written permission of instructor prior to registration. One to three credits. Offered fall and winter semesters.

**HS 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. Prerequisite: HS 306. Three credits. Offered fall semester.

**HS 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. Prerequisites: 212/213, and CHM 232 or 242 or permission of instructor. Three credits. Offered fall semester.

**HS 411 Immunology Laboratory.** An introduction to serological reactions, including: serum electrophoretic techniques, single and double diffusion in gels, hemagglutination reactions and complement fixation. Prerequisites: 410. (0-0-3). One credit. Offered winter semester.

**HS 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. Prerequisites: 212 and CHM 232 or 242 or permission of instructor. Three credits. Offered winter semester.

**HS 413 Medical Bacteriology Laboratory.** Isolation and identification of the more common bacterial pathogens with emphasis on current clinical methods and normal flora. Prerequisites: 412 or concurrent registration. Two credits. Offered winter semester. (0-0-4).

**HS 416 Hematology.** A study of normal and abnormal blood cell development, morphology, and function. Blood dyscrasias will be studied with emphasis on the biochemical and morphological changes involved in disease. Prerequisites: 208 and CHM 232 or permission of instructor. Two credits. Offered fall semester.

**HS 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

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correlation of the data to disease. Prerequisite: 416 or concurrent registration. (0-0-3). One credit. Offered fall semester.

**HS 427 Neuroanatomy.** Covers the organization of the human nervous system with emphasis on the pathways and nuclei of the central nervous system. Prerequisites: 208 and 309. One credit. Offered fall semester.

**HS 428 Neurosciences.** Covers the function of the human nervous system. Emphasis on somatosensory and somatomotor systems and the cranial nerve nuclei involved in disease. Prerequisite: 427. Three credits. Offered spring/summer session; winter on demand.

**HS 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. Prerequisites: 212/213 and organic chemistry or permission of instructor. Three credits. Offered winter semester.

**HS 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. Prerequisites: 212 and organic chemistry or permission of instructor. (2-0-0). Two credits. Offered fall semester.

**HS 433 Medical Parasitology.** A study of host parasite relationships in humans. Significant human parasites and the pathogenesis and epidemiology of parasite infection. Prerequisites: 212 and organic chemistry or permission of instructor. (2-0-2). Three credits. Offered winter semester.

**HS 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. Prerequisites: 208 and 309 or equivalent. (2-0-4). Four credits. Offered fall semester.

**HS 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. Prerequisite: 208 and 309 and permission of instructor. (2-0-4). Four credits. Offered winter semester.

**HS 461 Prosected Regional Anatomy.** A regional approach to the gross anatomy of the human body through the use of prosected cadavers. Prerequisite: Admission to the Physical Therapy or Physician's Assistant Studies program. (3-0-3). Four credits. Offered fall semester.

**HS/MOV 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. Prerequisites: STA 215, MOV 402, MOV 404, or MOV 304. Two credits. Offered winter semester.

**HS 475 The Pathology of Aging.** A survey of the disease and functional disabilities of aging. Emphasis is placed on prevention and rehabilitation. Three credits. Offered winter semester.

**HS 480 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. One credit. Offered winter semester.

**HS 490 Clinical Practicum in C.L.S.** 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.

**HS 495 Concepts in Wellness (capstone).** This health science course will synthesize the materials students have learned from the health sciences core and cognate courses and enable them to write and present professionally styled communications to an audience of their peers and to instructors. Prerequisites: 208, 212, 290/291, and senior standing (3-0-0). Three credits. Offered fall, winter and occasionally summer semesters. Offered for SWS credit.

**HS 499 Research in the Health Sciences.** Independent, supervised research in special areas of the health 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 health science program or, with permission, for group science or biology majors. Offered fall and winter semesters.

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**HS 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. Prerequisite: 290/291 or permission of instructor. Three credits. Offered fall semester.

**HS 523 Epidemiology.** An introduction to the study of the distribution and determinants of disease frequency in people. Prerequisites: 222 and STA 215 or permission of instructor. Two credits. Offered fall semester of even-numbered years.

**HS 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. Prerequisites: 508 or permission of instructor. Three credits. Offered winter semester.

**HS 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. Three credits. Offered fall semester.

**HS 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. Prerequisite: 508 or permission of instructor. Three credits. Offered winter semester and occasionally fall semester.

**HS 611 Theory and Practice of Infection Control.** A study of identification and control of hospital-associated infections. Prerequisite: Graduate standing, a microbiology course, or experience as a health care professional; permission of instructor required for others. Three credits. Offered alternate winter semesters.

**HS 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. Prerequisites: A course in medical microbiology or permission of instructor. Three credits. Offered on demand.

**HS 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. Prerequisites: 460 and permission of instructor. Three credits. Offered upon demand.

**HS 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.

**HS 680 Special Topics in the Health Sciences.** Supervised study and research in special areas of the health 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. Prerequisite: 601. A signed contract must be submitted before registration. One to three credits. Offered fall and winter semesters.

**HS 693 Project in Health Sciences.** Definition and solution of a problem within the health 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.

**HS 695 Master's Thesis Research.** Research in the health 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.

## Seidman College of Business

Dean: Reifel. Assistant Dean: Gulembo; Faculty: Accounting and Taxation: Cannon, Danko, DeBruine, de la Rosa, Fanning, Godwin, Goldberg, Grant, Harris, Lindquist, Martin, Mielke, Sopariwala, Veazey, Yuhas; Economics: Dalmia,



## **Business**

Giedeman, Isely, Lowen, Nader, Reifel, Sicilian, Simons, Singh, Thorsnes; Finance: Bhagwat, Blose, Dimkoff, Edwards, Gondhalekar, Griggs, Pettengill, Sundaram, Swartz, Willey; Management: Akbulut, Castro, Crampton, Gupta, Hall, Hodge, IsHak, Jones-Ridders, Klein, Kosalge, Koste, Kumar, Magal, Margulis, McKendall, Mishra, Mothersell, Motwani, Mudde, Sanchez, Sanford, Swift, Subramanian, Wolterink; Marketing: Benet, Cotter, Good, Kraft, Lane, Levenburg, Pope, Robideaux, Rudolph, Taylor, Wolter. Graduate Business Programs Director: Bajema. Undergraduate Student Services Coordinator: Brownley. International Business Programs Advisor: Ohm.

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.

## **Mission Statement**

The Seidman College of Business creates a rigorous learning environment with a student focus, regional commitment and a global perspective. The college strives to excel at innovation, the application of concepts, and the integration of knowledge.

## **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—Detroit College of Law. The Seidman College in partnership with Michigan State University—Detroit 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. There are also opportunities for students who do not wish to enter a degree program to take courses that apply to their professional interests.

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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.

### 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

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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 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 sponsorship and co-management of 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 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 Dr. Barry Castro.

#### **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 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.mi-sbdc.org/region7](http://www.mi-sbdc.org/region7). The MI-SBTDC has several partner programs:

- Kent Area MicroBusiness Loan Services (KAMLS) provides small business loans for individuals that are prebankable.
- Michigan Works Procurement Technical Assistance Center (PTAC) helps companies become a government contractor or exporter.
- SBA Business Information Center is a one-stop location for information, training and resources designed to help entrepreneurs start, operate and grow their business.

#### **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: [www.mi-sbdc.org](http://www.mi-sbdc.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.gubizinfo.com](http://www.gubizinfo.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

\*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.

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successfully complete this CFP Board-Registered Program will be qualified to sit for the CFP™ Certification Examination. The SFPC program consists of six non-credit 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](http://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 bi-annual etiquette dinner.

### **ABCs of International Business**

The ABCs of International Business program is for business students who are interested in experiencing another culture but do 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.

### **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.

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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.

### **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 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.

## **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.

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Membership is open to any part- or full-time student majoring in accounting and finance at Grand Valley State University with a upper level cumulative GPA in declared area of concentration of at least a 3.0 (based on a 4.0 scale) and a cumulative overall GPA of at least a 3.0 (or an overall GPA of 3.25 for the last 35 credits).

### Beta Gamma Sigma

The Grand Valley State University chapter of Beta Gamma Sigma, a National Honor Society in Business Administration, promotes high scholarship in business education by recognizing and rewarding scholastic attainment in business subjects.

Membership in Beta Gamma Sigma is awarded once each year to certain undergraduate and graduate students who are in the top 7 percent of the junior class, the top 10 percent of the senior class, and the top 20 percent of graduating master's students.

### 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 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



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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 full-time 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.

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**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 \$500 scholarship is awarded each year to a woman MBA candidate. The candidate may be either a full-time or part-time student. The award is based on both scholarship and financial need. The recipient is selected by a Seidman College of Business committee.

**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/](http://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.

**Minority Scholarship for Graduate Students.** The Seidman College provides scholarships to underrepresented minority students who are interested in graduate business programs. It is designed to supplement employer support, and awards are based on employer contributions. The scholarship may be awarded for one semester prior to admission for students who are preparing to take the GMAT and is renewable each semester the student is enrolled in the graduate program. Interested students should contact the Graduate Office.

### Undergraduate Business Program

The undergraduate program provides students with business education that blends liberal arts and professional courses with practical application. The programs are designed to prepare students for careers in various business areas as well as for admission into graduate and professional schools.

#### Admission

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

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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 course can be repeated more than once. Exceptions are made only with the approval of the Assistant Dean.

### **Professional Advising/Scheduling**

All routine advising for program requirements and scheduling for undergraduate students is provided by the Seidman Undergraduate Student Services Office, 101B DeVos Center. Appointments are available at either DeVos or Allendale by calling 331-7500. It is the student's responsibility to contact the office for program planning. Freshman and sophomore business students are encouraged

to contact any faculty member or the Seidman Undergraduate Student Services Office concerning business career opportunities and advice. A faculty advisor will be assigned when a student is admitted to the upper-division program.

### **Internship Opportunities**

Undergraduate business students are encouraged to become involved in, and receive academic credit for, a work experience directly related to their major. Junior and senior students who wish to apply must have completed at least nine hours of the core program requirements and should have an overall GPA of 2.5 or higher to be eligible. Application forms are available at the Seidman Undergraduate Student Services Office. Students selected will intern for a varied number of hours each week depending on the number of credits of the internship. Coordination for each internship is provided by the Seidman Internship Supervisor. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements.

### **Minority Business Education Center**

The Minority Business Education Center Program provides student participants weekly career educational opportunity meetings in which students develop personally and professionally through writing resumes, discussing topics such as time management and how to “dress for success,” and holding mock interviews and business etiquette workshops.

For more information and applications, contact the Multicultural Affairs Office, 130 Commons, telephone (616) 331-2177.

### **Transfer Students**

Transfer students may receive transfer credit for basic courses in accounting, business law, computing, economics, management, marketing, mathematics, and statistics completed at their junior or community college. Credit may be given for Intermediate Accounting I if the student is able to pass a validation exam.

In all cases, transfer students may apply a maximum of 24 hours of transfer credit for business courses toward their Seidman College 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. Program**

The Seidman College of Business and Michigan State University—Detroit 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 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—DCL work in which the student earned a 2.0 or above will be accepted. MSU—DCL courses may be applied to the four upper-division elective courses (12 credits)

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required for the BBA. The BBA 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-DCL, “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—DCL admission requirements.

### **Requirements for the B.B.A. Degree**

To complete the requirements for graduation with a BBA 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 helps 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 Management Information Systems  
MGT 331 Concepts of Management  
MGT 366 Operations Management  
MGT 495 Administrative Policy  
MKT 350 Marketing Management

#### **Additional Requirements**

Additionally, students are required to take four upper-division Seidman courses not applied to the major, minor, or cognate (12 credits total). Students pursuing a second BBA 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.

#### **Cognate Requirements**

ECO 200 Business Economics or both ECO 210 Introductory Macroeconomics and ECO 211 Introductory Microeconomics  
Upper-division economics course (not ECO 490)  
CS 150 Introduction to Computing  
STA 215 Introductory Applied Statistics

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Quantitative Group (choose one: MTH 122 College Algebra, MTH 125 Survey of Calculus, MTH 201 Calculus, PHI 103 Logic, MGT 361 Management Science\*)

### Electives

Students may elect non-business or business courses to fulfill their elective course requirements. However, at least 60 hours of the total program must be in non-business courses. Students may apply up to six hours of internship and independent research credit, in any combination, toward their degree requirements. Business majors may not take any of their major or cognate courses, except the internship, on a credit/no credit basis. Lower-division economics courses and economics courses used in the BBA cognate are counted as non-business credit.

The requirements for each major offered by the Seidman College are presented below.

### 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.

Accounting majors must complete all requirements for the BBA degree (the business core, the cognate requirements, and four business electives) and take an additional 18 credit hours, as follows: ACC 310, 311, 340; one of the following two courses: ACC 317 or 318; one of the following two courses: ACC 321 or 322; and one of the following two courses ACC 413 or 414. 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](http://www.michigan.gov/cis/0,1607,7-154-10557_12992_13878-40080--,00.html) or [www.nasba.org/nasba/web.nsf/exam](http://www.nasba.org/nasba/web.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>.

\*May also be used as one of the four required upper-division elective courses.

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### **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: ECO 312, 313, 495, and three additional economics electives at or above the 300-level.

The upper-division economics course selected as part of the cognate requirements cannot count as an economics major course.

**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 BBA with the real estate emphasis will take the following courses:

Required courses: ECO 312, 313, 435, 436, 495, and FIN 350.

The upper-division economics course selected as part of the cognate requirements cannot count as an economics major course.

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, PA 307, PA 439, GPY 307, and 309.

### **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, 322, 422, and three other courses from the following list with at least one of three being a finance course: FIN 331, 350, 380, 420, 428, 429, 490, 499; ACC 310, 311, 318, 321, 322; ECO 312, 313, 414, 480. (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

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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. 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, ECO 369, FIN 429, MGT 433, MGT 466, MKT 359.

One course from the following group: ECO 349, ECO 365, PLS 315.

### Cultural Component

Global option: GPY 235 or PLS 211 and one other course from either Group A or Group B. With advisor approval, courses taken abroad may satisfy courses in this option.

Regional option: Two courses from Group B, both focusing on the same region, is recommended. With advisor approval, courses taken abroad may satisfy courses in this option.

International internship option: Students may substitute up to six credit hours of international internship for cultures courses. Highly recommended.

Group A: GPY 220, GPY 235, PLS 211, PLS 327.

Group B: EAS 201, GPY 355, PLS 283, PLS 221, FRE 225, GER 235, RST 225, PLS 282, GPY 350, GPY 352, LAS 210, LAS 301. Other courses in a variety of disciplines may be used to fulfill this group as approved by the advisor.

## 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.



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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, 334, 336, 431, 432, and one of the following: MGT 355, 430, or 433.

**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 MGT 361\*, 362, 367, and two of the following courses: MGT 363, 364, and 365, plus two of the following courses: MGT 337, MGT 466, MGT 467, and MKT 457.

**Organizational Information Systems.** This emphasis provides students with the appropriate knowledge and skills to define, design, and develop E-Commerce and/or Enterprise Resource Planning applications for business. The emphasis provides students with a strong technical background and the business knowledge necessary for them to successfully implement such applications.

Required courses: Business core and CS 160, CS 337, CS 353, MGT 371, MGT 372, and one of the following sets of courses: MGT 451 and MGT 452 (for E-Commerce), MGT 471 and MGT 475 (for Enterprise Resource Planning related to Business Process), or MGT 472 and MGT 475 (for Enterprise Resource Planning related to Technical Administration).

If a student has the flexibility to take additional electives, students concentrating on ERP should consider MGT 479, MGT 362, and MGT 451; for those concentrating on e-commerce, MKT 360 is suggested.

## 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.

\*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.

## Business

**General Marketing.** This 18-credit-hour emphasis is very application-oriented and stresses interaction with many leading regional business organizations.

Required courses: Business core, MKT 351, 352, 451, and three additional marketing electives at or above the 300 level.

**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, 352, 354, 357, 451, and 457.

**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, 352, 353, 356, 451, and 456.

### 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.

## **Business**

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. Required courses: BUS 201, ACC 212, ACC 213, FIN 320, MGT 331, and MKT 350. 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.

## **Economics**

The undergraduate minor program in economics is for both business and non-business students with the exception of those majoring in business economics or economics. Students are required to complete at least 21 hours in economics, including ECO 210 and 211. 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.

## **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, four courses from the following list: ACC 330, FIN 429, ECO 365, ECO 349, ECO 369, MGT 466, MKT 359; and one course from the International Business Major Cultural Component Group A or Group B, 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, MGT 333 or MGT 334, MGT 339 or MGT 438, and MGT 355 or MGT 466. In addition to the four courses, students must complete two electives from 300- and 400-level courses in management.

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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.

### 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.

## **Business**

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 other graduate degrees and/or have taken other graduate admissions tests. Such requests should be addressed to the committee and submitted to the M.B.A. 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.

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-DCL for the J.D./MBA and J.D./M.S.T. dual degrees. Students earning either dual degree may transfer 12 credits from MSU-DCL 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

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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's 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 MBA and MSA programs, this background must be in 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 some or all of the courses in their undergraduate programs 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 within five years 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 after appropriate study. 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 BUS 601. Students may complete background studies during the same semester in which they enroll for BUS 601. 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 BUS 601 prior to enrollment in other M.B.A. courses but must have met other relevant prerequisites.

### Background Equivalencies

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

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Background Area	Background Course	GVSU Undergraduate Course
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 (3 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 four three-credit courses:

BUS 601 The Business Plan  
BUS 631 Leadership and Organizational Dynamics  
BUS 671 Global Competitiveness  
BUS 681 Strategy

In addition, all M.B.A. candidates must complete at least three of the following five directed electives:

ACC 611 Managerial Accounting  
FIN 621 Financial Policy for Managers  
ECO 641 Business Economics and Strategy  
MKT 651 Marketing Management  
MGT 661 Operations Management

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.

BUS 601, The Business Plan, is designed as application of the theories developed in the background courses. MBA students are to take it after completion of all background work or in the last semester of background studies. If all background courses are complete, BUS 601 should be the first MBA course in which the student enrolls. The Business Plan will provide students feedback on their strengths and weaknesses and help direct them to electives that will maximally develop their potential. BUS 601 may not be taken as an elective by students completing the M.B.A. curriculum of earlier catalogs.

BUS 601 and other core or directed elective courses may be taken concurrently during the student's first semester of 600-level coursework. All students must complete 33 credit hours of 600-level business coursework, including the core courses listed above and at least three of the five directed electives, also listed above. BUS 681, Strategy, is a capstone course and may not be taken until other

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core courses and three directed electives are completed or concurrent with other required courses if it is their last semester.

The balance of the program, two to four 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.

Students admitted to graduate programs other than the M.B.A. but wishing to take a M.B.A. course as an elective may do so with permission of the graduate programs director. Such students are not required to complete BUS 601 prior to other 600-level courses but must have completed other relevant prerequisites.

### **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 earning an emphasis within the generalist framework of the M.B.A. degree. The Seidman College offers three emphasis areas.

Students wanting depth in accounting, especially those interested in fulfilling requirements for C.P.A. certification while earning the M.B.A., may elect an emphasis in accounting. Those students must complete four accounting courses, selected from courses numbered between ACC 611 and ACC 618, as the elective portion of the M.B.A. program.

M.B.A. students wanting a greater depth of exposure to and understanding of taxation may earn an emphasis in taxation by completing four tax courses as the elective portion of the M.B.A. program. The taxation emphasis includes ACC 622, Research and Writing, and ACC 624, Corporate Tax I; and any two other tax courses, with the approval of a faculty advisor in the area of tax (as a function of academic and professional background) and permission of the graduate programs director.

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 field of public 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.



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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

At least two additional graduate accounting courses and the remaining 18 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.

The program requires students to pass a comprehensive exam. Students may take the exam in the semester following successful completion of 24 graduate credits with an average GPA of 3.0 or better and including the required core courses (ACC 613, 616, and 617). The essay exam consists of three parts and is graded by faculty members who teach the core courses. Each part will be graded high pass, pass, low pass, or fail. Students who receive a fail in one part of the exam or a low pass in more than one part must retake the entire exam in another semester. Students have two opportunities to pass the exam.

## **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

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 Estate, Gift, and Trust II  
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 & Report  
ACC 635 Advanced Tax Subjects  
ACC 639 Federal Tax Practice & Procedure

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 MST 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.

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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. Program

Seidman College of Business and Kirkhof College of Nursing offer a combined Master's of Business Administration and Master's of Science in Nursing (M.S.N./M.B.A.). Persons wishing this degree must meet the admission requirements of both Colleges with the exception that satisfactory performance 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 above except FIN 521. Also required are the following four three-credit courses:

- BUS 601 The Business Plan
- BUS 631 Leadership and Organizational Dynamics
- BUS 671 Global Competitiveness
- BUS 681 Strategy

Candidates must also complete at least three of the following five three-credit M.B.A. courses:

- ACC 611 Managerial Accounting
- FIN 621 Financial Policy for Managers
- ECO 641 Business Economics and Strategy
- MKT 651 Marketing Management
- MGT 667 Service Management

Candidates must complete the following M.S.N. courses:

- NUR 521 Theoretical Perspectives in Nursing I
- NUR 522 Theoretical Perspectives in Nursing II
- NUR 622 Advanced Pathophysiology I
- NUR 623 Advanced Pathophysiology II
- NUR 529 Health Care System, Policy and Finance
- NUR 531 Professional Role Development
- NUR 530 Advanced Nursing Strategies
- NUR 690 Research Development in Nursing
- STA 610 Applied Statistics for Health Professions
- NUR 648 Administrative Practicum

Scholarly Project Options (candidates select one)

- NUR 694 Thesis Preparation and NUR 695 Master's Thesis
- NUR 692 Nursing Protocol Exploration and NUR 693 Nursing Protocol Development
- NUR 696 Nursing Research Practicum (four credits or two credits plus related elective)
- NUR 697 Nursing Comprehensive Examination (one credit plus two electives)

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.

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### **Adult/Elderly**

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
NUR 654 Clinical Practicum I: Adult/Elderly  
NUR 655 Clinical Practicum II: Adult/Elderly  
NUR 656 Clinical Practicum III: Adult/Elderly

or

### **Child**

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
NUR 657 Clinical Practicum I: Child  
NUR 658 Clinical Practicum II: Child  
NUR 659 Clinical Practicum III: Child

or

### **Family**

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
NUR 670 Clinical Practicum I: Family  
NUR 671 Clinical Practicum II: Family  
NUR 672 Clinical Practicum III: Family

or

### **Women**

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
NUR 673 Clinical Practicum I: Women  
NUR 674 Clinical Practicum II: Women  
NUR 675 Clinical Practicum III: Women

or

### **Mental Health**

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
HS 528 Neuropathology  
NUR 628 Nursing Therapeutics: Mental Health  
NUR 676 Theoretical Perspectives: Mental Health  
NUR 677 Clinical Practicum I: Mental Health  
NUR 678 Clinical Practicum II: Mental Health  
NUR 679 Clinical Practicum III: Mental Health

Descriptions of the M.S.N. courses are contained in the nursing section of the catalog.

## **Dual M.B.A./J.D.**

The Seidman College of Business and Michigan State University—Detroit College of Law offer the dual M.B.A./J.D. The partnership enables students to transfer 12 credits of Seidman MBA courses to the MSU—DCL J.D. program and 12 credits of J.D. credits to the MBA 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 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-DCL will complete the elective portion of the M.B.A. program. Thus, students pursuing this degree will complete, in addition to the

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M.B.A. prerequisites, the four required core courses and three of five directed electives. Specific coursework to be transferred to the M.B.A. from MSU—DCL must be planned with the MBA program director. Students are referred to the Admissions Office of MSU—DCL 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-Detroit 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-DCL J.D. program and 12 credits of J.D. credits to the MST 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-DCL 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-DCL must be planned with the M.S.T. program director. Students are referred to the Admissions Office of MSU-DCL for advising with respect to the J.D. and the specific MST transfer courses.

### 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.

### Washington Campus Program

Seventeen universities have recognized the importance of training private sector managers and leaders in the art of working with the federal government and have established the Washington Campus Program. These colleges and universities are Grand Valley State, 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

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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.

The program's courses are "Policy Development in the Executive Branch," "Government Regulation," "Congress, Interest Groups, and Lobbying in Washington," and "Domestic and International Economic Policy Issues." These courses are taught by using actual policies, regulations, and current and relevant issues. The instructors for the courses include individuals involved in making day-to-day public policies and carrying them out.

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

## **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

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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 full-time 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 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. Prerequisites: 212. Knowledge of spreadsheets and college algebra recommended. Offered fall, winter, and summer semesters. Three credits.

**ACC 308 Governmental and Non-for-Profit Accounting.** Accounting and auditing principles for governmental and non-for-profit entities. Prerequisite: 212. Offered winter semester. 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. Prerequisite: 212. Offered every semester. 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. Prerequisite: 310. Offered every semester. 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: 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. Prerequisite: 212, ACC 317 recommended. Offered fall and winter semesters. 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

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management, performance evaluation and sales, profitability, mix, yield, and productivity variances. Prerequisite: 213. Offered fall and winter semesters. 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. Prerequisites: 213 and STA 215. May be offered any semester. 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. Prerequisite: ACC 212. May be offered any semester. 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. Prerequisite: 212, MGT 268. Offered fall and winter semesters. 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. Prerequisites: MGT 268. Offered Winter semester. Three credits.

**ACC 380 Special Studies in Accounting.** To be arranged with a full-time faculty member with the approval of the department chairman. Offered as demand warrants. A maximum of three hours of credit may be applied to the degree requirements.

**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. Prerequisites: 212. Offered fall semester. 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. Prerequisites: 310, 340 strongly recommended. Offered fall semester. 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. Prerequisites: 413 or 414, or permission of instructor. Offered winter semester. Three credits.

**ACC 490 Accounting Internship.** This course will be used to grant accounting credit to students who complete internships in the accounting field. One to six credits. Prerequisites: Junior standing; minimum 2.5 GPA. Offered on a credit/no credit basis.

**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.

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**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.

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**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 380 Selected Topics in Business.** Topics covered will reflect special interests of the students and/or the instructor. Prerequisite: Permission of instructor. Offered as demand warrants. 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 BBA degree. Open to juniors and seniors only. Offered on sufficient demand.

**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. One to six credits. Offered on a credit/no credit basis.

**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. Prerequisites: MTH 110, sophomore standing recommended. Three credits. Offered every semester.

**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. Prerequisites: MTH 110, sophomore standing recommended. Fulfills Social Sciences Foundation. Three credits. Offered every semester.

**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. Prerequisites: MTH 110, sophomore standing recommended. Fulfills Social Sciences Foundation. Three credits. Offered every semester.

**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. Prerequisites: 211 or 200. Three credits. Offered every year.

**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. Prerequisites: 210 or 200. Three credits. Offered every year.

**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



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employee compensation; and cost-benefit analysis of investment projects. Prerequisites: 211 or 200. Three credits. Offered every other year.

**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. Prerequisite: Completion of Mathematical Science Foundation. Part of Creativity theme. Three credits. Offered every winter.

**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. Prerequisites: 211 or 200. Part of Earth and Environment theme. Three credits. Offered every other year.

**ECO 349 Emerging Markets Issues.** Important problems in emerging markets throughout the world. Includes policies to stimulate growth via international trade; foreign aid and multinational investment in transitional economies; the use of natural resources and agriculture in economic development; and the human resource issues of education, health, and migration. Prerequisites: 210 or 200. Three credits. Offered every other year.

**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. Prerequisites: 211 or 200. Three credits. Offered once a year.

**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. Prerequisites: 211 or 200. Three credits. Offered every other year.

**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. Prerequisites: 210 or 200. Three credits. Offered every other year.

**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. Prerequisites: 210 or 200. Part of Global Change theme. Three credits. Offered every year.

**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. Prerequisites: 210 or 200. Three credits. Offered every year.

**ECO 435 Urban Economics.** Topics include the urbanization process, the city as an economic system, location analysis, poverty, housing, pollution, transportation, and public finance. Prerequisites: 211 or 200. Part of the Cities theme. Three credits. Offered fall semester.

**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

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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. Prerequisites: 211 or 200. Three credits. Offered fall semester.

**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. Prerequisites: 211 or 200. Three credits. Offered winter semester.

**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. Prerequisites: 200 or 210 or 211, and STA 215. Three credits. Offered every other year.

**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. One to six credits. Prerequisites: Junior standing; minimum 3.0 GPA. Offered on a credit/no credit basis.

**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. Prerequisites: 312, 313, one of which may be taken concurrently. Three credits. Offered winter semester.

**ECO 499 Independent Study and Research.** Independent study in an area of interest to the student, supervised by a member of the economics faculty and culminating in a written and oral report. One to four credits. Offered fall and winter semesters.

## 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. Prerequisites: ACC 212 and MTH 110. Offered every semester. 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. Prerequisites: FIN 320 and STA 215. Not to be taken concurrently with FIN 320. Offered fall and winter semesters. Three credits.

**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. Prerequisite: 320, ECO 200, ACC 213, and STA 215. Offered fall and winter semesters. 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. Prerequisite: Junior standing or permission. Offered fall semester. 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.

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**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. Prerequisite: 320. Offered fall semester. Three credits.

**FIN 422 Advanced Managerial Finance.** Application of principles of finance to solving selected business case problems and analyzing current financial topics. Prerequisite: 322. Offered fall and winter semesters. 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. Prerequisites: 321. Offered every winter. 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. Prerequisite: 321. Offered winter semester. 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. One to six credits. Prerequisites: Junior standing; minimum 2.5 GPA. Offered on a credit/no credit basis.

**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 Management Information Systems.** Managers require timely, up-to-date, accurate information to facilitate decision-making. This course will increase the understanding of information systems and their related technologies, including analytic, human, and technical resources available to aid the decision-making process. Prerequisite: CS 150. Offered every semester. 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: 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 consistency with external competitiveness. Prerequisite: 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.

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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 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 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. Prerequisites: CS 150, STA 215. Offered every semester. Three credits.

**MGT 362 Computers in Operations Management.** Familiarizes students with the modeling, methodologies, and software used in developing operations management systems. Prerequisites: MGT 366 and 268. Offered once yearly. 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. Prerequisites: 366. Offered once yearly. 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. Prerequisites: STA 215 and MGT 268. Offered every semester. 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. Prerequisites: 268 and 366. Offered fall semester. Three credits.

**MGT 371 Business Systems and Change.** Designed to provide students with theoretical foundations and practical experience in planning and designing IS. The conceptual foundations include change management and job redesign. Students develop assessment tools, and collect and analyze data in an actual field project. Prerequisites: MGT 268. Offered once yearly. Three credits.

**MGT 372 Managerial Application of Communication Technology.** Use of the case study method to study different applications of a wide variety of communications technologies for business application as they relate to the end user environment such as: groupware tools,

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local area networks, Internet, list servers, teleconferencing, videoconferencing, voice mail, and voice/data network management. Prerequisite: MGT 268. Offered once yearly. 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. Prerequisite: Permission of instructor. Offered on sufficient demand. 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: 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: 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: 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: 333. Three credits.

**MGT 436 Small-Business Management.** Application of management principles to the everyday operating problems of small, evolving businesses. Designed for persons considering entrepreneurial careers and those already operating small businesses. 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 Electronic Commerce.** An examination of the opportunities that Internet related technologies have to offer for conducting electronic commerce. Includes coverage of a variety of tools, analysis of available business opportunities, and an analysis of critical management issues. Prerequisite: CS 160, MGT 268, and CS 353. CS 353 can be taken concurrently. Offered fall semester. Three credits.

**MGT 452 E-Commerce Applications Development.** The design of interactive data-driven Web-based applications. Topics to be covered include data management, user-interface design, application functionality, and security controls. Prerequisite: MGT 451 and CS 353. CS 353 can be taken concurrently. Offered winter semester. 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. Three credits.

**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,

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case analysis, and real-world exercises. Prerequisites: 366. Offered once yearly. 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. Prerequisite: CS 160, MGT 268, and CS 353. CS 353 can be taken concurrently. Offered winter semester. Three credits.

**MGT 472 ERP Technical Administration.** This course will explore the theory underlying the administration of complex multi-layered system architectures. Students will learn to use the tools associated with off-the-shelf Enterprise Resource Planning software like SAP's Basis to monitor system well-being, maintain optimal performance, and manage security. Issues pertaining to initial system installation will be explored as well. Prerequisite: CS 160, MGT 268, and CS 353. CS 353 can be taken concurrently. Offered fall semester. 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. Prerequisites: MGT 471 or 472. Offered winter semester. Three credits.

**MGT 479 Deployment and Management.** A capstone course that integrates through case studies this application of concepts, theories, and skills associated with OIS as they contribute to the solution of business problems and the development of solutions for business problems. Development of OIS strategies is emphasized. Prerequisites: 371 and 372. Offered once yearly. 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. One to six credits. Offered on a credit/no credit basis.

**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. Prerequisites: Senior standing and all core classes. Offered every semester. 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. Prerequisite: 350. Offered fall 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. Prerequisites: 350 and Statistics 215. Offered fall and winter semesters. 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. Three credits.

## Business

**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. Prerequisite: 350. Offered fall and winter semesters. Three credits.

**MKT 357 Retailing.** Introduction to retailing with emphasis on profit elements, pricing and merchandising policies, inventory, and merchandise control. Prerequisite: 350. Offered fall and winter semesters. 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. Prerequisite: 350. Offered fall and winter semesters. 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. Prerequisites: 350. Three credits. Offered fall semester.

**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. Prerequisites: 350. Offered fall and winter. 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. Prerequisites: 350 and senior standing. Offered fall and winter semesters. Three credits.

**MKT 455 Industrial Marketing.** Examines the nature of the industrial market, focusing primarily upon manufacturing. It develops the distinctive character of industrial buyers and sellers, then analyzes industrial marketing planning, pricing, channeling, promotion, customer service, and control. May use case studies. Prerequisite 350. Offered fall and winter semesters. 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. Prerequisites: 350 and 356 or permission of instructor. Offered winter semester. 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. Prerequisite: 350. Offered every other semester. 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. One to six credits. Offered on a credit/no credit basis.

**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 213. Offered fall and winter semesters. 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. Prerequisite: ACC 511 or equivalent. Offered fall and winter semesters. 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: 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. Prerequisites: 310 and 311. 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. Prerequisites: 317. 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: 511 or equivalent. Three credits.

**ACC 618 Advanced Accounting.** Accounting issues related to mergers and acquisitions, international operations, and governmental/nonprofit accounting. Prerequisite: 310. Offered fall and spring semester. 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.



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**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: 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 Estate, Gift, and Tax II.** 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: 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 an in-depth survey of employee benefit plans and executive compensation arrangements under ERISA and the Internal Revenue Code. Topics covered include medical, dental, vision, and hybrid arrangements; fiduciary responsibility in the operation and management of plans. Nonqualified deferred compensation and stock-based programs are also discussed. 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. Prerequisites: permission of MST director. Offered every other year. Three credits.

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**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.

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**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 601 Business Plan.** An initial comprehensive overview of the nature of business decision-making from the standpoint of the entrepreneur starting a business. Course requires the preparation of a business plan, including pro forma financial statements. Feedback on decision-making will be provided from a computer business simulation. Prerequisites: All 500-level background courses or equivalents. Offered every semester. 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 of personal strengths and weaknesses when dealing with situations of managerial responsibility. Prerequisite: 601 (may be taken concurrently). 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 MBA 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. One credit. Course may be repeated up to three credits when content varies. Concurrent enrollment allowed.

**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. Prerequisite: 601 (may be taken concurrently). Offered fall and winter semesters. Three 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. Prerequisite: Completion of all other core courses and at least three directed electives. Offered fall and winter semesters. 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 MBA Office. Credit/no credit.

**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 tech-

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niques and concepts necessary to reason from an economic point of view. Prerequisite: MTH 110. Equivalent to ECO 210 and 211. Offered fall and winter semesters. 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: 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. Prerequisites: ECO 542 and BUS 601, or equivalents. Offered fall and winter. 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 MBA students. Topical coverage includes: basics of financial analysis and cash flow analysis; time value of money; stock and bond evaluation; introduction to risk and return; and basics of capital budgeting. A financial calculator may be required. Prerequisites: ACC 511 and FIN 521, or equivalents. Equivalent to FIN 320. Offered fall and winter semesters. 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. Prerequisite: BUS 601. Offered each semester. Three credits.

**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: 621.

**FIN 626 Advanced Managerial Finance.** Application of principles of finance to solving selected business case problems and analyzing current financial events. Prerequisite: 621. Three credits.

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**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: 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: 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. 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 561 Production and Operations Management.** Develops a knowledge of the technical and quantitative aspects of operations management and competitive positioning. Emphasis is placed on applying management science and operations management tools to solving business problems in a dynamic business environment. Equivalent to MGT 366. Offered fall and winter semesters. Three 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 Problems in Labor-Management Relations.** Intensive analytical probe into areas of problems between unions and management, public and private sector. Problems include discipline and discharge, wages, discrimination, contract interpretation, safety, working conditions, arbitration, and mediation. Prerequisite: BUS 631. 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. Prerequisite: 561. Offered fall and winter semesters. 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: 661 or 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

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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. Prerequisites: FIN 522 and MKT 551. Offered fall semester. 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. Prerequisites: FIN 522 and MKT 551. Offered winter semester. Three credits.

**MGT 677 Professional Ethical Problems and Perspectives.** A study of ethical problems commonly encountered in business, the professions, and public service. Topics include moral responsibility of the manager in business and public service; economic justice; business practices such as pricing, hiring, advertising; profit-determination and gifts; relationship between organizational and personal goals and values; ethical codes and laws covering illegal or unethical behavior, social responsibility of corporations and public agencies; government corruption and conflict-of-interest problems. Three credits.

**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. 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 MBA-level marketing studies. Two credits.

**MKT 651 Marketing Management.** A consideration of marketing problems and policies in society and in the firm. Topics include marketing decision-making, consumer behavior, the legal and political environment, demand analysis, marketing strategy, product line and positioning problems, promotion, distribution, pricing, marketing research, and information systems. Case studies of marketing problems, marketing research, and the application of marketing techniques to business problems in the domestic and international spheres. Prerequisites: MKT 551 and BUS 601 or equivalents. Offered fall and winter semesters. 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

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marketing, partnerships and supply chain management, global challenges, and dynamics for implementing e-commerce strategies. Exploration of the new power of information flows. Prerequisite: When taken as part of the E-Commerce Certificate Program, this course will co-requisite with MKT 654, MKT 661 and MGT 668. Offered on demand. 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, economics, and customer preferences. Develops strategies for handling changes in the competitive environment. Prerequisite: When taken as part of the E-Commerce Certificate Program, this course will co-requisite with MKT 652, MKT 661 and MGT 668. Offered on demand. 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: 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: 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. Problem definition, research design, sampling techniques, data collection, analysis, etc. This class undertakes real marketing research projects and thereby offers students actual "hands-on" research opportunities. Prerequisite: 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. Prerequisite: When taken as part of the E-Commerce Certificate Program, this course will co-requisite with MKT 652, MKT 654, and MGT 668. Offered winter semester. 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: 651. 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: Nikkel, Resau, Reynolds, Rogers, N. Shontz, Teh; Associate Professors: Blackman, Capodilupo, Carlson, Hecht, Karpen, Leonard, Morgan, Nieuwkoop, Nizielski, Schaertel, Staves, Thorpe; Assistant Professors: D. Burg, M. Burg, Dietrich, Graham, Hanna, Herman, Kipp, McClinton, Ostrow, Pratt, Wallar, Witucki.

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,

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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 and Health 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 GVSU 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 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 currently employs 179,000 people; that's more than all the people employed by the toy and sporting goods industries.
- The cell and molecular biology industry has more than tripled in size since 1992, with revenues increasing from \$8 billion in 1992 to \$27.6 billion in 2001.
- There are 1,457 cell and molecular biology companies in the United States, of which 342 are publicly held.
- There are more than 350 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  
BIO 375  
BIO 376  
CHM 115  
CHM 116  
CHM 245  
CHM 246  
CHM 247  
CHM 248  
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 catalog.
2. The Cell and Molecular Biology Core Requirements (\* indicates B.S. degree cognates, number of credits in parentheses):

BIO 120 (4): General Biology II  
BIO 375 (3): Genetics  
BIO 376 (1): Genetics Laboratory  
\*BIO 405 (4): Cell and Molecular Biology  
BIO 406 (2): Cell and Molecular Biology Laboratory  
BIO 426 (2): Nucleic Acids Analysis  
CHM 115 (5): Principles of Chemistry I  
CHM 116 (5): Principles of Chemistry II  
CHM 245 (4): Principles of Organic Chemistry I  
CHM 246 (1): Principles of Organic Chemistry I Lab  
\*CHM 247 (4): Principles of Organic Chemistry II  
CHM 248 (1): Principles of Organic Chemistry II Lab  
CHM 461 (4): Biochemistry I  
CHM 462 (3): Techniques in Biochemistry  
CMB 250 (3): Introduction to Biotechnology  
CMB 495 (2): Perspectives and Issues in CMB (Capstone)  
\*STA 215 (3): Introductory Applied Statistics



## Cell and Molecular Biology

3. A choice between two microbiology courses:
  - Option A  
BIO 357 (4): Environmental Biology
  - Or
  - Option B  
HS 212 (3): Introductory Microbiology, and  
HS 213 (1): Laboratory in Microbiology
4. A choice between two math/physics sequences:
  - Option A (13 credits)  
MTH 125 (3): Survey of Calculus, and  
PHY 220 (5): General Physics I, and  
PHY 221 (5): General Physics II
  - Or
  - Option B (19 credits)  
MTH 201 (5): Calculus I, and  
MTH 202 (4): Calculus II, and  
PHY 230 (5): Principles of Physics I, and  
PHY 231 (5): Principles of Physics II
5. A choice between an independent research experience at a private industry or research lab or at GVSU:
  - Option A  
CMB 490 Internship in CMB (3)
  - Or
  - Option B  
CMB 499 Independent Research in CMB (3)
6. Electives

With the required courses listed above, most students will need additional credits to satisfy the 120 credit hour baccalaureate degree requirement. These additional credits will be comprised of electives. The elective credits are unrestricted; students may choose whatever elective courses they wish. For those students who desire more science in their CMB curriculum, the following is a list of suggested electives.

BIO 411 (3) Genetics of Development and Cancer  
BIO 414 (3) Molecular Biology of the Gene  
BIO 416 (2) Advanced Genetics Laboratory  
BIO 422 (3) Embryology  
BIO 423 (3) Plant Biotechnology  
BIO 432 (4) Comparative Animal Physiology  
CHM 351 (3) Introduction to Physical Chemistry  
CHM 463 (3): Biochemistry II  
HS 208 (3) Human Anatomy  
HS 290 (3) Human Physiology (prereq: HS 208)  
HS 291 (1) Laboratory in Human Physiology (prereq: HS 208)  
HS 310 (3) Basic Pathophysiology (prereq: HS 290/291)  
HS 311 (3) Pharmacological Aspects of Health Science (prereq: HS 310)  
HS 312 (3) Bacterial Genetics  
HS 313 (1) Bacterial Genetics Laboratory  
HS 322 (3) Bacterial Physiology (prereq: HS 212/213)  
HS 323 (1) Bacterial Physiology Laboratory (pre/coreq: HS 322)

## Chemistry

HS 410 (3) Immunology (prereq: HS 212/213)  
HS 411 (1) Immunology Laboratory (pre/coreq: HS 410)  
HS 431 (3) Medical Virology (prereq: HS 212/213)  
PHY 320 (4) Optics (prereq: PHY 231)

### 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 245, 246, 247 and 248  
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  
4 CMB electives  
3 Gen Ed courses

### Courses of Instruction

**CMB 250. 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 112; CHM 115 and 116. 3 credits.

The capstone course (Perspectives and Issues in Cell and Molecular Biology) as well as internship and independent research courses are currently being developed.

### Chemistry (CHM)

Chair: Carlson; Professors: Baum, Richmond; Associate Professors: Carlson, Karpen, Matchett, Miller, Nikkel, Qi, Schaertel, Smart, Tanis; Assistant Professors: Bender, Burns, Henderleiter, Herrington, Kovacs, Lawrence, Leonard, McBane, 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.

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

## Chemistry

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 catalog.
2. 26 semester credit hours of CHM core courses with a minimum 2.0 GPA.
  - 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 I<sup>4</sup>
  - CHM 246 Principles of Organic Chemistry I Lab<sup>4</sup>

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CHM 247 Principles of Organic Chemistry II<sup>4</sup>  
CHM 248 Principles of Organic Chemistry II Lab<sup>4</sup>  
CHM 391 Chemistry Seminar I<sup>3</sup>  
CHM 491 Chemistry Seminar II<sup>3</sup>

3. A minimum 2.0 GPA in required cognate courses. A grade of C or better in all chemistry courses that are listed as prerequisites of other chemistry courses in the major.

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 356 Physical Chemistry I  
CHM 353 Physical Chemistry Laboratory I  
CHM 358 Physical Chemistry II  
CHM 355 Physical Chemistry Laboratory II  
CHM 372 Inorganic Chemistry Lab Techniques  
CHM 461 Biochemistry I  
CHM 471 Advanced Inorganic Chemistry<sup>1</sup>

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)  
CHM 344 Qualitative Organic Analysis (42)  
CHM 425 Instrumental Analysis II (28)  
CHM 452 Advanced Synthetic Techniques (70)  
CHM 455 Computational Physical Chemistry (28)—may substitute for CHM 355.  
CHM 462 Techniques in Biochemistry (84)  
CHM 499 Investigation Problems (84)—two credits of CHM 499 can be applied to satisfy the lab elective requirement.

And the following cognate courses:

MTH 201 Calculus I<sup>2</sup>  
MTH 202 Calculus II (MTH 203 is recommended)  
PHY 230 Principles of Physics I<sup>2</sup>  
PHY 231 Principles of Physics II<sup>2</sup>

### 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 II<sup>1</sup>

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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

And the following cognate courses:

MTH 201 Calculus I<sup>2</sup>  
PHY 220 General Physics I<sup>2</sup>  
PHY 221 General Physics II<sup>2</sup>  
STA 215 Introductory Applied Statistics  
CS 160 or 162 Programming with Visual Basic or Computer Science I

### Education Emphasis

The education emphasis is designed specifically for students who plan to teach chemistry at the secondary level.

CHM 351 Introduction to Physical Chemistry  
CHM 352 Applied Physical Chemistry  
CHM 232 Biological Chemistry or 461 Biochemistry I  
CHM 419 Chemistry in Secondary Education<sup>1</sup>

And the following cognate courses:

MTH 201 Calculus I<sup>2</sup>  
PHY 220 General Physics I<sup>2</sup>  
PHY 221 General Physics II<sup>2</sup>

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 complete a biology and an 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.

### Biochemistry and Biotechnology Emphasis

The biochemistry and biotechnology emphasis prepares students for entry-level employment in biotechnical or biomedical laboratories or for entry into professional health schools or biochemical graduate programs.

CHM 351 Introduction to Physical Chemistry  
CHM 352 Applied Physical Chemistry  
CHM 461 Biochemistry I  
CHM 462 Biochemistry Techniques  
CHM 463 Biochemistry II<sup>1</sup>  
MTH 201 Calculus I<sup>2</sup>  
PHY 220 General Physics I<sup>2</sup>  
PHY 221 General Physics II<sup>2</sup>  
BIO 120 General Biology I  
BIO 375 and 376 Genetics with laboratory

Cognate options: choose 10 additional credits from these choices:

CHM 490 Chemistry Laboratory Internship\*  
CHM 499 Investigation Problems\*  
BIO 357 or HS 212/213 Microbiology with Laboratory  
BIO 432 or HS 290/291 Physiology with Lab

## Chemistry

BIO 405 Cell and Molecular Biology or  
BIO 414 Molecular Biology of the Gene  
BIO 406 Cell and Molecular Biology Lab  
BIO 416 Advanced Genetics Lab  
BIO 426 Nucleic Acid Lab  
BIO 423 Plant Biotechnology  
HS 312/313 Bacterial Genetics Lab *or*  
HS 322/323 Bacterial Physiology with Lab

Students interested in graduate school should take the following:

CHM 356, 353, 358, and 355 or 455 instead of CHM 351 and 352  
PHY 230 and 231 instead of PHY 220 and 221  
MTH 202

### Environmental Emphasis

CHM 321 Environmental Chemistry  
CHM 322 Environmental Chemistry Analysis<sup>1</sup>  
CHM 351 Introduction to Physical Chemistry  
CHM 352 Applied Physical Chemistry Laboratory  
CHM elective (two to three credits) at the 300–400 level (approval required)  
MTH 201 Calculus I<sup>2</sup>  
PHY 220 General Physics I<sup>2</sup>  
PHY 221 General Physics II<sup>2</sup>  
CS 150 Introduction to Computing  
STA 215 Introductory Applied Statistics I  
OSH 414 Environmental Safety and Health Regulations

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.

1. Biology Track: BIO 120, BIO 215.  
And any two of the following courses:  
BIO 338, BIO 357, BIO 440.
2. Natural Resources Management Track: GEO 111, NRM 281.  
And any two of the following courses:  
NRM 320, 410, 451, 452, GPY 307.
3. Geology Track: GEO 111, GEO 112.  
And any two of the following courses:

\*Variable credit courses. Up to six credits in CHM 490 and 499 may apply. Internship and research projects must be approved in advance by advisor.

<sup>1</sup>capstone course.

<sup>2</sup>Completion 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.

<sup>3</sup>Required 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.

<sup>4</sup>CHM 241 and CHM 242 may substitute for CHM 245/246/247/248. However, students must also take CHM 249 plus upper-level chemistry electives that include a total of 28 lab-hours.

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GEO 440, GEO 445, GPY 307.

Students interested in graduate school are encouraged to take the following:

CHM 353, 356, and 358 and 355 or 455 instead of CHM 351 and 352  
PHY 230 and 231 instead of PHY 220 and 221  
MTH 202

## Minor Requirements

1. 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 245/246 Principles of Organic Chemistry I/Lab  
CHM 242 Organic Chemistry for Life Sciences II  
or CHM 247/248 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 461 Biochemistry I  
CHM 419 Chemistry in Secondary Education (education majors only)  
CHM 442 Polymer Chemistry

2. A minimum GPA of 2.0 in all chemistry courses is required. Transfer students must complete at least six credits in chemistry at Grand Valley.
3. A chemistry minor for teacher certification requires CHM 419 and a minimum GPA of 2.8 in chemistry courses.

## 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.

### 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

### Second Year

CHM 222 Quantitative Analysis  
CHM 225 Instrumental Analysis I  
CHM 245/246 Principles of Organic Chemistry I/Lab  
CHM 247/248 Principles of Organic Chemistry II/Lab  
PHY 231 Principles of Physics II

### Third Year

CHM 356/353 Physical Chemistry I/Lab  
CHM 358/355 Physical Chemistry II/Lab  
CHM 372 Inorganic Chemistry Lab Techniques  
CHM 391 Chemistry Seminar I  
CHM electives

### Fourth Year

CHM 461 Biochemistry I  
CHM 471 Advanced Inorganic Chemistry  
CHM 491 Chemistry Seminar II  
CHM electives

## 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 between the scientific disciplines, their relationship with technology, and their relevance to society. In order to be certified students must complete this major with at least a 2.8 GPA and the elementary teaching minor. See the Science section for details.

### Courses of Instruction

Numbers in parentheses at the end of course descriptions indicate the number of lecture, discussion, and laboratory hours per week.

**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). Three credits. Offered fall and winter semesters.

**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. Prerequisite: MTH 097 (may be taken concurrently). Fulfills Physical Sciences Foundation. (4-1-2). Five credits. Offered every semester.

**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. Prerequisites: High school chemistry or CHM 109, and MTH 110. Fulfills Physical Sciences Foundation. (4-1-3). Five credits. Offered every semester.

**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. Prerequisites: 115 and MTH 122 or 125. (4-1-3). Five credits. Offered every semester.

**CHM 180 Special Topics in Chemistry.** Special topics for the first year in college chemistry. Prerequisite: Permission of CHM department. One to three credits. Offered upon sufficient demand.

**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). Four credits. Offered fall and winter semesters.

**CHM 221 Survey of Analytical Chemistry.** Survey course on classic wet chemical and instrumental methods of analysis with a focus on practical laboratory skills. Topics include gravimetric, titrimetric, and potentiometric techniques. Basic issues concerning UV-Vis and atomic absorption spectroscopy and gas and liquid chromatography are also covered. Prerequisite: 116 or one full year of General Chemistry. (3-0-4). Four credits. Offered fall and winter semesters.

**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. Prerequisite: 116. Corequisite: 241 or 245. (2-1-4). Three credits. Offered fall and winter semesters.

**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. Prerequisite: 222. (2-1-3). Three credits. Offered winter semester.



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**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. Prerequisite: 109 or equivalent. (5-0-0). Five credits. Offered fall and winter semesters.

**CHM 231 Introductory Organic Chemistry.** An introduction to organic chemistry. Topics include the classes of organic compounds, reactions, synthesis, and mechanisms. Includes laboratory. Prerequisite: 109 or 116. (3-1-2). Four credits. Offered every semester.

**CHM 232 Biological Chemistry.** An introductory course in biochemistry. Topics include carbohydrates, proteins, lipids, nucleic acids, enzymes, metabolism, and protein synthesis. Includes laboratory. Prerequisite: 231. (3-1-2). Four credits. Offered every semester.

**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. Prerequisite: 116. (3-1-3). Four credits. Offered fall and winter semesters.

**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. Prerequisite: 241. (3-1-3). Four credits. Offered fall and winter semesters.

**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. Prerequisite: 116. Co-requisite: 246. (3-1-0). Three credits. Offered fall semester.

**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. Prerequisite: 116. Co-requisite: 245. (0-0-4). One credit. Offered fall semester.

**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. Prerequisites: 245 and 246. Co-requisite: 248. (3-1-0). Three credits. Offered winter semester.

**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. Prerequisites: 245 and 246. Co-requisite: 247. (0-0-4). One credit. Offered winter semester.

**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. Prerequisite: 242. (1-0-0). One credit. First offered fall 2005.

**CHM 280 Special Topics in Chemistry.** Special topics for the second year in college chemistry. Prerequisite: Permission of CHM department. One to three credits. Offered upon sufficient demand.

**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. Prerequisites: 242 or 247/248; and MTH 125 or MTH 201. (2-0-0). Two credits. Offered fall semester.

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**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. Prerequisite: 231 or 242 or 247/248. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisites: 221 or 222, and 231, 242, or 247/248. (2-0-3). Three credits. Offered fall semester.

**CHM 344 Qualitative Organic Analysis.** Identification of organic compounds using chemical and instrumental methods. Prerequisites: 247/248 or 249. (1-1-4). Three credits. Offered fall and winter semesters.

**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. Prerequisites: 116, MTH 201, and PHY 220 (may be taken concurrently). (3-0-0). Offered fall semester.

**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. Prerequisites: 116, 351 (may be taken concurrently), MTH 201, and PHY 220 (may be taken concurrently). (0-0-3). One credit. Offered winter semester.

**CHM 353 Physical/Computational Chemistry Lab I.** Laboratory experiments in physical chemistry and computational chemistry. Topics include quantum mechanics, spectroscopy, and chemical kinetics. Prerequisites: 222 and 356 (may be taken concurrently). (0-0-4). Two credits. Offered fall semester.

**CHM 355 Physical Chemistry Laboratory II.** Laboratory experiments in physical chemistry. Topics include thermodynamics and chemical kinetics. Prerequisites: 222, 353, and 358 (may be taken concurrently). Students will meet for labs every other week for four-hour laboratory sessions. (0-0-2). One credit. Offered winter semester.

**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. Prerequisites: 116, MTH 202, and PHY 230. (3-1-0). Three credits. Offered fall semester.

**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. Prerequisites: 356 and PHY 231 (may be taken concurrently). (3-0-0). Three credits. Offered winter semester.

**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. Prerequisites: 222; and 247/248 or 249. (0-0-3). One credit. Offered fall semester.

**CHM 380 Special Topics in Chemistry.** Special topics for the third year in college chemistry. Prerequisite: Permission of CHM department. One to three credits. Offered upon sufficient demand.

**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). First semester—zero credit; second semester—one credit. Offered fall and winter semesters.

**CHM 399 Readings in Chemistry.** Independent supervised reading in selected topics or supervised independent laboratory work in chemistry. The topics, hours, and amount of

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credit must be arranged with a faculty member and approved by the department chairman before registration. One or two credits. May be taken for a maximum of four credits. Offered on demand.

**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. Prerequisites: Chemistry major or minor, teacher certification candidate, and 18 credits in chemistry. (3-0-0). Three credits. Offered fall semester

**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. Prerequisite: CHM 225. (2-0-2) Three credits. First offered fall 2005.

**CHM 441 Advanced Organic Chemistry.** An advanced treatment of organic structure, reactions, and mechanisms and physical organic chemistry. Prerequisites: 247/248 or 249, and 351 or 356 (351 or 356 may be taken concurrently). (3-0-0). Three credits. Offered winter semester of odd-numbered years.

**CHM 442 Polymer Chemistry.** Covers the physical and chemical properties of polymers, the preparations and reactions of polymers, and the industrial uses of polymers. Prerequisite: 242 or 247/248, and 351 or 356 (351 or 356 may be taken concurrently). (3-0-0). Three credits. Offered winter semester of even-numbered years.

**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. Prerequisites: 247/248 or 249; 344 recommended. (0-1-5). Two credits. Offered winter semester of odd-numbered years.

**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. Prerequisites: 222, 353, and 358 (may be taken concurrently). (0-0-4). Two credits. Offered winter semester.

**CHM 461 Biochemistry I.** Structure and function of biological compounds, bioenergetics, intermediary metabolism, and protein synthesis. Prerequisite: 242 or 247/248. (4-0-0). Four credits. Offered fall and winter semester.

**CHM 462 Techniques in Biochemistry.** Laboratory experiments and lectures covering techniques used in modern biochemical research. Prerequisite: 461 or permission of instructor. (1-0-6). Three credits. Offered fall and winter semesters.

**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. Prerequisites: 461 and BIO 120 or permission of instructor. Three credits. (3-0-0). Offered winter semester.

**CHM 471 Advanced Inorganic Chemistry.** Structure and bonding as related to chemical and physical properties of inorganic compounds. Capstone for the professional emphasis. Prerequisite: 351 or 356 (351 or 356 may be taken concurrently). (3-0-0). Three credits. Offered fall semester.

**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. Prerequisite: 247/248 or 249. (3-0-0). Three credits. Offered winter semester of even-numbered years.

**CHM 480 Special Topics in Chemistry.** Special topics for the fourth year in college chemistry. Prerequisite: Permission of CHM department. One to three credits. Offered upon sufficient demand.

**CHM 490 Chemistry Laboratory Internship.** Practical on-the-job training and independent study in specialized areas of chemistry. Prerequisite: Chemistry major with a minimum of

## City and Regional Planning

20 hours in chemistry and permission of instructor. One or two credits per semester. Can be taken for a maximum of four credits. Offered on demand.

**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). First semester—zero credit; second semester—one credit. Offered fall and winter semesters.

**CHM 499 Investigation Problems.** Supervised research in chemistry for junior and senior chemistry majors. One to five credits can be taken for a maximum of seven credits. Prerequisite: Permission of instructor. Offered every semester.

**CHM 580 Special Topics in Chemistry.** Special topics appropriate for graduate study in college chemistry. One to three credits. Offered upon sufficient demand.

**CHM 582 Introductory Chemistry for Teachers.** Introduction to chemical science emphasizing the descriptive approach including lectures, demonstrations, discussions, experiments, and assignments illustrating appropriate material as background for teaching middle school science. Prerequisite: Admission into Graduate Program of College of Education for Middle Level Endorsement. Four credits. Offered summers: second six weeks of odd-numbered years.

**CHM 585 Workshop for Chemistry Teachers.** Intended to expand the perspectives or the teaching of specific topics in an introductory chemistry course. Special emphasis on lecture demonstrations, laboratory experiments, and computer programs. Prerequisites: High school chemistry teacher and permission of instructor. Two credits. Offered summer semester.

## City and Regional Planning Minor

Coordinator: Gasahl.

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

### Classics (CLA, GRK, LAT)

Chair: Rayor. Professors: Rayor; Associate Professors: Flaschenriem, Levitan; Assistant Professors: Anderson, Morison, Pazdernik.

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 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.

### Study Abroad

Students interested in classics are encouraged to seek study-abroad experience in a program emphasizing the civilization of the classical world, such as those offered by the Intercollegiate Center for Classical Studies in Rome and the College Year in Athens. Summer internships at archaeological excavations of classical sites are also available.

For more information about opportunities to study classics abroad, students should contact the Department of Classics and the Padnos International Center.

### Requirements for Major and Minor Programs

The Department of Classics offers major and minor programs in classics with five distinctive 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.

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 and CLA 250 *or* CLA 320 *or* PHI 301; *or* HNR 211/212 and HNR 221/222.

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.

## Classics

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.

### **Major in Classics, Classical Languages emphasis (minimum 36 hours):**

Core courses (13 hours)

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 capstone

### **Major in Classics, Greek emphasis (minimum 34 hours):**

Core Courses (13 hours)

Additional 18 hours of Greek at 300 level or above

CLA 495 Capstone

### **Minor in Classics, Greek emphasis (minimum 22 hours):**

Core Courses (13 hours)

Additional nine hours of Greek at 300 level or above; for three of these hours, CLA 275 may be substituted.

### **Major in Classics, Latin emphasis (minimum 34 hours):**

Core Courses (13 hours)

Additional 18 hours of Latin at 300 level or above

CLA 495 Capstone

### **Minor in Classics, Latin emphasis (minimum 22 hours):**

Core Courses (13 hours)

Additional nine hours of Latin at 300 level or above.

### **Major in Classics, Latin Secondary Education emphasis (minimum 34 hours):**

Core courses (13 hours)

Additional 18 hours of Latin at 300 level or above, one of which must be LAT 351

CLA 495 capstone.

### **Minor in Classics, Latin Secondary Education emphasis (minimum 22 hours):**

Core courses (13 hours)

Additional nine hours of Latin at 300 level or above, one of which must be LAT 351.

### **Major in Classics, Classical Tradition emphasis (minimum 37 hours):**

Core courses (13 hours)

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 capstone

### **Minor in Classics, Classical Tradition emphasis (minimum 22 hours):**

Core courses (13 hours)

Additional nine hours from following, with a minimum of six hours from classics:

CLA 250	CLA 315	CLA 410	ANT 215	HST 345
CLA 320	CLA 461	ANT 350	PLS 231	PHI 220*
CLA 275	CLA 345	CLA 479	COM 203*	PHI 301
CLA 287	CLA 380	CLA 495	HNR 300	

\*Upon recommendation of departmental advisor.

## Courses of Instruction

**Courses in Greek 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. Four credits. Offered fall semester.

**GRK 102 Elementary Ancient Greek II.** Continuation of GRK 101. Language work will be supplemented with discussions of ancient Greek history and culture. Prerequisite: Completion of GRK 101. Four credits. Offered winter semester.

**GRK 201 Intermediate Ancient Greek I.** Continuation of GRK 102. Reading of an entire dialogue by Plato, such as the *Apology* or *Crito*. Prerequisite: Completion of GRK 102. Four credits. Offered fall semester.

**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. Prerequisite: Completion of GRK 201 or permission of the instructor. Three credits. Offered winter semester.

**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 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. Prerequisite: Completion of GRK 202 or permission of the instructor. Three credits. Offered fall semester.

**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. Prerequisite: Completion of GRK 301 or permission of the instructor. Three credits. Offered winter semester.

**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. Prerequisite: Completion of GRK 301 or permission of the instructor. Three credits. Offered fall semester.

**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. Prerequisite: Completion of GRK 301 or permission of the instructor. Three credits. Offered winter semester in even-numbered years.

**GRK 399 Independent Reading.** Supervised independent reading in Greek. Topic, credit, and time must be arranged with individual faculty member before registration. One to three credits. Offered fall and winter semester.

**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. Prerequisite: GRK 301 or permission of the instructor. Three credits. Offered fall semester.

**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. Prerequisite: GRK 301 or permission of the instructor. Three credits. Offered winter semester in odd-numbered years.

**LAT 101 Elementary Latin I.** An introduction to Latin vocabulary, grammar, and syntax with emphasis on the language of the classical period. Four credits. Offered fall semester.

**LAT 102 Elementary Latin II.** Continuation of LAT 101. Prerequisite: Completion of LAT 101. Four credits. Offered winter semester.

**LAT 201 Intermediate Latin I.** Continuation of LAT 102. Introduction to the study of selected ancient authors. Prerequisite: LAT 102 or appropriate high school background. Four credits. Offered fall semester.



## Classics

**LAT 202 Intermediate Latin II.** Readings in Virgil's *Aeneid*, supplemented by study of the history and culture of Augustan Rome. Prerequisite: Successful completion of LAT 201, or appropriate high school background. Fulfills World Perspectives requirement. Three credits. Offered winter semester.

**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. Prerequisite: completion of LAT 202 or permission of the instructor. Three credits. Offered fall semester.

**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. Prerequisite: LAT 301 or permission of the instructor. Three credits. Offered winter semester in even-numbered years.

**LAT 351 Latin Prose.** Readings from the works of authors such as Cicero, Livy, Pliny, Tacitus, and Augustine, in genres such as oratory, history, philosophy, and epistolary writing. Special attention to the social and literary contexts of the Latin works and to their influence on contemporary ways of thinking, writing, and viewing the world. Prerequisite: Completion of LAT 301 or permission of the instructor. Three credits. Offered fall semester.

**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. Prerequisite: Completion of LAT 301 or permission of the instructor. Three credits. Offered winter semester in odd-numbered years.

**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. Prerequisite: Completion of LAT 301 or permission of the instructor. Three credits. Offered winter semester in odd-numbered years.

**LAT 399 Independent Reading.** Supervised independent reading in Latin. Topic, credit, and time must be arranged with individual faculty member before registration. One to 3 credits. Offered fall and winter semester.

**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. Prerequisite: Completion of LAT 301 or permission of the instructor. Three credits. Offered fall semester.

**LAT 402 The Roman Novel.** Readings from Petronius' *Satyricon* or Apuleius' *Metamorphoses*, focusing on the novel as a vehicle of social commentary. Special attention to the role of slaves and freedmen, the relationship of patrons and clients, relations between the sexes, and aspects of everyday life: dress, food, education, domestic architecture, and forms of entertainment. Prerequisite: Completion of LAT 301 or permission of the instructor. Three credits. Offered winter semester in even-numbered years.

## 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. Three credits. Offered fall semester.

**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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

## Classics

**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. Prerequisite: fulfillment of the freshman writing requirement. Three credits. Offered winter semester.

**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. Cross-listed with ENG 275. Students may not receive credit for both classes. Prerequisite: fulfillment of the freshman writing requirement. Three credits. Offered even years, winter semester.

**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. Prerequisite: fulfillment of the freshman writing requirement. Three credits. Offered oddyears, winter semester.

**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. Prerequisite: fulfillment of the freshman writing requirement. Three credits. Offered fall semester.

**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 Gender them. Prerequisite: fulfillment of the freshman writing requirement. Three credits. Offered winter semester.

**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. Prerequisite: fulfillment of the freshman writing requirement. Three credits. Offered fall semester in odd-numbered years.

**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. Prerequisite: fulfillment of the B.A. cognate requirement in a foreign language or permission of the instructor. Three credits. Offered winter semester in odd-numbered years.

**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. Prerequisite: Junior standing or permission of the instructor. Three credits. Offered fall semester in even-numbered years.

**CLA 479 Classical Theater Workshop.** Rehearsal and public performance of a play selected from the repertory of ancient Greek and Roman drama. Prerequisite: GRK or LAT 201, or permission of the instructor. Three credits. Offered winter semester in even-numbered years.

**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

## Clinical Laboratory Science

been and can be understood, adapted, and transformed. Required for majors. Prerequisite: senior standing or the permission of the instructor. Three credits. Offered winter semester.

**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. Offered fall and winter semester.

Students interested in classics should also note the following courses offered by related programs:

ANT 215 Origins of Civilization	HST 350 Classical Greece and Rome
ANT 220 Introduction to Archaeology	HNR 211/212 Classical World I
ANT 350 Archaeology of the Middle East	HNR 221/222 Classical World II
COM 203 Argument and Analysis	HNR 300 Classical Mythology
ENG 204 Mythology	PHI 301 Ancient Great Philosophers
HST 345 The Ancient Mediterranean and Orient	PLS 231 Classical Political Thought

## Clinical Laboratory Science (CLS)

Director: Goossen

Associate Professor: Goossen

Affiliate faculty: Stoddard M.H.S., M.T.(ASCP)

Education Coordinator: Tomlinson, M.S., M.T.(ASCP)

Adjunct faculty: Tanis, M.S., M.T.(ASCP)

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, and clinical microbiology and progress through

## Clinical Laboratory Science

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.

### 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 or above and a science GPA of 2.8 or above. Completion of HS 208, BIO 120, CHM 115 & 116, 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 applying student.
4. Additional activities. Additional educational, professional, leadership, scholarly, and volunteer activities are valued and may be used as selection criteria.

### Degree 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 catalog.
2. The Clinical Laboratory Science core requirements:
  - HS 102 Introduction to Clinical Laboratory Sciences
  - HPR 111 Medical Terminology
  - HS 208 Human Anatomy
  - HS 212 Introductory Microbiology
  - HS 213 Laboratory in Microbiology
  - HS 290 Human Physiology\*
  - HS 291 Laboratory in Human Physiology\*
  - HS 301 Introduction to Research in the Health Sciences\*
  - CLS 495 Issues in Clinical Laboratory Science\*\*
3. 32 semester hours of required science cognate courses:
  - BIO 120 General Biology I
  - BIO 355 Human Genetics

\* B.S. degree cognate course sequence: STA 215; HS 301; HS 290, 291

\*\* capstone course

## Clinical Laboratory Science

CHM 115 Principles of Chemistry I  
CHM 116 Principles of Chemistry II  
CHM 231 Introductory Organic Chemistry  
CHM 232 Biological Chemistry  
PHY 200 Physics for Health Sciences  
STA 215 Introductory Applied Statistics\*

4. 34 additional semester credits in professional courses:

HS 416 Hematology  
HS 417 Clinical Hematology  
HPR 340 Health Care Management  
CLS 320 General Laboratory Practice  
CLS 370 Introductory Clinical Science 1  
CLS 372 Introductory Clinical Science 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

## 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. Two credits.

**CLS 370 Introductory Clinical Science I.** A study of the structure, function, and diagnostic characteristics of clinically significant viruses, parasites, and fungi, related to pathogenicity, transmission, control, and host response. Laboratory will emphasize specimen collection and diagnostic procedures for the identification of pathogenic microbes. Five credits

**CLS 372 Introductory Clinical Science 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. Three 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. 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. 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. 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. 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. Two credits.

## Communications

**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. 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. Three credits.

## The School of Communications

Director: Nesterenko. Professors: Ellis, R. Harper, Morse, Nesterenko, Rathbun; Associate Professors: Anton, Bell, Helgert, Libman, Mayberry, Perrine, Philbin, Pritchard B, Roos, Sheffield, Thompson; Assistant Professors: Beery, Pednekar-Magal, Penning, Roberts, Schmit, P. Taylor, Veenstra, Winegar.

Communications is a multidisciplinary liberal arts and professional field. At Grand Valley a student may choose a general major in communications 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.

*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 discussion.

In all major fields students will be expected to acquire the theoretic insights and practical skills appropriate to their 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 more than one internship. Students are strongly urged to work closely with their

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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 (SWS)

*Students also complete the requirements for one of the eight majors listed below.*

*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

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STA 215 Introductory Applied Statistics  
SS 300 Research Methods in the Social Sciences  
COM 375 Communication Research

For the film and video production, photography, and theatre programs, the B.S. cognate is

CS 150 Introduction to Computing, or PHI 103 Logic  
STA 215 Introductory Applied Statistics  
SS 300 Research Methods in the Social Sciences

For the broadcasting and health communication programs, the B.S. cognate is

STA 215 Introductory Applied Statistics  
MKT 352 Marketing Research  
COM 375 Communication Research

### 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, public relations writing and program development, and media strategy and planning.

#### Advertising Sequence

1. *School of Communications Core* (9 credits).
2. *Advertising Core* (33 credits).

CAP 105 Technology in PR & Advertising  
CAP 115 Research Basics for Advertising and PR  
CAP 210 Fundamentals of Advertising  
CAP 220 Fundamentals of Public Relations  
CAP 310 Advertising Management and Cases  
CAP 315 Advertising Copywriting  
CAP 400 Advertising/Public Relations Campaigns  
CAP 413 Media Planning  
CAP 490 Internship  
CJR 256 News Reporting I  
PHI 325 Ethics in Professional Life

3. *Electives* (minimum 6 credits).

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 (3 credits).

#### Public Relations Sequence

1. *School of Communications Core* (9 credits).
2. *Public Relations Core* (33 credits).



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CAP 105 Technology in PR & Advertising  
CAP 115 Research Basics for Advertising and PR  
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 Campaigns  
CAP 423 Public Relations Writing II  
CAP 490 Internship  
CJR 256 News Reporting I  
PHI 325 Ethics in Professional Life

3. *Electives* (minimum 6 credits).

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 (3 credits).

### 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 210 Fundamentals of Advertising  
CAP 220 Fundamentals of Public Relations  
CAP 310 Advertising Management and Cases, *or*  
CAP 320 Public Relations Management and Cases

## 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. Students will work on a weekly newscast that is broadcast to the campus community. 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.

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1. *School of Communications Core* (9 credits).
2. *Broadcasting Requirements*  
All majors take the following core courses (18 credits):  
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 261 Scriptwriting I
3. Select one of the following sequences:  
Broadcast Production (13 credits):  
CBR 281 Audio Production I  
CBR 320 Advanced TV Studio Production  
CBR 382 Audio Production II  
CFV 125 Media Production I  
or  
Broadcast News (12 credits):  
CBR 368 Broadcast News I  
CBR 468 Broadcast News 2  
CBR 484 TV News Workshop  
CJR 256 News Reporting I
4. Electives (6 credits):  
After consulting with a Communications advisor, chose at least six credits from any School of Communications discipline at the 200 level or above.
5. *Capstone*: COM 495 Issues In Communication (3 credits).

### Film and Video Production

A strong hands-on emphasis characterizes the film/video program. The curriculum integrates production experience with the insights offered by media history, theory, and criticism. Students are encouraged to recognize the increasing synthesis between computers, film, video, and audio.

Graduates find a wide range of professional employment, both in West Michigan and nationally, including positions in the feature film industry on the West Coast, in the expanding field of computer animation, at regional radio and television stations, advertising agencies, in cable and public access management, and with production and post-production houses, school systems, and corporations. Other students have chosen to continue their education in graduate school, usually working toward the master of fine arts degree.

Video facilities include video nonlinear editing suites, cuts-only editing suites, digital camcorders, S-VHS camcorders, a fully equipped non-broadcast television studio, and a state-of-the-art audio studio. The 16mm facilities include editing flatbeds, single and double system camera packages, and a full complement of lighting equipment. Students work with a variety of programs in a Macintosh computer animation laboratory. Students intern or are employed in production at WGVU/WGVK-TV, Channels 35 and 52, a PBS affiliate licensed to Grand Valley State University.

### Admission

In order to maintain high-quality instruction, the film/video program limits the number of students accepted each year into CFV 226 and all 300- and 400-level film/video courses.

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Students are required to have an overall GPA above 2.0 and complete the three film/video pre-admission courses (with a minimum of 2.5 GPA) in order to apply for admission to CFV 226 and to 300- and 400-level film/video courses. Achievement of these minimum criteria does not guarantee admission (see below). The following required pre-admission courses may be taken in any order:

Pre-admission courses:\*

1. CFV 124 Image and Sound
2. CFV 125 Media Production I
3. CFV 170 American Cinema

Having met these requirements, students will submit an admission application. Guidelines for the application are available on request from the School of Communications Office, 121 Lake Superior Hall. All prospective majors must submit an admission application. Applications are accepted the first Monday of November, April, and August.

Students may petition to bypass the three pre-admission courses on the basis of prior coursework for which they have received a 2.5 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/video faculty will determine what Grand Valley coursework, if any, is required of the petitioner prior to admission to CFV 226 and to CFV 300- and 400-level courses. Students may not take 200-level or higher CFV courses until they are admitted to the major.

Students interested in the film/video major are urged to complete the "Declaration of Major" form promptly upon admission to Grand Valley and to maintain regular contact with their advisor to ensure proper course enrollment and steady progress toward full acceptance.

1. *School of Communications Core* (9 credits)
2. *Film/Video Foundation* (20 credits)
  - CFV 124 Image and Sound\*
  - CFV 125 Media Production I\*
  - CFV 170 American Cinema\*
  - CFV 226 Media Production II
  - CFV 261 Scriptwriting I
  - CBR 281 Audio Production I
3. *Emphasis Areas* (select one emphasis: A, B, C, or D)
  - A. *Animation* (21 credits)
    - CFV 325 Animation I
    - CFV 326 Computer Image Making
      - or ART 155 Foundations: Introduction to Drawing I
    - CFV 425 Animation II
    - CFV 426 Cinematic Multimedia
      - or ART 257 Life Drawing
    - CFV 370 Film and TV Interpretation
    - Two additional history/theory/criticism courses

\*Minimum 2.5 GPA overall required to achieve major status. See admission policy.

\*Minimum 2.5 GPA overall required to achieve major status. See admission policy.

\*\*Students who select the film production emphasis must complete at least three credits in CFV 328 or CFV 428.

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### B. *Film Production*\*\* (21 credits)

CFV 321 16mm Film Production I  
CFV 328 Film Practicum I\*\* (variable credit)  
or CFV 428 Film Practicum II (variable credit)  
CFV 370 Film and TV Interpretation  
CFV 424 16mm Film Production II  
CFV 429 Film Practicum III  
Two additional history/theory/criticism courses

### C. *Video Production* (21 credits)

Four production courses above CFV 226, at least one of which is at the advanced (400) level.  
CFV 370 Film and TV Interpretation  
Two additional history/theory/criticism courses

### D. *Cinema Studies* (21 credits)

Two intermediate (300 level) production courses  
CFV 370 Film and TV Interpretation  
Four additional history/theory/criticism courses  
Students who select the cinema studies emphasis must complete a senior thesis (not project). See #4, below.

4. *CFV 498 Senior Thesis/Project, or CFV 490 Internship* (variable credit).

5. *Capstone: COM 495 Issues In Communication* (3 credits).

#### *Intermediate Production:*

CBR 320 Advanced TV Studio Production  
CBR 382 Audio Production II  
CFV 321 16mm Film Production I  
CFV 322 Documentary and Field Production  
CFV 323 Radio and TV Electronics  
CFV 325 Animation I  
CFV 326 Computer Image Making  
CFV 327 Film and Video Art  
CFV 328 Film Practicum I  
CFV 330 Nonlinear Editing  
CFV 362 Scriptwriting II  
CFV 368 Lighting for Film/Video Production

#### *Advanced Production:*

CBR 485 Audio Production III  
CFV 424 16mm Film Production II  
CFV 425 Animation II  
CFV 426 Cinematic Multimedia  
CFV 428 Film Practicum II  
CFV 429 Film Practicum III  
CFV 470 Business and Educational Media

#### *History/Theory/Criticism:*

CFV 370 Film and TV Interpretation  
CFV 375 World Cinema  
COM 348 Film Theories (SWS)  
COM 371 Media and Society  
COM 372 Global Communications  
COM 373 Women and Minorities in Film and Television

## Communications

### Communication Studies

Because our lives — publicly, privately, and professionally — vitally depend upon various communication processes, the Communication Studies major fosters in students a broad-based multi-disciplinary orientation, believing that this best prepares them for life-long learning, promotes professional and personal development, and helps them take fuller ownership of their responsibilities as citizens of local, national, and global communities. Students are brought to understand communication as a practice as well as a reflective inquiry into that practice. Communication Studies stresses fundamental capacities for expression and comprehension, including: learning how to analyze difficult texts, to articulate nuanced questions, to cultivate aesthetic and ethical sensibilities, to build persuasive appeals, and to develop critical sensitivities to the persuasive appeals of others.

The major in communication studies is designed to combine a broad overview of the field of communication 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 Communication 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* (9 credits).
2. *Communication Studies Core* (at least 19 credits):

COM 201 Speech

COM 202 Critical Interpretation (SWS), or COM 203 Argument and Analysis (SWS)

COM 210 Nonverbal Communication, or COM 301 Interpersonal Communication

COM 271 History of Communication Technologies

COM 320 Vision and Culture, or COM 371 Media and Society

COM 380 Special Topics: Advanced Reading in Selected Authors (3 cr. May be repeated for credit.)

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.]

#### 3a. *Mass Communication*

Minimum of 6 credits in one—i, ii, or iii.

##### i. Advertising and Public Relations:

CAP 210 Fundamentals of Advertising, or CAP 220 Fundamentals of Public Relations

CAP 315 Advertising Copywriting, or CAP 321 Public Relations Writing I

CAP 310 Advertising Management and Cases, or CAP 320 Public Relations Management and Cases

##### ii. Journalism:

CJR 256 News Reporting I

CJR 270 News Reporting II, or CJR 316 Editing

CJR 290 Journalism History

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### iii. Broadcasting:\*

COM 240 Survey of Electronic Media  
COM 371 Media and Society  
CBR 368 Broadcast News Reporting, or CBR 281 Audio Production I

### 3b. *Communication Arts*

Minimum of 6 credits in one—i, ii, or iii.

#### i. Film/Video:

CFV 125 Media Production I  
CFV 225 Film Culture or CFV 170 American Cinema  
COM 348 Film Theories, or CFV 370 Film and TV Interpretation

#### ii. Photography:

CPH 171 Photography I  
CPH 172 Photography II  
CPH 266 Photo History  
CPH 278 Color-Positive Photography

#### iii. Theatre:

CTH 151 Acting I: Improvisation  
CTH 161 Theatre Production  
CTH 371 Theatre History  
CTH 380 Special Topics  
OR, 3c. Communication Applications: Instead of satisfying 3a *and* 3b, the student may take a minimum of 12 credits (in i, ii, or iii) in 3a *or* 3b.

### 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 (3 credits).

## 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

## Communications

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 health 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.

1. *School of Communications Core* (9 credits).\*

2. *Health Sciences Core* (19 credits).\*\*

BIO 103 The Biology of People  
CHM 109 Introductory Chemistry  
HS 202 Anatomy and Physiology  
HS 223 Public Health Concepts  
HPR 111 Medical Terminology  
HPR 340 Health Care Management

3. *Health Communication Core* (27 credits).

CAP 210 Fundamentals of Advertising  
CAP 220 Fundamentals of Public Relations  
CAP 321 Public Relations Writing I  
CJR 256 News Reporting I  
CJR 390 Technical Writing  
COM 209 Health Communication Systems  
COM 410 Senior Seminar in Health Communication  
COM 490 Internship (minimum of 3 credits)  
MKT 350 Marketing Management

4. *Elective Group* (select two of six courses for 6 to 8 credits).

ART 107 Reproduction Processes  
ART 210 Graphic Design I  
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 (3 credits).

## 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

\*The health communication major requires COM 201 to be taken in the School of Communications core (1 above).

\*\*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.

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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 Lantborn* daily and weekly newspapers, minority publications, trade and popular magazines, and commercial and public broadcasting stations.

1. *School of Communications Core* (9 credits).

2. *Journalism Core* (24 credits).

COM 203 Argument and Analysis  
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

3. *Emphasis Area*—select one, either A or B

A. *Print Journalism* (9 credits)

CJR 364 Article Writing  
CJR 365 Advanced Editing  
CJR 481 Investigative Reporting

B. *Electronic Journalism* (14 credits)

CFV 125 Media Production I  
CFV 226 Media Production II  
CBR 368 Broadcast News I  
CBR 482 Broadcast News II

4. *Outside Electives* (9 credits)

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 (3 credits).

## 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 36 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



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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* (9 credits).
2. *Photography Core* (eight courses, for a minimum of 30 credits).

- CPH 171 Photography I
- ART 150 Two-Dimensional Design
- CPH 172 Photography II
- CPH 266 History of Photography I
- CPH 273 Classic 4 x 5 Photography
- CPH 278 Color-Positive Photography or
- CPH 279 Color Printing
- CPH 372 Computer Photo I
- CPH 366 History of Photography II
- CPH 498 Senior Thesis

3. *Electives* (minimum of 9 credits).
  - CPH 371 Experimental Black and White Photography
  - CPH 373 Computer Photo II
  - CPH 374 Color Photography
  - CPH 375 Studio Photography
  - CPH 377 Social Eye
  - CPH 380 Advanced Problems in Photography
  - CPH 399 Independent Study
  - CPH 490 Internship

4. *Capstone*: COM 495 Issues In Communication (3 credits).

## 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

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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 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.

1. *School of Communications Core* (9 credits)\*.

2. *Theatre Core* (35 credits)

CTH 151 Acting I: Improvisation  
CTH 161 Theatre Production  
CTH 162 Play Analysis  
CTH 252 Acting II: Characterization  
CTH 261 Stagecraft  
CTH 262 Costume Construction  
CTH 365 Directing I  
CTH 371 Theatre History  
CTH 372 Modern Theatre

*Two of the following\*\**

CTH 367 Scenography  
CTH 368 Lighting Design  
CTH 369 Costume Design  
CTH 465 Directing II  
CTH 490 Internship or COM 498 Senior Thesis

3. *Electives* (9 credits)

CTH 198 Rehearsal and Performance  
CTH 250 Stage Management  
CTH 263 Makeup  
CTH 300 Storytelling  
CTH 356 Acting III  
CTH 366 Theatre for Children  
CTH 367 Scenography  
CTH 368 Lighting Design  
CTH 369 Costume Design  
CTH 373 Global Arts Performance and Management  
CTH 380 Special Topics  
CTH 454 Acting IV

\*The theatre program requires COM 201 in the School of Communications core.

\*\*These two courses cannot also count for electives below.

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CTH 465 Directing II  
CTH/CLA 479 Classics Workshop  
MUS 357 Opera Theatre

### 4. *Capstone*: COM 495 Issues In Communication (3 credits)\*\*

Note: Theatre majors are encouraged to take ENG 212 in general education.

### 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 Communication

As the field of communication has matured, the value of empirically based decision-making has become increasingly clear. Communication professionals must be knowledgeable about acquiring and assessing relevant information and integrating the analysis of that information into the decision-making process.

The Master of Science degree in the School of Communications is a versatile program that meets the needs of various aspects of professional communication. Individuals in public relations, advertising, journalism, and broadcasting, to name a few, as well as those seeking a degree that will enhance their effectiveness and leadership skills within an organization, find this to be a rewarding and beneficial program. Communication professionals who become managers and decision-makers will increasingly be selected because they have leadership skills, knowledge of theory and research and their application, the ability to access information to solve communication problems, and the ability to effectively implement information into the decision-making process. The curriculum of the master's program is attendant to these skills.

The 36 credit master's program is designed with working professionals in mind. Courses are scheduled during evenings and offered at Grand Valley's Pew Grand Rapids Campus. Taken part-time, the Master of Science in Communication 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  
BUS 631 Leadership and Organization 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.

\*\*These two courses cannot also count for electives below.

## Communications

COM 643 Small Group Communication and Leadership  
COM 644 Network Analysis  
COM 680 Special Topics  
COM 699 Independent Study

### Prerequisites and Entrance Requirements\*

1. 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.
2. Background coursework in communication theory, research methods, and statistics.
3. Two letters of endorsement from communication professionals.
4. 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

BUS 631 Leadership and Organization Dynamics, or

PA 520 Foundations of Public Management

COM 634 Ethics in Professional Communication

##### Spring/Summer

Elective course

#### Third Year

##### Fall

COM 641 Emerging Telecommunication Technologies

Elective course

##### Winter

COM 642 Communication Law

COM 660 Communication Management and Cases

##### Spring/Summer

COM 695 Master's Thesis/Project

\*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.

## Communications

### Courses of Instruction

#### Advertising/Public Relations (CAP)

**CAP 105 Technology in PR & 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. Prerequisite: CAP 115 and completion of composition requirement (WRT 150) with grade of C (not C-) or better. Offered every semester. 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 and implementing public relations campaigns, the identification of publics and the strategies for influencing them. Prerequisite: CAP 115 and completion of composition requirement (WRT 150) with grade of C (not C-) or better. Offered every semester. Three credits.

**CAP 305 Sports Promotion.** Part of the Sport and Life General Education theme. 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. Prerequisite: Junior standing. Offered fall and winter semesters.

**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. Prerequisite: 210. Offered fall and winter semesters. 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. Prerequisite: 210 or permission of instructor. Offered every fall. Three credits.

**CAP 312 Merchandising and Sales Promotion.** A study of the methods and materials that supplement advertising, public relations, and personal selling in the marketing mix. Prerequisites: 210 and 220 or permission of instructor. Offered on sufficient demand. Three credits.

**CAP 315 Advertising Copywriting.** Practice in the copywriting process, from conception of ideas to finished copy for product and corporate advertising objectives. Prerequisite: CJR 256 or permission of instructor. Offered fall and winter semesters. Three credits. Part of Creativity theme.

**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. Prerequisite: 220. Offered fall and winter semesters. 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 every semester.

**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. Prerequisite: Sophomore standing. Three credits. May be repeated for credit when content varies. Offered on sufficient demand.

## Communications

**CAP 399 Independent Study in Advertising/Public Relations.** Individually designed learning projects. Prerequisites: Advertising/public relations major, junior status, and permission of advisor. Offered every semester. Variable credit.

**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. Prerequisites: 310 or 320 and senior standing. Offered fall and winter semesters. 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. Prerequisites: 210 and 220 or permission of instructor. Offered fall and winter semesters. 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. Prerequisite: 321. Offered fall and winter semesters. 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. Prerequisite: 310 or 320. Offered winter semester of odd-numbered years. Three credits.

**CAP 490 Internship in Advertising/Public Relations.** Practical work-study involving supervised on-the-job experience in advertising and public relations. Prerequisites: Advertising/public relations major, junior status, and permission of advisor. Offered every semester. Variable credit.

### Broadcasting (CBR)

**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. Prerequisite: 220. Offered winter semester. 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. Prerequisites: Preference to Broadcasting majors. Offered fall semester. 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. Prerequisite: CBR 240. Offered fall semester. Three credits.

**CBR 368 Broadcast News I.** News writing for radio and television. Projects include writing and producing newscasts and interviews. Prerequisite: CJR 256. Offered winter semester. Three 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. Prerequisites: 281 or permission of instructor. Offered spring/summer semester. Three credits.

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**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. Variable credit.

**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. Prerequisites: CBR 240 and senior standing. Offered winter semester. 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. This newscast will be broadcast to the Grand Valley community. Prerequisites: CBR 368. Offered fall semester. 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. Prerequisites: CBR 220. Offered winter semester. 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. Prerequisite: CBR 468. Offered fall and winter semesters. 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. Prerequisite: 382. Offered fall semester. 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. Variable credit.

**CBR 498 Senior Thesis/Project.** The senior thesis/project demonstrates depth and sophistication in the major. Offered fall and winter semesters. Variable credit.

## Film and Video Production (CFV)

**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 small format video. A pre-admission course for film and video production. Offered every semester. Four credits.

**CFV 170 American Cinema.** Introductory course in the critical study of film. Examines formal, economic, social, and historical aspects of film production and reception in the United States. Involves close textual analysis of historically important and/or exemplary films. A pre-admission course for film and video production. Offered fall and winter semesters. Three credits.

**CFV 226 Media Production II.** The second course in the media production sequence, emphasizing the techniques and aesthetics of editing. Includes television studio production using the facilities of WGVU/WGVK-TV, where students complete 20 lab hours. Prerequisite: Admission to major. Offered every semester. 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. Prerequisite: Admission to major. Offered every semester. Three credits.

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**CFV 321 16mm Film Production I.** 16mm shooting, editing, conforming, and budgeting, using class members as production unit. Includes attention to the history and aesthetics of this format. Prerequisite: Admission to major. Offered fall and winter semesters. Three credits.

**CFV 322 Documentary and Field Production.** Research, shooting, and editing for documentary and field production. Emphasis on video, with exercises in audio and film. Includes viewings and readings. Prerequisite: Admission to major and 226. Offered every year. Three credits.

**CFV 323 Radio and Television Electronics.** Basic electronics theory, audio and video recording, synthesizing on audio or video signal, and signal processing. Prerequisite: 226 or COM 281; Physics 226 or 229 recommended. Offered winter semester of even-numbered years. 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. Prerequisites: 124, 125, 170 and/or admission to major. Offered fall semester. Three credits.

**CFV 326 Computer Image Making.** An introduction to the Macintosh computer system for imaging, image manipulation, and multimedia production. Emphasis will be placed on how the computer as a tool affects the communications environment. Prerequisites: 124, 125, 170 and/or admission to major. Offered fall semester. 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. Prerequisite: Admission to major and 226. Offered winter semester. Three credits.

**CFV 328 Film Practicum I.** 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. Prerequisite: Permission of instructor. Offered spring term. Variable, three or six credits.

**CFV 330 Nonlinear Editing.** Explores conceptual issues in editing images and sound in a digital production environment. Prerequisite: Admission to major and 226. Offered winter semester. 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. Prerequisite: 261. Offered winter semester. 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, product shoots. Prerequisite: Admission to major and 226. Offered fall semester of odd-numbered years. 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. Prerequisite: Admission to major and 170. Offered every year. May be repeated for credit when content varies. 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. Prerequisite: Admission to major, 170, or permission of instructor. Offered winter semester of even-numbered years. 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. Prerequisite: Sophomore standing. Three credits. May be repeated for credit when content varies.

**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. Variable credit.



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**CFV 424 16mm Film Production II.** Working in production teams, students will shoot a short synchronous sound motion picture from a pre-existing script. Prerequisite: Admission to major and 321. Offered winter semester. 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. Prerequisite: Admission to major and 325. Offered winter semester. 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. Prerequisite: Admission to major and 326. Offered winter semester. Three credits.

**CFV 428 Film Practicum II.** 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. Prerequisite: Admission to major and 424. Offered spring semester. Variable, three or six credits.

**CFV 429 Film Practicum III.** 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. Prerequisite: 261 and either 330 or CBR 281. Offered summer semester. Three credits.

**CFV 470 Business and Educational Media.** How the media expert serves within a problem-solving team. Development of media productions for actual clients. Prerequisite: One intermediate video production course (CFV 320 or higher). Offered fall semester. 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. Variable credit.

**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. Variable credit.

## Journalism (CJR)

**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. Prerequisite: 256 or permission of instructor. Offered fall semester. 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. Prerequisite: Fulfillment of the composition requirement. Offered fall, winter, and spring/summer semesters. 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. Prerequisite: 256, or permission of instructor. Offered fall and winter semesters. 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. Prerequisite: 256 or permission of instructor. Offered winter semester. Three credits.

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**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. Prerequisite: 256 or permission of instructor. Offered fall and winter semesters. 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 considerations; and generating infographics to accompany stories. Prerequisite: 316. Offered winter semester. 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. Prerequisite: Ability to write competently and experience or coursework in one or more of the arts. Prerequisite: 256 or permission of instructor. Offered fall semester of odd-numbered years. 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. Prerequisite: Sophomore standing. May be repeated for credit when content varies. Offered fall semester of odd-numbered years. 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. Prerequisite: 270 or permission of instructor. Offered winter semester. 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. Variable credit.

**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. Prerequisite: 270. Offered fall semester. 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. Prerequisite: Sophomore standing. Offered fall semester of even-numbered years. 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

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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. Prerequisites: 316 or permission of instructor. Offered winter semester of odd-numbered years. Three credits.

**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. Variable credit.

### Communications (COM) Undergraduate Courses

**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. Prerequisite: Sophomore standing. Offered fall semester. 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. Prerequisite: Fulfillment of composition requirement. Offered fall and winter semesters. 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 271 History of Communications Technologies.** Introduces students to historical impacts communication technologies have had in shaping and sustaining civilization and modernity. Examines communicative media as extensions of the human habitat, and critically considers their social and personal consequences. At least half of the course focuses on media prior to the telegraph. Pre-requisites: COM 101. Offered winter semesters. 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. Prerequisite: COM 101. Offered every semester. Three credits.

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**COM 301 Interpersonal Communication.** Introduces students to theory, research, and practical issues involved in interpersonal communication, including topics such as language, non-verbal 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. Prerequisite: 201. Offered on sufficient demand. Three credits.

**COM 320 Vision and Culture.** A historical survey of the evolving modes and techniques of vision, visuality, and representation in art, science, and mass media in order to examine how those modes of vision have both reflected and influenced our ways of knowing ourselves and the world. Offered fall even years. Three credits. Part of Perception Theme.

**COM 348 Film Theories.** Examines a selection of major theories concerning sources of meaning and power in film and television. Prerequisite: Junior standing. Offered every semester. 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/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. 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. Prerequisite: SS 300 or MKT 352. Offered fall and winter semesters. Three credits.

**COM 376 Communications Policy and Law.** A survey of key policies and recent developments in communication law that shape media industries (print, broadcast, cable, telephony and the Internet) and communication practices in media environments. In this context, theories of policymaking, regulation and the public interest are examined. Offered fall semester. 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. Prerequisite: Sophomore standing. Three credits. May be repeated for credit when content varies. Offered on sufficient demand.

**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. Variable credit.

**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. Prerequisites: 209; senior standing. Offered winter semester. Three credits.

**COM 415 Advanced Writers' Studio.** A workshop for advanced students in journalism, creative writing, writing for media, and other writing areas who are writing on their own and want to present their writing to a group for constructive criticism. Offered on sufficient demand. Three credits.

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**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. Variable credit.

**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. Prerequisites: Senior standing; School of Communications major. Three credits. Offered every semester.

**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. Variable credit.

### Communications (COM) Graduate Courses

**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: 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: 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: 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: 600, BUS 631. Three credits.

**COM 644 Network Analysis.** Research in complex organizational settings focusing on communication interrelationships and problems. Prerequisite: 650. 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: 620, BUS 631. Three credits.

**COM 680 Special Topics.** A study of special topics not regularly covered in the curriculum. Prerequisite: 600. Three credits.

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**COM 695 Master's Thesis/Project.** Master's thesis or project completed in consultation with the student's advisor and committee. Prerequisite: 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: 600 and 610. Three credits.

### Photography (CPH)

**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. Prerequisite: 171. Offered every semester. 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 19<sup>th</sup> century to the present. Prerequisite: None. Offered fall semester. 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. Prerequisite: 172 or permission of instructor. Offered fall and winter semesters. 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. Prerequisite: 172 or permission of instructor. Offered winter semester. Four credits.

**CPH 279 Color Printing.** Introduction to color theory, negative-to-positive chromagenic printing, and expressive use of color in photography. Prerequisites: 172 or permission of instructor. Offered fall semester. 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 19<sup>th</sup> century to the present, their social and political contexts, and their expression in both photographic practice and critical writings. Prerequisites: CPH 266 History of Photography I, and Junior Standing or permission of the instructor. Offered winter semester. 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. Prerequisite: 273. Offered winter semester. 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. Prerequisites: ART 150 and CPH 175, or 278 or 279 or CFV 226, or permission of instructor. Offered every semester. 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

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with digital imaging projects. Prerequisite: 372 or permission of instructor. Offered winter semester. 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. Prerequisite: 279. Offered winter semester. 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. Prerequisite: 273. Offered winter semester. 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. Prerequisite: 273. Offered fall semester, odd years. 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. Prerequisite: 273. Offered fall semester. 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. Variable credit.

**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. Variable credit.

**CPH 498 Senior Thesis/Project.** The senior thesis/project demonstrates depth and sophistication in the major. Prerequisite: 266 with a grade of C or better. Offered fall and winter semesters, but *not necessarily in the summer*. Variable credit.

## Theatre (CTH)

**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 107 Oral Interpretation.** Performance and theory in the art of reading literature aloud. Criticism by instructor and peers in readings from prose, drama, and poetry. Skills in cutting and programming for performance. Work on voice and diction. Offered on sufficient demand. 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 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. Two 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

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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. Prerequisite: Permission of instructor. May be repeated for credit. Offered every semester. One to three credits.

**CTH 207 Readers' Theatre.** Work in directing and acting in a readers' theatre production. Skills in selecting and cutting literature will be developed when students write scripts for performance of a final project. Some critical assignments included. Offered on sufficient demand. 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. Prerequisite: 151. Offered winter semester. 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. Prerequisite: 161 or permission of instructor. Offered on sufficient demand. 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. Two credits. Offered on sufficient demand.

**CTH 298 Applied Theatre Practice.** Participation in a technical or design capacity (scenery, lighting, costumes, stage-management, etc.) in the college's production program. Prerequisite: Permission of instructor. May be repeated for credit. Offered every semester. 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. Pre-requisite: Junior Standing. Offered fall of even numbered years. Three credits. Part of Creativity theme.

**CTH 356 Acting III.** An introduction to the special techniques of performing for film and video cameras, including pre-studio rehearsals, studio rehearsal, and the actual film or videotaping. Prerequisite: Two courses in acting. Two credits. Offered on sufficient demand.

**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. Prerequisites: 151, 161, 261 or by permission of instructor. Offered winter semester even-numbered years. Three credits.

**CTH 366 Theatre for Children.** 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. Prerequisite: 161 and 261 or permission of instructor. Offered winter semester of odd-numbered years. 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. Prerequisite: 161. Offered fall, odd-numbered years. Three credits.



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**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. Prerequisite: 161 and 262 or permission of instructor. Offered fall semester of odd-numbered years. 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. Prerequisite: fulfillment of the Freshman Writing Requirement. Offered fall, odd-numbered years. 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. Prerequisite: fulfillment of the Freshman Writing Requirement. Offered fall, even-numbered years. 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. Prerequisite: Permission of instructor and two courses in any arts area. Offered spring semester. Three credits. Part of Global Integration and Fragmentation Theme.

**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. Prerequisites: Sophomore standing. Three credits. May be repeated for credit when content varies. Offered on sufficient demand.

**CTH 399 Independent Reading.** Directed readings or research work in theatre literature or theatrical practice. Prerequisite: Junior or senior standing and permission of the instructor. Offered every semester. One to 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, performing. Offered winter semester in odd-numbered years. 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. Prerequisite: 365 or by permission of instructor. Offered on sufficient demand. 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. Prerequisites: GRK or LAT 201 or by permission of instructor. Offered winter semester in even-numbered years. Three credits.

**CTH 490 Internship.** Practical work and study in the area of acting, arts management, or technical production with a professional regional theatre. Prerequisite: Senior standing, selected coursework in background to the specific area of the internship, and permission of theatre chairman. Offered every semester. Variable credit.

**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, Tusch, Wolffe; Assistant Professors: Dulimarta, El-Said, Kurmas, Levin, McGuire, Reynolds, Trefftz; Instructors: Hornik, Lange, Peterman, Scripps; Visiting Instructors: Meyers, Posada; Computer Lab Supervisor: Strebel.

## Computing and Information Systems

Degrees offered: B.S., B.A. in computer science, with a K-12 teacher certification option; B.S., B.A. in information systems; M.S. in computer information systems. Minors offered: computer science, computer science (K—12 teacher certification), information systems, microcomputer systems, 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 computer 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 computer 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, the CISAB Coordinator, and at least 12 leading computer science 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 contact 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 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 department will also consider internship availability and the applicant's suitability for internships before granting admission. Transfer students must complete at least six hours of CSIS coursework before applying, but should consult with a CSIS advisor before scheduling their first semester.

The technical core includes CS 162 and 163; MTH 225; STA 215 or 312; 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.

## Computing and Information Systems

### 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 catalog.
2. Computer Science Major (not for Teacher Certification).

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

Computer Science Elective Courses. All computer science majors must select three electives (minimum of nine hours) from the following:

CS 361 C and Unix  
CS 365 Artificial Intelligence  
CS 367 Computer Graphics  
CS 380 Special Topics  
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 24 credits of cognate courses:

COM 201 Speech  
MTH 201 Calculus I\*\*  
MTH 202 Calculus II\*\*  
MTH 225 Discrete Structures: Computer Science 1  
MTH 325 Discrete Structures: Computer Science 2  
STA 215 Introductory Applied Statistics\*\* or STA 312 Probability and Statistics\*\*  
WRT 350 Business Communication

4. Computer Science Major (K—12 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

\*capstone course.

\*\*Completion of MTH 201, MTH 202, and either STA 215 or 312 satisfies the B.S. degree cognate for computer science majors. Students completing a B.A. degree must complete a third semester proficiency in a foreign language.

## Computing and Information Systems

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.

### Required Computer Science Courses:

CS 162 Computer Science I  
CS 163 Computer Science II  
CS 231 Problem Solving Using Spreadsheets  
CS 237 Microcomputer Communications  
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\*

### 5. Cognate Courses:

All computer science majors seeking teacher certification must complete the following 12 credits of cognate courses:

WRT 350 Business Communication or COM 201 Speech  
MTH 225 Discrete Structures: Computer Science 1\*\*  
MTH 325 Discrete Structures: Computer Science 2\*\*  
STA 215 Introductory Applied Statistics\*\* or STA 312 Probability and Statistics\*\*

### 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 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:

#### Fall First Year

CS 162 Computer Science I  
COM 201 Speech  
MTH 122 College Algebra\*\*\*  
WRT 150 Strategies in Writing  
General Education courses

#### Winter First Year

CS 163 Computer Science II  
MTH 123 Trigonometry\*\*\*  
MTH 225 Discrete Structures: CS 1  
STA 215 Introductory Applied Statistics or  
STA 312 Probability and Statistics  
General Education courses

#### Fall Second Year

CS 251 Computer Organization  
MTH 201 Calculus I  
MTH 325 Discrete Structures: CS 2  
General Education courses

#### Winter Second Year

CS 263 Data Structures & Algorithms  
MTH 202 Calculus II  
WRT 350 Business Communication  
General Education courses

\*capstone course.

\*\*Completion of MTH 225, MTH 325, and either STA 215 or 312 satisfies the B.S. degree cognates for computer science majors (K—12 certification emphasis).

\*\*\*This course may be satisfied by an Advanced Math Placement Test.

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### Fall Third Year

CS 350 Software Engineering  
CS 457 Data Communications  
General Education courses

### Winter Third Year

CS 343 Struc. of Programming Lang.  
CS 353 Database  
CS 451 Computer Architecture  
General Education courses

### Fall Fourth Year

CS 490 Internship  
Computer Science Electives  
General Education courses

### Winter Fourth Year

CS 452 Operating Systems Concepts  
CS 467 Computer Science Project  
Computer Science Electives  
General Education courses

## Requirements for an Information Systems Major

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. All information systems majors must complete the following 45–48 semester credit hours of computer science courses with a minimum 2.0 GPA:

CS 162 Computer Science I  
CS 163 Computer Science II  
CS 231 Problem Solving using Spreadsheets or CS 238 Desktop Media  
CS 251 Computer Organization  
CS 253 COBOL  
CS 337 Network Systems Management  
CS 350 Introduction to Software Engineering  
CS 353 Database  
CS 437 Distributed Computing  
CS 443 Software Development Tools  
CS 450 Advanced Application Development  
CS 460 Management of Information Systems\*  
CS 463 Information Systems Project  
CS 490 Internship

3. Cognate Courses.

All information systems majors must complete the following 24 credits of cognate courses:

ACC 212 Principles of Financial Accounting  
ACC 213 Principles of Managerial Accounting  
COM 201 Speech  
MGT 331 Concepts of Management  
MTH 225 Discrete Structures: Computer Science 1\*\* or MTH 227 Linear Algebra I\*\*  
STA 215 Introductory Applied Statistics\*\* or STA 312 Probability and Statistics\*\*  
STA 216 Intermediate Applied Statistics\*\*  
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

\*capstone course.

\*\*Completion of either MTH 225 or 227, and either STA 215 or 312, and STA 216 satisfies the B.S. degree cognate for information systems majors. Students completing a B.A. degree must complete a third-semester proficiency in a foreign language.

## Computing and Information Systems

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:

#### Fall First Year

CS 162 Computer Science I  
ACC 212 Financial Accounting  
MTH 122 College Algebra\*\*\*  
WRT 150 Strategies in Writing  
General Education course

#### Winter First Year

COM 201 Speech  
CS 163 Computer Science II  
MTH 225 Discrete Structures: CS 1  
STA 215 Introductory Applied Statistics  
General Education course

#### Fall Second Year

CS 231 Problem Solving using Spreadsheets  
or CS 238 Desktop Media  
CS 251 Computer Organization  
CS 253 COBOL  
General Education courses

#### Winter Second Year

ACC 213 Managerial Accounting  
General Education courses  
STA 216 Intermediate Applied Stats

#### Fall Third Year

CS 337 Network Systems Management  
CS 350 Introduction to Software  
Engineering  
CS 353 Database  
MGT 331 Concepts of Management  
General Education courses

#### Winter Third Year

CS 443 Software Development Tools  
WRT 350 Business Communications  
General Education courses

#### Fall Fourth Year

CS 450 Advanced Application Dev.  
CS 463 Information Systems Project  
CS 490 Internship  
General Education Classes

#### Winter Fourth Year

CS 437 Distributed Computing  
CS 460 Management of IS  
General Education Classes

## Requirements for Computer Science and Information Systems Minors

The following minors require a minimum GPA of 2.0 to be approved.

### 1. Computer Science.

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  
CS 353 Database, or CS 361 C and UNIX, or CS 457 Data Communications  
MTH 225 Discrete Structures: Computer Science 1  
MTH 325 Discrete Structures: Computer Science 2

### 2. Computer Science (K—12 Teacher Certification)

A minimum GPA of 2.8 in this minor is required for recommendation for teacher certification.

\*\*\*This course may be satisfied by an Advanced Math Placement Test.

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CS 162 Computer Science I  
CS 163 Computer Science II  
CS 231 Problem Solving Using Spreadsheets  
CS 233 Microcomputer Database Management  
CS 237 Microcomputer Communications  
CS 251 Computer Organization  
CS 309 Teaching Computer Science  
MTH 225 Discrete Structures: Computer Science 1

### 3. Microcomputer Systems.

A minor in microcomputer systems must complete at least 24 hours as follows:

All of the following (15 hours):

CS 150 Introduction to Computing  
CS 160 Programming with Visual Basic  
CS 231 Problem Solving Using Spreadsheets  
CS 233 Microcomputer Database Management  
CS 339 Microcomputer Applications Project

Three elective courses selected from the following (9–10 hours):

CS 162 Computer Science I  
CS 230 Microcomputer Operating Systems  
CS 237 Microcomputer Communications  
CS 238 Desktop Media  
CS 331 Advanced Spreadsheet Development

With prior departmental approval, one course in another discipline that extensively uses microcomputers and that has a prerequisite of CS 150.

### 4. Computer Engineering.

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 Advanced Digital Systems  
EGR 424 Design of Microcontroller Applications

One elective course selected from the following (three-four credit hours).

CS 263 Data Structures and Algorithms  
CS 452 Operating Systems Concepts  
CS 457 Data Communications

### 5. Information Systems.

CS 162 Computer Science I  
CS 163 Computer Science II  
CS 253 COBOL  
CS 337 Network Systems Management  
CS 350 Introduction to Software Engineering  
CS 353 Database  
MTH 225 Discrete Structures: Computer Science 1

### 6. Health Care Information Systems.

HPR 111 Medical Terminology  
HS 222 Introduction to Public Health  
HPR 220 Health Care Delivery  
HPR 340 Health Care Management

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SOC 356 Sociology of Health Care  
CS 160 Programming with Visual Basic or CS 162 Computer Science I  
CS 231 Problem Solving Using Spreadsheets  
CS 233 Microcomputer Database Management or CS 353 Database  
CS 237 Microcomputer Communications or CS 337 Network Systems Management  
or CS 457 Data Communications  
CS 340 Health Care Information Systems

### Internship Program

This program enables juniors and seniors with jobs involving computer science to earn credits for academic work related to the technical skills required in performing the job.

### Master of Science—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 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, 251, 350 and 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.



## **Computing and Information Systems**

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.

### **Degree Requirements**

All candidates for the degree must complete a total of 33 credits, as indicated below:

- 3 CS 500 Fundamentals of Computer Science\*
- 18 all courses in two content areas
- 9 three elective courses
- 3 capstone course, project course, or thesis course

Each candidate must complete either the capstone course, a project course, or the thesis option.

### **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**

- CS 672 Computer Systems Architecture
- CS 674 Modeling and Decision Systems

\*Students not required to take this course must take an additional elective.

## Computing and Information Systems

CS 675 Compiler Construction  
CS 680 Seminar in Computer Information Systems  
CS 699 Directed Readings in Computer Science  
Courses in the three content areas not selected by the student.

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

CS 692. The capstone course topic will vary each semester. Contact the department one semester before beginning CS 692.

### Project

CS 693. Contact the department for detailed information one semester before beginning the project course.

### Thesis

CS 690 Master's Thesis Research  
CS 695 Master's 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.

### Courses of Instruction

To fulfill a prerequisite, a student should obtain a grade of C or higher in the prerequisite course. Any prerequisite may be waived by consent of the instructor. Numbers in parentheses at the end of the course description indicate the number of lecture, discussion, and laboratory hours per week.

**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). Three credits. Offered fall and winter semesters.

**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. Co-requisite: MTH 110. (3-0-0). Three credits. Offered fall and winter semesters.

**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. Prerequisite: MTH 110. (3-0-2). Four credits. Offered fall and winter semesters.

**CS 163 Computer Science II.** Programming methodology, design and analysis of algorithms, an introduction to data structures and an introduction to the CS&IS computing facilities. Examples from a wide range of computing applications will be discussed. Prerequisite: CS 162. Co-requisite: MTH 225 or EGR 226. (3-0-1). Four credits. Offered fall and winter semesters.

**CS 180 Special Topics.** Readings, lectures, discussions, or labs (or any combination) in specific computer science topics at an introductory or elementary level. Prerequisite: Permission of the instructor. One to four credits. Offered on demand.

**CS 230 Microcomputer Operating Systems.** An introduction to hardware and operating systems for microcomputers. Topics include: hardware components, standards, compatibility problems, the DOS operating system, hard disk management, system configuration, and DOS batch files. Graphic User Interfaces are examined using the Apple Macintosh operating system and Windows. OS/2 and UNIX are also studied. Prerequisite: CS 150, 160, or 162. (3-0-0). Three credits. Offered winter semester.

## Computing and Information Systems

**CS 231 Problem Solving Using Spreadsheets.** An introduction to Excel spreadsheets and its use as a tool in problem solving and applications. Prerequisites: CS 150, 160, or 162; and MTH 110 or 115. (3-0-0). Three credits. Offered fall and winter semesters.

**CS 233 Microcomputer Database Management.** Study of database management on microcomputers. Relational model data definition and manipulation. Database design. Functions of a database management system (DBMS). Database administration. Application generation. Students will write projects using a major microcomputer DBMS such as Access. Prerequisite: CS 150, 160, or 162. (3-0-0). Three credits. Offered fall semester.

**CS 237 Microcomputer Communications.** An introduction to data communications and networking on personal computers. Topics will include: communications basics, data and facsimile modems, communications software packages, online information services, computer conferencing, bulletin board services, local area networks, and requirements analysis. Laboratory projects will be used to complement the lectures. Prerequisite: CS 150, 160, or 162. (2-0-2). Three credits. Offered winter semester.

**CS 238 Desktop Media.** Study of the technology of desktop media, including digital graphics editing, Internet publishing, and digital video. Examines advanced features of the hardware and software requirements of those media. Applies the technology to the student's field of study through individual projects. Prerequisite: CS 150, 160, or 162. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisites: CS 163 and CS/IS major standing. (3-0-0). Three credits. Offered fall and winter semesters.

**CS 253 COBOL.** Introduction to the COBOL language; file management techniques; main-frame 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. Prerequisites: CS 162 and CS/IS major standing. (4-0-0). Four credits. Offered fall and winter semesters.

**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. Prerequisites: MTH 110; Co-requisites: MTH 122 and MTH 123. (2-0-2). Three credits. Offered fall and winter semesters.

**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. Prerequisites: CS 163, MTH 325, and CS/IS major standing. (3-0-0). Three credits. Offered fall and winter semesters.

**CS 280 Special Topics.** Readings, lectures, discussions, or labs (or any combination) in specific computer science topics. Permission of instructor required. One to three credits. Offered on demand.

**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. Prerequisites: CS 163 and PSY 301. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisites: CS 163 and ED 205. (3-0-0). Three credits. Offered winter semester of even-numbered years.

**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. Prerequisites: CS 231 and either 160 or 162. (3-0-0). Three credits. Offered fall semester.

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**CS 337 Network Systems Management.** Provides Information Systems majors 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. Prerequisites: CS 162 and CS/IS major standing. (2-0-2). Three credits. Offered fall and winter semesters.

**CS 339 Microcomputer Applications Project.** Individual student project using the micro-computer laboratory facilities. Students will learn a systematic approach to developing a microcomputer application system using a programming language or a software package such as a spreadsheet, database management system, or expert system. Prerequisites: CS 231 and 233. (3-0-0). Three credits. Offered winter semester.

**CS 340 Health Care Information Systems.** Introduces principles of health care information systems. Course is taught so that individuals with various backgrounds can become familiar with computer applications in medicine and the fundamentals of medical decision making, artificial intelligence, and information retrieval. A major project serves to integrate components from the health and computer sciences. Prerequisites: CS 233, CS 237, and HS 340. (3-0-2). Four credits. Offered fall semester.

**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. Prerequisites: CS 263 and CS/IS major standing. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisites: CS 163 and CS/IS major standing. (3-0-0). Three credits. Offered fall and winter semesters.

**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. Prerequisites: CS 163 and CS/IS major standing. (3-0-0). Three credits. Offered fall and winter semesters.

**CS 361 C and UNIX.** 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. Prerequisites: CS 163 and CS/IS major standing. (3-0-0). Three credits. Offered fall and winter semesters.

**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. Prerequisites: CS 163, and either STA 215 or STA 312, and CS/IS major standing. (3-0-0). Three credits. Offered winter of even-numbered years.

**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. Prerequisites: CS 343, and CS/IS major standing. (3-0-0). Three credits. Offered winter semester of odd-numbered years.

**CS 380 Special Topics.** Readings, lectures, discussions, or labs (or any combination) in specific computer science topics. Prerequisites dependent upon topic selected. Permission of the instructor required. One to four credits. Offered on demand.

**CS 399 Independent Readings.** Hours, credit, topics, and time to be arranged with individual staff members with approval of the department. One to four credits. Offered fall and winter semesters.

**CS 437 Distributed Computing.** Foundations of distributed computing; modern operating systems and computer networks. Comparative discussions of commercially important OSSs. Network programming paradigms, network applications, and client/server development.

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Laboratory exercises in network and client/server programming. Prerequisites: CS 163, 337, 353, and CS/IS major standing. (3-0-2). Four credits. Offered fall and winter semesters.

**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. Prerequisites: CS 253, 350, 353, and CS/IS major standing. (3-0-0). Three credits. Offered winter semester.

**CS 450 Advanced Application Development.** Advanced systems analysis and design concepts, strategies and techniques. Development of systems documentation and user guides for complex, integrated systems. Work flows, procedures, forms and algorithms for common accounting, financial, operational, manufacturing and management systems. Current trends and developments in information systems technology. Prerequisites: CS 350, 353, and CS/IS major standing. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisites: CS 251 and CS/IS major standing. (3-0-2). Four credits. Offered winter semester.

**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. Prerequisites: CS 251, 343, and CS/IS major standing. (3-0-2). Four credits. Offered fall and winter semesters.

**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. Prerequisites: CS 251 and CS/IS major standing. (3-0-2). Four credits. Offered fall and winter semesters.

**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. Prerequisites: EGR 326, CS 350, 452, and 457. (3-0-0). Three credits. Offered summer semester of even-numbered years.

**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. Prerequisites: CS 350, MGT 331, and CS/IS major standing. (3-0-0). Three credits. Offered fall and winter semesters.

**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. Prerequisites: CS 251, 263, and CS/IS major standing. (3-0-0). Three credits. Offered fall semester of even-numbered years.

**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. Prerequisites: CS 350, 353, 443, and CS/IS major standing. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisites: MTH 325, CS 162, and CS/IS major standing. (3-0-0). Three credits. Offered fall semester of odd-numbered years.

**CS 467 Computer Science Project.** Individual or group projects using the department's laboratory facilities. Prerequisites: CS 263, 350, and CS/IS major standing. (3-0-0). Three credits. Offered winter semester.

**CS 480 Special Topics.** Readings, lectures, discussions, or labs (or any combination) in specific computer science topics. Prerequisites dependent upon topic selected. Permission of the instructor required. One to four credits. Offered on demand.

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**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. Graded credit/no credit. Prerequisites: Junior status, 2.0 overall GPA, 2.0 GPA in major. See departmental application form for further information. 2–5 credits. Offered every semester.

**CS 499 Independent Study and Research.** Hours, credit, topics, and time to be arranged with individual staff members with approval of the department. One to four credits. Offered fall and winter semesters.

**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. Prerequisites: CS 162 or knowledge of a high-level programming language. (3-0-0). Three credits. Offered fall and winter semester.

**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. Prerequisite: CS 500. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: CS 611. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisite: CS 612. (3-0-0). Three credits. Offered winter semester.

**CS 621 Object-Oriented Programming.** An introduction to object-oriented programming in C++. C++ constructs and programming techniques that are essential for performing successful object-oriented design and implementation are covered. Prerequisite: CS 500. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisite: CS 621. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: CS 622. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisite: CS 500. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisite: CS 641. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: CS 642. (3-0-0). Three credits. Offered fall semester.

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**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. Prerequisite: CS 500. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: CS 654. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisite: CS 656. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: CS 500. (3-0-0). Three credits. Offered on demand.

**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. Prerequisite: CS 500 or equivalent. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisite: CS 500. (3-0-0). Three credits. Offered on demand.

**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. Prerequisite: CS 500. (3-0-0). Three credits. Offered on demand.

**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. Prerequisite: CS 673. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: CS 676. (3-0-0). Three credits. Offered fall semester.

**CS 680 Seminar in Computer Information Systems.** Discussion of current advances in computer information systems theory, methodologies, and support systems. (3-0-0). Three credits. Offered on demand.

**CS 690 Master's Thesis Research.** Faculty-supervised study and research on a suitable topic in Computer Information Systems. Prerequisite: Consent of Thesis Advisor. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Completion of two content areas. Three credits. Offered fall and winter semesters.

**CS 693 Master's Project.** Individual student project involving the development or evaluation of a complex software, information, or database system. Prerequisites: Completion of two content areas. Three credits. Offered fall and winter semesters.

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**CS 695 Master's Thesis.** Continuation of faculty-supervised study and research on topic identified in CS 690. Prerequisite: Consent of Thesis Committee. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 500. One or three credits. Offered fall and winter semesters.

### School of Criminal Justice (CJ)

Director: Fisk. Professors: Hewitt, Houston, White; Associate Professors: Bailey, Hughes, Johnson, McKenzie, Mullendore, Ziembo-Vogl; Assistant Professors: Crawley, Kierkus, Kingshott, Meesig, Ross, Steffel, Yalda; Director of Criminal Justice Training: Wallace; Internship Coordinator: Affiliate Professor: Burlingame; Student Services Coordinator: McCaul.

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 this catalog.

#### The Michigan State Requirements for Certification in Law Enforcement

The School of Criminal Justice at Grand Valley State University operates a state-certified M.C.O.L.E.S. Police Academy during the summer months. The program leads to eligibility for police certification in Michigan, and it can be counted toward a major in criminal justice or general electives for graduation. The Grand Valley Police Academy has achieved a reputation for excellence. Non-Grand Valley students who meet the M.C.O.L.E.S. minimum eligibility requirements may apply. Those wishing to apply for admission to the Police Academy must complete separate admissions tests and meet minimum state standards before they are admitted. Entry is extremely competitive and is not guaranteed. Students may apply for the academy during their senior year. Application packets are available in the criminal justice office between November 15 and January 30. It is advisable that they are obtained as soon as possible due to the complexity of the application process.

#### 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. Students taking three credits of CJ 490 are normally expected to put in 15 hours at the internship site per week. Graduate students without prior criminal justice or private security work experience are required to complete a CJ 640 internship (see Criminal Justice Master Degree Requirements). No more than six credit hours may be applied to the major; graduate internships are limited to three credit hours. 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.



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While most courses taken at accredited colleges and universities are transferable for full credit, only four courses will be considered toward criminal justice major programs. Students should take at least two-thirds of the credits constituting their major from Grand Valley State University.

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 STA 215, CJ 300, and CJ 400.

**Bachelor's in Criminal Justice.** A minimum of 39 credits is required. All majors must take the following nine courses (27 credit hours): CJ 101, 201, 305, 312, 330, 350, 470, 495, and SOC 382. In addition, majors must select 12 credit hours of electives from criminal justice courses (not including the 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, 461, 490, and the Academy courses, CJ 415, 416, 417, 418, and 419.

## Minor Program Requirements

**Minor in Criminal Justice.** Minors are required to complete at least 21 credit hours, including CJ 101, 201, 305, and an additional 12 hours of electives from criminal justice courses. See the director of the School of Criminal Justice for information.

## 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. Three credits. Offered every semester.

**CJ 201 Criminology.** An analysis of crime, criminal behavior, punishment, and the theories of deviancy from historical perspectives. Three credits. Offered fall and winter semesters.

**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. Prerequisites: STA 215, CJ major and junior standing. Three credits. Offered every semester.

**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. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered every semester.

**CJ/WGS 310 Sexual Orientation, Law, and Policy.** An examination of legal and policy issues relating to sexual orientation including topics relating to constitutional law, criminal law, family law, and employment law. Part of Gender and Identity theme. Three credits. Offered winter semester.

**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. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 201, and Junior standing. 3 credits. Offered fall and winter semesters.

**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

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technology, internal and external threats, and fire prevention and safety. Three credits. Offered fall semester.

**CJ/WGS 320 Crimes Against Women.** An in-depth study of crimes committed almost exclusively against women. Such crimes include sexual harassment, rape, and certain types of murder. The course is taught within the framework of feminist theory and research. Part of Gender and Identity theme. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered winter semester.

**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. Prerequisite: 201. Three credits. Offered every semester.

**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. Prerequisites: CJ 201. Three credits. Offered every semester.

**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. Three credits. Offered fall and winter semesters.

**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. One to three credits. Offered on sufficient demand.

**CJ 399 Independent Readings in Criminal Justice.** Independent supervised readings on selected topics not dealt with in-depth in another course. Prerequisites: Junior or senior status and permission of instructor. Offered on a credit/no credit basis. One to three credits. Offered every semester.

**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. Prerequisite: Junior or senior status. Three credit hours. Offered every semester.

**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. Analysis of geographical regions, religion, ideology, technology, counter measures, media, and mass destruction. Part of Making War and Peace theme (#05). Three credit hours. Offered fall and winter semesters.

**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. Prerequisites: Junior standing and 201 and CJ 312 (312 may be taken concurrently). Three credits. Offered fall and winter semesters.

**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. Three credits. Offered summer semester. Restricted enrollment.

**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. Three credits. Offered summer semester. Restricted enrollment.

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**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. Three credits. Offered summer semester. Restricted enrollment.

**CJ 418 Patrol and Traffic Administration and Procedure.** Designed to analyze the necessity for and the theory of regulatory laws to control criminal behavior and deviance from the norms of safety. Required for Law Enforcement Certification. Three credits. Offered summer semester. Restricted enrollment.

**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. Three credits. Offered summer semester. Restricted enrollment.

**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. Three credits. Offered winter semester.

**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. Prerequisites: CJ 101. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisites: CJ 201. Three credits. Offered fall semester of even-numbered years.

**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. Prerequisites: Junior standing. Three credits. Offered winter semester of even-numbered years.

**CJ 455 Leadership Principles.** An overview of leadership issues, strategies, and techniques, an understanding of leadership philosophies, knowledge of critical leadership skills, principles of decision-making and risk-taking, effective communication skills, coaching and counseling for results, and team building skills applicable to criminal justice organizations. Prerequisites: Criminal Justice or Legal Studies major and junior or senior standing. Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisites: CJ 201 and 305. Three credits. Offered fall and winter semesters.

**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. Prerequisites: CJ 201 and 305 (305 may be taken concurrently). Three credits. Offered winter semester.

**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. Prerequisite: 305 (may be taken concurrently). Three credits. Offered winter semester.

**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. Prerequisites: CJ 201 and junior standing. Three credits. Offered fall and winter semesters.

**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. One to six credits. Offered on a credit/no-credit basis. May be repeated for up to six credits. Prerequisites: Senior status, permission of instructor. Offered every semester.

## Criminal Justice

**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. Prerequisites: CJ 201, 305, and senior status and permission of instructor. Three credits. Offered every semester.

**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. Prerequisites: Permission of the instructor and senior standing. Offered on a credit/no-credit basis. One to three credits. Offered every semester.

### Master of Criminal Justice

This 36-credit graduate program is designed to prepare students to become highly capable criminal justice leaders, planners, practitioners and academicians who will continually improve the criminal justice system and profession. The program is also designed to prepare those students who are planning to pursue doctoral degrees. Courses are designed to meet the needs of managers and administrators in law enforcement, adult corrections, juvenile justice, and private security.

The Master of Criminal Justice degree program includes 18 hours of required courses, an option to choose between a three-credit project and a six-credit thesis requirement, and 9–12 credits of guided electives. In addition, students without work experience in criminal justice or private security are required to take a three-credit graduate internship course (CJ 640).

### Admission

The minimum Grand Valley State University requirements are listed in the Admissions section of the catalog. Applicants must have a bachelor's degree and should have an undergraduate grade point average of 3.0 or higher calculated on the last 60 hours of undergraduate work. All applicants must also pass a written application essay examination and submit three letters of recommendation. Those with less than a 3.0 grade point average may be admitted if they have five or more years of professional experience in criminal justice or a related field, pass the application essay exam, and obtain GRE or Miller's Analogy Test scores that indicate a likelihood of academic success. The decision of the Admissions Committee is final.

Applications for fall admission should be received by May 1; winter admission applications should be received by November 1. The Admissions Committee reserves the right to require additional information it deems appropriate, including GRE or GMAT test scores. The committee may also require applicants to appear for an oral interview.

Students in the process of applying for admission may enroll in CJ 601 and/or CJ 602 with the permission of the instructor. Successful completion of these courses with grades of A or B will be considered indicators of a likelihood of academic success but will not guarantee admission.

### Transfer Credit

Up to 12 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.

## Criminal Justice

### 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 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

The criminal justice master's degree consists of a minimum of 36 credit hours. Students are strongly encouraged to be familiar with the *SCJ Graduate Handbook*. The 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 Methods and Data Analysis  
CJ 607 Criminology

**and the student's choice of one of the following elective courses:**

CJ 620 Advanced Police Systems  
CJ 621 Advanced Corrections Systems  
CJ 622 Advanced Juvenile Justice Systems  
CJ 623 Advanced Private Security Systems

### Strongly Recommended:

Students who do not have undergraduate degrees in criminal justice or criminology are strongly encouraged to take CJ 101 Justice and Society, CJ 201 Criminology, and CJ 305 Constitutional Rights and Civil Liberties before they take any of the CJ graduate level courses. All three of these courses are offered each semester. These are preparatory courses and cannot be used to satisfy graduate degree requirements; only graduate credits can be applied to degree requirements.

Students who plan to pursue doctoral studies are strongly encouraged to take an advanced course in applied statistical methods. The following course is recommended: CJ 630 Criminal Justice Data Analysis.

### Additional Requirements:

A CJ 640 Graduate Internship is required of students who have no prior criminal justice or private security work experience.

**and the student's choice of one of the following courses:**

CJ 693 Criminal Justice Project  
CJ 695 Criminal Justice Thesis

Students must also choose a concentration of 9 to 18 credits and must meet with an advisor during the first semester of admission to plan their course of studies, including the concentration. Substitutions (i.e., courses not listed) in the concentrations are allowed but must have transfer credit or prior advisor approval.

### Concentrations (nine to 18 credit hours)

#### Labor Relations

BUS 631 Leadership and Organizational Dynamics  
MGT 637 Problems in Labor-Management Relations

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PA 639 Issues in Occupational Health  
MGT 632 Contemporary Communication for Managers  
PA 642 Conflict Resolution  
CS 633 Microcomputer Database Management

### Social Work

SW 600 Human Diversity in Social Work Practice  
SW 614 Social Policy and Mental Health  
SW 616 Law, Ethics, and Social Welfare  
SW 622 Psychopathology and Social Deviance  
SW 660 Grantsmanship and Resource Development  
SW 662 Substance Abuse and Social Work Practice  
SW 676 Community and Social Planning  
SW 678 Human Services Administration  
CS 633 Microcomputer Database Management

### Public Administration

PA 612 Human Resources in Organizations  
PA 614 Organization Theory  
PA 615 Public Financial Administration  
PA 621 Administrative and Regulatory Law  
PA 642 Conflict Resolution  
PA 643 Strategic Planning  
CS 633 Microcomputer Database Management

### Policy Formulation and Planning

PA 643 Strategic Planning  
SW 676 Community and Social Planning  
PA 641 Economic Development  
PA 535 Grant Writing  
PA 616 Public Policy Analysis  
CS 633 Microcomputer Database Management

## 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. Prerequisite: Admission to CJ graduate program or permission of instructor. Three credit hours. Offered every semester.

**CJ 601 Criminal Justice Leadership.** Addresses visionary leadership applied to the administration of criminal justice. Includes an orientation to criminal justice graduate studies. Prerequisite: Admission to CJ graduate program or permission of instructor. Required of all students. Three credits. Offered fall semester.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor and CJ 601 (may be taken concurrently). Required of all students. Three credits. Offered fall semester of even numbered years.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor and CJ 601. Three credits. Offered winter semester of odd numbered years.

**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

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cooperative policy formulation will be emphasized. Prerequisites: Admission to CJ graduate program or permission of instructor and CJ 601. Required of all students. Three credits. Offered winter semester of odd numbered years.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor and CJ 601 (may be taken concurrently). Required of all students. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor and CJ 601. (May be taken concurrently.) Three credits. Offered fall semester.

**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. To achieve these objectives, and examination of the way that crime is defined, measured and understood will be utilized. Prerequisites: Admission to CJ graduate program or permission of instructor.. Three credits. Offered winter semester of odd-numbered years.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor. Three credits. Offered every semester.

**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 Criminal Justice graduate program or permission of instructor.. Three credits. Offered winter semester.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor.. Three credits. Offered fall semester of even-numbered years.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor.. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor. Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisites: Admission to CJ graduate program and permission of instructor. Three credits. Offered every semester.

**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. Prerequisites: Admission to CJ graduate program or permission of instructor. Three credits. Offered fall semester of even-numbered years.

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**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 emphasize 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. Prerequisites: Admission to CJ graduate program or permission of instructor. Three credits. Offered winter semester of odd-numbered years.

**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. 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. Offered every semester.

**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. Prerequisites: Admission to CJ graduate program and permission of instructor (completion of core curriculum may be concurrent). Three credits. Offered every semester.

**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. Prerequisites: Admission to CJ graduate program and permission of instructor (completion of core curriculum may be concurrent). One to six credits. Offered every semester.

**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. Prerequisites: Admittance to the Criminal Justice graduate program and permission of instructor. One to three credits. Offered every semester.

## Dance (DAN)

Director: Associate Professor Jefferson Baum. Assistant Professor Stephanie Thi-beault. Director of Music: Joe Cross. Visiting Professor: Sean France.

In addition to the full-time faculty, five 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. This degree presents professional training in ballet, modern, and jazz in the context of a broad liberal education. The dance faculty 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

Each applicant wanting to major in dance, or requesting consideration for talent scholarships, is required to arrange for a personal audition with the director of the dance program. When considerable geographical distance prevents a personal



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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. Audition appointments should be made with the Director at least ten days in advance; the audition will consist of a ballet 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:

- Ballet 241/451 (8 hours)
- Modern 251/451 (8 hours)
- Jazz 281 (2 hours)
- Performance ensembles 179, 150 (4 hours)
- Dance History 345 (3 hours)
- Music for Dance 279 (2 hours)
- Improvisation and Choreography 311 (3 hours)
- Stagecraft and Production—CTH 261 (3 hours)
- Senior Project 495 (3 hours)
- Dance electives (11 hours)

### 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.

### 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 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

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quality. 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 atraditional and postmodern dance techniques. May include Limon, Cunningham, Graham, or other styles. May be repeated for credit, up to a maximum of 10 credits. Prerequisite: permission of the instructor. Two credits. Offered fall, winter semesters.

**DAN 262 Pointe.** Sequential training in the principals of pointe technique and performance styles, emphasizing placement and strength of the feet and legs. Variations from the classical and neo-classical repertoire. 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 10 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 atraditional and postmodern dance techniques. May include Limon, Cunningham, Graham, or other styles. Continuation of DAN 251. May be repeated for credit, up to a maximum of 10 credits. 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 10 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

### East Asian Studies Minor (EAS)

Coordinator: NI. . Professors: Ni; Associate Professors: Helgert, Lai, C. Smith; Assistant Professors: Shan, Shang, Y. Yu.

East Asian studies at Grand Valley 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 more than a billion people, and Japan, with its unparalleled economic progress, can be perceived as inaccessible and remote by Westerners. The East Asian studies program balances a liberal arts and professional approach to understanding both the economic potential and the basic need for intercultural relationships with these two countries.

The East Asian studies minor was designed for students who are interested in Chinese and Japanese culture and who see fluency in the Chinese and Japanese languages as vital for their effectiveness in an increasingly international society. Students at Grand Valley majoring in such areas as business, communications, English, history, international relations, philosophy, and political science, among others, will find that the East Asian studies minor program provides a unique perspective on these two dynamic countries and a valued complement to their major programs. Students who have studied Chinese or Japanese at the primary or secondary level, transfer students who initiated language study at other two- or four-year institutions, and study abroad participants are also welcome.

As a part of their EAS program, students can participate in the Japanese studies program at International Christian University (ICU) or the Japan Center for Michigan Universities (JCMU). Students interested in Chinese language and culture may select a study abroad program at East China Normal University. Summer study abroad programs are also available in mainland China and Taiwan. Consult the Padnos International Center or the coordinator of the East Asian Studies Program for information on these study abroad programs.

Students are also encouraged to participate in the activities of local Asian associations including the Asian-American Association, the Japan-American Society of West Michigan, and the Chinese Association of West Michigan, along with 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 minoring in East Asian studies are required to complete 21–22 credit hours. Normally this includes nine credits of core courses, four credits of language at the 202 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.

All minors will be required to complete three core courses:

EAS 201 East Asia in the Contemporary World  
PHI 210 Eastern Philosophy  
EAS 301 Masterpieces of East Asian Literature

## East Asian Studies

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  
ENG 204 Mythology (when taught by EAS faculty)  
GPY 354 Geography of Asia  
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  
PLS 283 Comparative Politics: China and Japan  
EAS 180/280/380/480 Special Topics  
EAS 399 Independent Study

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.

HST 210 Empire, Culture, and Conflict  
HST 345 The Ancient Mediterranean and Orient  
SS 280 Comparative Religions  
ECO 365 Comparative Economic Systems  
SS 270 Gender and Family in Third World Development  
ANT 204 Introduction to Cultural Anthropology

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 180/280/380/480 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 100- to 400-level courses. May be repeated for credit when the content varies. Variable credit.

**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. Three credits. Offered fall semester.

**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,

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namely, Confucian, Taoist, Buddhist, and Shinto. Prerequisite: 201 or junior standing. Three credits. Offered winter semester of odd-numbered years.

**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. One to three credits. Offered every semester.

## Economics (ECO)

Chair: Singh. Professors: Reifel, Singh; Associate Professor: Sicilian; Assistant Professors: Dalmia, Isely, Lowen, Simons, Thorsnes; Instructors: Nader.

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 Major and Minor Programs

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 this catalog. Majors earning a B.S. or B.A. must complete 30 hours of economics, including ECO 210, 211, 312, 313, and 495, the senior-level Capstone course. All economics majors are required to take STA 215, Introductory Applied Statistics and PHI 103, Logic, as cognate requirements. In addition, for their third cognate course, students can take either SS 300, Research Methods in Social Sciences, or STA 216, Intermediate Applied Statistics. Economics majors or minors cannot apply ECO 200 for credit to the major or minor.

Because economics is a department in the Seidman College of Business, students must achieve a 2.75 cumulative GPA and 55 semester hours to be admitted to the economics program. In order to graduate, upper-division economics majors must achieve a 2.5 minimum cumulative GPA and a 2.5 minimum GPA in all economics courses. A student whose cumulative GPA falls below 2.5 will not be permitted to take additional 300- and 400-level economics or business courses. However, such students may repeat 300- and 400-level Seidman economics and business courses for which they received a low grade. Students may repeat up to three different economics and business courses in their undergraduate career, but no single economics or business course can be repeated more than once. Exceptions are made only with the approval of the assistant dean.

Economics majors are eligible to participate in the business internship program. Students who plan to enter a graduate program after completion of the B.A. or B.S. degree or who have an interest in more extensive work in mathematics should consult with their advisors at an early date to explore alternatives and plan their curricula.

The economics minor program is for both business and nonbusiness students, with the exception of those majoring in business economics or economics. Students are required to complete at least 21 hours in economics, including ECO 210 and 211. Students must achieve a minimum 2.5 grade point average in these

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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, ECO 313 (SWS) and ECO 349 or 369. In addition they must take PSL 102, HST 206, and GPY 235 or equivalent to obtain basic knowledge in political science, history, and geography.

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, nonprofit 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 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  
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

## Education

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.

## The College of Education (ED)

Dean: Collins. **Curriculum and Instruction:** Unit Head: McCrea; Professors: Armstrong, Grant, Herrera, King, Pottorff; Associate Professors: Barnes, Chattulani, Chlebo, Fisher, Miller, Reinken; Assistant Professors: Busman, Clark, Doumanian, Hipp, Lancaster P., Patterson, Sannes, Schiller, Storey. **Foundations and Technology:** Unit Head: Bair; Professors: Cross, Konecki, Mack; Associate Professors: Abramson, Mader, Pryor; Assistant Professors: Carson, Choi, Lancaster S., Mahon, Topper, Westerhof-Shultz, Wilson; Instructor: Williams. **Leadership and Human Services:** Unit Head: Shinsky; Associate Professor: Alston, Garriot; Assistant Professors: Cooper, Geisel, Margulus. **Administrative Services:** Director: Fournier; Associate Director: Eikenberry. **Community Outreach:** Director: Sowa-Wojciakowski; Assistant Directors: Moore, Pelon. **Student Information and Services Center:** Director: Melin; Associate Directors: Dausman, VandeVelde; Assistant Director: Smith; Coordinators: Kruihoff, 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 endorsement. 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, 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

### 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. College of Education students must sign a declaration of intent and attend a Group Advising Session during the semester they are taking ED 200. Students transferring to Grand Valley must attend a Group Advising Session the semester immediately upon entering Grand Valley State University. During the Group Advising Session, students are assigned a College of Education advisor. Students will meet with this advisor at least twice before being admitted into the College of Education. 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 reapply.

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 modern language majors must apply during winter semester.



## Education

3. Elementary physical education and music majors must also attend the accompanying Education 331 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 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. An established 2.8 Grand Valley GPA overall and in the major, minor, and professional program. English, English/language arts and art education require a 3.0 major GPA. The minimum Grand Valley GPA must be established by the time of application.
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 2.8 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 60 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.

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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.

Occasionally, an outstanding candidate who does not meet GPA requirements may be considered for alternate entrance based on other rigorous performance standards. Interested individuals may consult with the Curriculum and Instruction unit head.

### Field Placement Requirements

**Teacher Assisting** (Education 330/350, 331, 332, 362)

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, 470, 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 2.8 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 2.8 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.

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### 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 (state approval pending), Mathematics, Physical Education, K—12. **Social Sciences:** History, Social Studies (Group Major).

Teaching minors may also be earned in Health Education\* and Mathematics.

#### 2. Elementary Teaching Minor—Elementary Certification

The 21–25 credit elementary teaching minor develops competencies across the entire elementary curriculum.

- a. ENG 308 Teaching Reading: The Necessary Skills
- b. MTH 221 and MTH 222, or MTH 223, Mathematics for Elementary Teachers I and II, or III.

Also select one from each of the following except the major area:

- c. *Fine Arts:* Art 230 or Music 350
- d. *Language Arts:* Writing 219, English 307, 309, or any foreign language
- e. *Physical Education/Theater:* Physical Education 305 or Children's Theater 366
- 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 Biology 107, Chemistry 201, Geology 201, Physics 201, and Integrated Science 225.
- g. *Social Science:* Economics 210, 211, History 203, 204, 205, 206, Political Science 102, Sociology 280, or Geography 235.

#### 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:

- 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

\*Certification changing—see advisor.

**First semester of admission to Undergraduate Teacher Education:**

f. ED 330/350 Elementary Teacher Assisting. Music and physical education majors also attend the ED 331 seminar.

g. ED 310 Managing Classroom Environments

h. ED 320 Reading: Assessment and Corrective Methods

**Second semester of admission to Undergraduate Teacher Education:**

i. ED 430/480 Elementary Student Teaching

### 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 17 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\*, Earth/Space Science, Mathematics, Physical Education, K—12, Physics. **Social Sciences:** Geography, History, Social Studies.

2. Teaching Minor—Secondary Certification

The 20 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, Music\*, 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.

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:**

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

**First semester of admission to Undergraduate Teacher Education:**

f. ED 331 Secondary Teacher Assisting

g. ED 310 Managing Classroom Environments

h. ED 321 Reading in the Content Area

\*Certification changing—see advisor.

## Education

Second semester of admission to Undergraduate Teacher Education:

- i. ED 431 Secondary Student Teaching

### 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  
PSY 302 Psychology of Adjustment  
PSY 304 Psychology and Education of the Exceptional Child  
PSY 324 Developmental Psychopathology  
PSY 325 Educational Psychology

Choice of one:

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  
ED 332 Methods and Strategies of Special Education Teaching or ED 362 Teacher Assisting: HI  
ED 361 Principles, Processes, and Methods in Special Education  
or ED 352 Language and Communication (take for HI)  
ED 495 Diagnostic and Interpretive Procedures

Choice of one:

ED 496 Educational Interventions: HI  
ED 497 Educational Interventions: CI  
ED 498 Educational Interventions: EI

#### 2. Elementary Teaching Minor

The 28–30-credit elementary teaching minor develops teaching competencies across the curriculum. It consists of the following courses:

ED 200 Introduction to Education  
ED 205 Computers in Education  
ED 320 Reading: Assessment and Corrective Methods

## Education

ED 360 Language and Reading Development  
ENG 308 Teaching Reading: The Necessary Skills  
MTH 221 and MTH 222, or MTH 223 Mathematics for Elementary Teachers I and II, or III.

ART 331 Art in Special Education  
SOC 280 Social Problems

### 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)  
Hearing Impairment (HI)\*  
Learning Disabilities (LD)

The following combinations are possible:

CI/EI, CI/ZA/ECDD, CI/LD, EI/ZA/ECDD, EI/LD, HI/ZA/ECDD, HI/LD.

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  
ED 310 Organizing and Managing Classroom Environments  
ED 430/480 Elementary Student Teaching

Cognitive Impairment (CI):

PSY 326 Mental Retardation  
ED 441 Curriculum for Special Education: CI  
ED 463 Educational Practices and Procedures: CI  
(ED 463 taken only by students who elect CI as primary endorsement)  
ED 471 Directed Teaching: CI  
ED 497 Educational Interventions: CI.

Emotional Impairment (EI):

PSY 310 Behavior Modification  
ED 442 Curriculum for Special Education: EI  
ED 464 Educational Practices and Procedures: EI  
(ED 464 taken only by students who elect EI as primary endorsement)  
ED 472 Directed Teaching: EI  
ED 498 Educational Interventions: EI.

Hearing Impairment (HI)\*:

ED 352 Language and Communication  
ED 450 Audiology and Anatomy of Speech and Hearing Process  
ED 440 Curriculum for Special Education: HI  
ED 470 Directed Teaching: HI  
ED 496 Educational Interventions: HI

The following are taken in the graduate special education program as part of the initial Provisional Certificate:

Early Childhood (ZA)/Early Childhood Developmental Delay (ECDD):

\*See advisor regarding program status.

## Education

(Student receives approval in ECDD and the Early Childhood ZA endorsement).

EDG 610 Advanced Studies in Child Development  
EDG 611 Assessment of the Young School Child  
EDG 612 Curriculum Development in Early Childhood Development  
EDG 613 Administration and Supervision of Early Childhood Education  
EDS 646 Counseling Parents  
EDS 647 Pre School Special Needs Child  
EDS 685J Practicum/Graduate Field Experience

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.

Learning Disabled (LD):

(The following program is designed to provide a paid school year teaching internship)

ED 653 School Learning  
EDS 627 Instructional Practices: Technology  
EDS 629 Transition Practices  
EDS 636 Diagnostic and Interpretive Procedures  
EDS 637 Instructional Practices: Learning Disabilities 1  
EDS 638 Instructional Practices: Learning Disabilities 2  
EDS 640 Diagnostic-Teaching Clinic  
EDS 685 Summer Clinic  
EDS 686 Internship

Students planning to complete the Master's Degree in Learning Disabilities should meet with their graduate advisor for a planned program.

## Graduate Studies in Education

The College of Education offers the Master of Education degree (M.Ed.), Michigan Provisional Certification, Michigan Professional Certification, Grand Valley State University Administrative Certification, and 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 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

\*See advisor regarding program status.

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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 foundations 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, Early Childhood Education, Educational Leadership, Educational Technology, Elementary Education, Gifted and Talented Education, Middle and High School Education, and Teaching English to Speakers of Other Languages. (Middle and High School Education also offers subject matter concentrations in Biology, English, History, Mathematics, Music, or Physics. Adult and Higher Education offers the above subject matter concentrations (excluding Music) and also a concentration in College Student Affairs Leadership.)

Emphasis area for the **M.Ed. in Reading** is Reading/Language Arts.

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



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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.
7. Special Education Endorsement K—12: Learning Disabilities, Emotional Impairment, and Cognitive Impairment.
8. Grand Valley Administrative Certificate: Elementary, Secondary, Central Office, Superintendent.
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 nine semester hours in foundation courses, which may be required or selected from the following areas: psychology of education (one course)—ED 650, 651, 652, 653; research and evaluation (one course)—ED 660, 661; and issues in education (one course)—ED 670, 671, 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.

The areas of study reflect the importance of increased breadth and depth of understanding of theoretical constructs and existing problems in general education. Breadth is provided by the foundation areas. Depth is provided by the emphasis courses, electives, and research applications. Areas of emphasis include:

**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; two courses selected from ED 630, 631, 633, 635, EDG 618, 651, 652, 685L, or EDR 629; nine hours of approved electives; and EDG 695I. **Biology, English, History, Mathematics, or Physics** concentrations within the Adult and Higher Education emphasis require, in addition to foundation courses, two courses from ED 630, EDG 648, 649, 650, and EDG 695I, 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; EDG 647, 651, 652, 653, 654, 655, and 685L; and six semester hours of electives. (EDG 647 may substitute for foundations area one with advisor approval.)

**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; one elective course; and EDG 695A. 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 Leadership.** This performance-oriented program emphasizes research, theory, and practice in such areas as: effective leadership, strategies for planning and developing curriculum, supervising employees, school improvement, personnel administration, law, finance, and related topics. Many courses are offered in the weekend leadership academy. **M.Ed** requirements in addition to the foundation courses, are EDG 685F or 685I or 685G or 685H, EDG 665, 666, 668, 669, 670, and 695F. Participants select one course from the following: EDG 667 or 671 or ED 633.

Administrator programs for elementary principal, secondary principal, central office, and superintendent are available. Consult an advisor for an appropriate planned program.

**Educational Technology.** This program prepares teachers, computer coordinators, and school library media specialists to use technology in elementary and/or sec-

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ondary schools. Program content includes the educational application of technology, including computers and related technologies. Courses concentrate on hardware and software, software evaluation, curricular integration, acquisition and use of instructional materials, information literacy, managerial use of technology, and media center development and management. Students may choose between two M.Ed. concentrations. Degree requirements for Option A, Computer/Technology Services, include, in addition to the foundations courses, ED 630, EDG 618, 619, 620, 621, six credits of approved electives, and EDG 695B. Degree requirements for Option B, School/Library Media Services with Library Media Endorsement, include, in addition to the foundations courses, ED 630, EDG 618, 619, 621, EDR 624 or EDR 625, EDG 622, 623, 624, 625, 685J, and 695B. Students seeking only the **Library Media Endorsement** complete ED 630, EDG 618, 619, 621, EDR 624 or EDR 625, EDG 622, 623, 624, 625, and 685J. Endorsement candidates must also pass the Michigan Test for Teacher Certification and maintain a 3.0 GPA.

**Elementary Education.** This program helps teachers continue their professional growth and advance in competence in their work in regular 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 ED 630, EDG 611 and EDR 622; two courses from ED 633, 635, EDG 618, 630, 631, 632, 633, 641, 667, EDR 621, 624, 628, and EDS 637; two electives/workshops; and EDG 695C. **Students already certified and seeking an additional Michigan Elementary Endorsement** ; take EDG 618, 630, 631, 632, 633, 685A, select two courses from EDR 622, 627, ENG/EDR 631 and take EDR 624 or 628; 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 36 credits: ED 650, 652, EDG 610, 630, 631, 632, 685A, EDR 622, 627, EDG 633 or EDR 624; 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 remaining foundations courses, ED 630, EDG 611, and EDG 695C.

**Gifted and Talented Education.** This program equips classroom teachers, specialists in gifted and talented education, consultants, and supervisors with the theory and practical skills necessary to teach gifted and talented students. The program focuses on assessment and diagnostic instruments, 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, EDG 640, 641, 642, 685C; two electives/workshops; and EDG 695D.

**Middle and High School Education.** This program is designed for teachers who wish to develop their skills and competencies in teaching middle and high school students. Students are required to complete a minimum of 33 semester hours. In addition to foundation courses, requirements for the M.Ed. include two emphasis area courses selected from EDG 635, 636 and ED 630; two supplemental courses selected from ED 631, 632, 633, 635, EDG 618, 630, 631, 632, 633, 641, 649, 671, 685B, 685E, EDR 623, 625, 627, 628; nine credits of electives; and EDG 695H. **Biology, English, History, Mathematics, Music, or Physics** concentrations within the Middle and High School Education emphasis require, in addition to foundation courses, two emphasis area courses from EDG 635, 636, and ED 630; EDG 695H;

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and at least 15 approved credits in the subject matter. (See course listings under Biology, English, History, Mathematics, Music, and Physics.) **Students already certified and seeking an additional Middle Level Endorsement** must have Michigan elementary or secondary certification; complete EDG 635 first, followed by ED 632, EDG 636, 685E; complete two supplemental courses; have or complete two subject area endorsements; obtain positive recommendations; maintain a 3.0 GPA; and pass the appropriate Michigan Tests for Teacher Certification. (Because of new state requirements for middle level endorsements, candidates must consult with an advisor before beginning this program.) **Students already certified and seeking an additional Secondary Endorsement** must have Michigan elementary certification; possess or complete a secondary teachable major or minor; complete ED 630 or EDG 636, and EDG 618, 635, 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 650, 652; EDG 610 or 635; EDR 623, EDG 636, and EDG 685B (three and six credits). 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 9–12 additional credits will fulfill M.Ed. degree requirements: two remaining foundation courses; EDG 695H.

**Teaching English to Speakers of Other Languages (TESOL).** This program provides training in linguistics principles and their applications; theories of language acquisition; issues of language and culture; methodology and curriculum design; assessment of second language competencies; and critical issues in multilingual, multicultural education. In addition to the foundation courses, **M.Ed.** requirements include ENG 660, 664, 665, 668, ED 631, 633, or equivalent, EDG 685K and 695G. To receive K–12 ESL endorsement, students must complete the full 33-hour TESOL master's program, pass the Michigan Subject Area Test, and maintain a 3.0 GPA. Students desiring only the **ESL Endorsement (K–8 or 7–12)** must complete 21 credits from ENG 660, 664, 665, 668, ED 631, 633, or equivalent and EDG 685K; have elementary or secondary certification; pass the Michigan Subject Area Test; and maintain a 3.0 GPA.

### **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. These requirements include one course from the following: ED 650, ED 651, ED 652 or ED 653; and one course from the following: ED 660 or ED 661. All of the following are required: EDR 621; EDR 622 or EDR 623; EDR 624 or EDR 625; EDR 628; ENG/EDR 631; and EDR 695. In addition, students must take at least two courses from the following: ED 631; ED 633; EDR 626; EDR 627; EDR 685; EDS 627; EDS 637; EDS 638; EDR 696 plus one elective.

#### **Elementary Reading Teacher Endorsement, K–8**

The Elementary Reading Teacher Endorsement is a 21-semester-hour program leading to state certification in reading at the elementary school level. It is

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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, EDR 622, EDR 624, EDR 628, ENG/EDR 631, EDR 626, EDR 627. 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 21-semester-hour program leading to state certification in reading at the secondary school level. 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, EDR 623, EDR 625, EDR 628, ENG/EDR631, EDR 626, ED 631 or EDS 627. 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 certification as a K—12 reading specialist. It is designed for persons who are interested in administration and supervision of district-wide reading/language arts programs and will enable the bearer to be employed as a school reading consultant, 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. Requirements include completion of a M.Ed in Reading/Language Arts plus additional coursework. These requirements include one course from the following: ED 650, ED 651, ED 652 or ED 653; and one course from the following: ED 660 or ED 661. All of the following are required: EDR 621; EDR 622; EDR 623 or EDR 627; EDR 624 or EDR 625; EDR 626; EDR 628; ENG/EDR 631; EDR 685; EDR 695 and EDR 696. 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.

Students are required to complete a minimum of 36 credit hours. M.Ed requirements include one course from the following foundation areas: Ed 660 or ED 661; and one course from ED 670 or 671. All the following courses are required: ED 651, EDC 621, 623, 625, EDG 649, SW 600 or its equivalent, EDC 685, 695 and an approved elective.

### **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.

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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 foundations 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 either ED 660 or 661 and ED 670, 671, or 672, the M.Ed. requirements include ED 650; EDS 609, 610, 611, 627, 629, 636, 638, and 695B. 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 either ED 660 or 661 and ED 670, 671, or 672, the M.Ed. requirements include ED 653; EDS 627, 629, 636, 637, 638, 640, 695A, and three semester hours of elective coursework. Students seeking only the **Learning Disabilities Endorsement (K—12)** complete ED 653, EDS 627, 629, 636, 637, 638, 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.

**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; one elective course; and EDG 695A. In addition, program prerequisites include one endorsement in special education and completion of a language development course (EDS 637, ED 360, or equivalent). 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.** Students wishing to complete the M.Ed. in special education administration must take the following, in addition to foundations courses: EDG or EDS 666, EDS 665, 667, 675, EDG 668, 670, EDS 685 A, EDS 695C, and three credits from EDS 668, 669, 670 or EDG 680.

### 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).** Endorsement prerequisites include EDS 550 (six credits); ED 652, 653, 661; EDG 610; ED 633 or EDS 637; or equivalents. Courses

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include ED 634, 650; EDS 601A, 601B, 618, 620, 629, 636, 638, and 685E or 685F (six credits). 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 (six credits); ED 634, 650, 652, 653, 661; EDG 610; EDS 601A, 601B, 618, 620, 627, 629, 636, 637, 638, 640, 685E or 685F (six credits), and 685H (six 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 650, 652, 653, 660 or 661; EDS 609, 610, 611, 627, 629, 636, 637, 638, 640, 685C (six credits), and 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 200, PSY 301, PSY 304, EDS 550 (six credits), or equivalents. Courses include ED 634, 650, 652 and 661; EDG 610; EDS 601A, 601B, 609, 610, 611, 618, 620, 627, 629, 636, 637, 638, 685C (six credits), and 685E or 685F (six 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, 653; EDG 610, 611, 612, 613; EDS 550 (six credits) 627, 629, 636, 637, 638, 640, 646, 647, 685H (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 633 or EDS 637; ED 653 or EDS 627; ED 652, 661; EDG 610; EDS 550 (six credits); or equivalents. Courses include ED 634, 650; EDG 611, 612, 613; EDS 601A, 601B, 618, 620, 629, 636, 638, 646, 647, 685J (six credits), and 685E or 685F (six 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; EDS 550 (six credits), 609, 610, 611, 627, 629, 636, 638, 646, 647, 685C (six

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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, EDS 665, 666, 667, 668, 669, 670, 675, EDG 668, 670, EDG 680 or EDS 673, and EDS 685A, passing of the supervisor's competency exam, and a minimum 3.0 GPA. The **Special Education Director** approval program includes all courses in the special education supervisor's program plus EDS 671, 672, 674, EDG 669, six credits of EDS 685B, passing of the director's competency exam, 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](http://www.Michigan.gov/mde)



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**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. Prerequisite: Freshman year, second semester. Three credits. Offered fall and winter semesters. Formerly ED 300.

**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. Recommended prerequisite: ED 200. Three credits. Offered fall and winter semesters.

**ED 225 Diversity in Education.** A study of the implications of inclusionary environments for students with exceptional needs and individual differences, including race, class, culture, and gender. Emphasizes diversity in educational environments, student learning styles, and instructional strategies. Classroom observations required. Prerequisites: ED 200, or may be taken concurrently. Fulfills U.S. Diversity requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisites: Admission to the College of Education. (Program outlines specify co-requisites.) Three credits. Offered fall and winter semesters.

**ED 320 Reading: Assessment and Corrective Methods.** Study of literacy assessment practices and procedures useful in guiding literacy instruction of all children in grades K—6. Methodologies and learning strategies useful for working with delayed/disabled readers are examined. Creation of developmentally appropriate materials is included. Prerequisite: ENG 308 and admission to the College of Education. Three credits.

**ED 321 Reading in the Content Area.** Reading instruction in the content areas. Lectures, discussions, demonstrations, and practicum experiences will provide the student a general overview of content area reading problems and strategies for dealing with them. Prerequisite: admission to the College of Education. Co-requisites: 310 and 331. Three credits. Offered fall and winter semesters.

**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. Prerequisites: admittance to College of Education. Co-requisites: 310, 320, 350. Five credits. Offered fall and winter semesters.

**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). Prerequisites: admittance to the College of Education. Co-requisites: 310, 321. Six credits. Offered fall and winter semesters.

**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. Prerequisites: admission to College of Education. Co-requisites: 320, 361, 495. Six credits. Offered fall semester.

**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. Prerequisites: admission to the College of Education. Co-requisites: 310, 320, 330. One credit. Offered fall and winter semesters.

**ED 352 Language and Communication.** Theoretical and practical aspects of the development and improvement of the hearing impaired learner's receptive and expressive language

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and communication skills. Use of various and combined modes of communication are introduced. Prerequisite: admission to the College of Education in special education. Co-requisites: 310, 360, 362, 450. Three credits. Offered fall semester only.

**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. Prerequisite: admission to the College of Education. (Program outlines specify co-requisites.) Three credits. Offered fall semester.

**ED 361 Principles, Processes, and Methods in Special Education.** Processes and methods involved in identification, assessment, placement, programming, instruction, and evaluation of learning needs. Prerequisite: admission to the College of Education. (Program outlines specify co-requisites.) Three credits. Offered fall and winter semesters.

**ED 362 Teacher Assisting: Hearing Impairment.** A 200-clock-hour field-based experience requiring application of instructional procedures designed to improve the language and communication of hearing impaired students. Prerequisite: admission to the College of Education. Concurrent with 310, 352, 360, 450. Six credits. Offered fall semester only.

**ED 399 Special Topics in Education.** Independent supervised study on selected topics that are not dealt with in depth in other courses. One to three credits. Offered upon sufficient demand.

**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. Prerequisites: Advancement to student teaching and positive recommendations from prior fieldwork. Ten credits. Offered fall and winter semesters.

**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. Prerequisites: Advancement to student teaching, and positive recommendations from prior fieldwork. Twelve credits. Offered fall and winter semesters.

**ED 440, 441, 442, Curriculum for Special Education.** 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. Prerequisites: successful completion of prior coursework, and permission of advisor. Three credits. Offered winter semester.

**ED 450 Audiology, Anatomy of Speech, and Hearing Process.** Structure and physiology of hearing and speech mechanisms; etiology and terminology of hearing problems; methods and interpretation of audio logical testing, and implications for classroom instruction. Prerequisite: admission to the College of Education. Co-requisites: 310, 352, 360, 362. Three credits. Offered fall semester.

**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. Prerequisites: Successful completion of prior coursework. Three credits. Offered winter semester.

**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. Prerequisites: Successful completion of prior coursework. Three credits. Offered winter semester.

**ED 470 Directed Teaching in Hearing Impairment.** Student teaching in a classroom with hearing impaired students under professional supervision, with accompanying seminar concerned with materials and curriculum for the hearing impaired. Prerequisites: 430/480, and positive recommendations from prior fieldwork. Co-requisite: 440. Nine credits. Offered winter semester.

**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. Prerequisites: successful completion of prior coursework and positive recommendations from prior fieldwork. Co-requisite: 441. Nine credits. Offered winter semester.

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**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. Prerequisites: successful completion of prior coursework and positive recommendations from prior fieldwork. Co-requisite: 442. Nine credits. Offered winter semester.

**ED 480 Professional Development in Teacher Education.** Content area seminars and classroom issues. Topics include technology, diversity, collaboration, and content area integration. Co-requisite: 430. Two credits. Offered fall and winter semesters.

**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. (Program outlines specify co-requisites.) Three credits. Offered fall semester.

**ED 496 Education Interventions: Hearing Impairment.** Study of the educational interventions appropriate for students with hearing impairments. (Program outline specify corequisites.) Three credits. Offered winter semester.

**ED 497 Educational Interventions: Cognitive Impairment.** Study of the educational interventions appropriate for students with cognitive impairments. (Program outline specify corequisites.) Three credits. Offered winter semester.

**ED 498 Educational Interventions: Emotional Impairment.** Study of the educational interventions appropriate for students with emotional impairments. (Program outline specify corequisites.) Three credits. Offered winter semester.

**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. One to three credits. Offered upon demand.

**ED 599 Independent Study.** Individual study of a theoretical or applied problem in education. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. One to four credits. Offered fall, winter, and summer semesters.

**ED 600–601 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. These courses are graded credit/no credit.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered every other year.

**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). Three credits. Offered spring/summer session.

**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. Three credits. Offered at least once a year.

**ED 634 Teaching the At-Risk Student.** Issues and concerns and programs in implementing effective programs for students from at-risk backgrounds. Three credits. Offered at least once a year.

**ED 635 Survey of Urban Education.** Study of the historical, sociological, and educational bases of urban education.

**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. Three credits. Offered at least once a year.

## Education

**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. Prerequisite: teaching experience or PSY 452. Three credits. Offered at least once a year.

**ED 652 Education of the Exceptional Student.** 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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**ED 660 Educational Evaluation and Research.** Study of the application of research, statistics, and evaluation principles to educational program and teaching improvement. Methods of research design and program evaluation. Emphasis on the design of research problems, valuation of existing practices, and the interpretation of major educational research studies. Three credits. Offered at least once a year.

**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. Three credits. Offered every semester.

**ED 670 Critical Issues in Special Education.** Examination of current crucial issues in the administration of special education. May be combined with ED 671. Three credits. Offered at least once a year.

**ED 671 Current Issues in Education.** Emphasis on investigation of current issues and trends in the administration of schools, school practice, school law, school finance, and other topics will be introduced. May be combined with ED 670. Three credits. Offered at least once a year.

**ED 672 Current Issues in Multicultural Education.** Emphasis on the study of current issues, among others, of gender, class, identity, race, language and exceptionality in cultural diversity, strategies for materials selection, teaching approaches, and program implementation in educational environments. Three credits. Offered at least once a year.

**ED 680 Special Topics in Education.** Study of selected topics in education. One, two, or three credits. Offered upon sufficient demand.

**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. Prerequisite: Permission of the advisor and completion of at least 27 semester credits. Three credits. Offered fall, winter, and summer semesters.

## 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. Prerequisites: None. Three credits. Offered at least once a year.

**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. Prerequisites: None. Three credits. Offered at least once a year.

**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,

## Education

critical thinking, logical reasoning, and interpersonal communication applied to academic achievement. Prerequisites: None. Three credits. Offered at least once a year.

**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. Prerequisites: EDC 621, 623, 625(may serve as co-requisite), EDG 649. Three to six credits. Offered fall and winter.

**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. Prerequisites: a minimum of 27 credit hours with an approved school counseling planned program. Three credits. Offered each semester.

### General Education

**EDG 599 Independent Study.** Individual study of a theoretical or applied problem in education. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. One to four credits. Offered fall, winter, and summer semesters.

**EDG 600-601 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. These courses are graded credit/no credit.

**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. Three credits. Offered at least once a year.

**EDG 611 Assessment of the Young School Child.** Instructional assessment procedures and prescriptive techniques for students Pre-K—6. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**EDG 618 Introduction to Microcomputers and Education.** For teachers with little computing experience. This course provides an introduction to the use of computer 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. Three credits. Offered fall/winter semester.

**EDG 619 Classroom Uses for the Microcomputer.** This course examines applications of computers and the Internet for K—12 subject matter teaching and learning. Extensive hands-on experience using educational software and the Internet in support of subject matter teaching and learning. Investigation of learning theory and exemplary uses of technology in teaching and learning in classroom settings. Prerequisite: EDG 618 or permission of instructor. Three credits. Offered spring/summer semester.

**EDG 620 Courseware Development:** This course focuses on the evaluation, selection, and use of educational software 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. Prerequisite: EDG 618 or permission of instructor. Three credits. Offered fall semester.

**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

## Education

of technology, networking, technology adoption planning, and field-based experiences. Prerequisite: EDG 618 or permission of instructor. Three credits. Offered winter semester.

**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. Prerequisite: EDG 618 or permission of instructor. Three credits. Offering varies.

**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. Prerequisite: EDG 618 or EDG 622 or permission of instructor. Three credits. Offering varies.

**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. Prerequisite: EDG 618 or EDG 622 or permission of instructor. Three credits. Offering varies.

**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. Prerequisite: EDG 618 or EDG 622 or permission of instructor. Three credits. Offering varies.

**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. Three credits. Offered at least once a year.

**EDG 631 Teaching Science: K—8.** Designed to prepare teachers to teach elementary and middle level science to all students. Emphasizes planning and teaching science, including laboratory inquiry and hands-on activities. Integration of process and content objectives, activities, and assessment will be addressed. Three credits. Offered at least once a year.

**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. Three credits. Offered spring/summer semester.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**EDG 640 Issues in Gifted and Talented Education.** A survey of the history, current issues, research and trends. Critical analysis of the origin and development of such terms as giftedness, talent and intelligence, and their implications for educational practice. Three credits. Offered at least once a year.

**EDG 641 Methods and Materials for the Gifted and Talented.** Examination and practical application of the objectives, instructional research, teaching strategies, classroom activities, and materials for teaching the gifted and talented student. Three credits. Offered at least once a year.

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**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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**EDG 650 Materials and Methods for Adult and Continuing Education.** Materials and methods of teaching the adult learner in school and nonschool settings. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**EDG 652 The American College Student.** Examines the characteristics, values, expectations, and needs of contemporary college students in the context of student development theory. Prerequisite or co-requisite: EDG 651 or permission of instructor. Three credits. Offered at least once a year.

**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. Prerequisites: EDG 651, EDG 652. Three credits. Offered at least once a year.

**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. Prerequisite: EDG 651 or permission of the instructor. Three credits. Offered at least once a year.

**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. Prerequisites: EDG 653 or permission of instructor. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least twice a year.

**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. Prerequisite: EDG 665. Three credits. Offered at least once a year.

**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. Three credits. Offered once a year.

**EDG 669 School Finance.** The principles and theory underlying finance practice in public schools. Three credits. Offered at least once a year.



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**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. Three credits. Offered at least once a year.

**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. Prerequisite: EDG 665. Three credits. Offered at least once a year.

**EDG 672, 673, 675 Advanced Studies in Special Education.** A series of competency modules dealing with various areas of special education. One to six credits. Offered at least once a year.

EDG 672 Policy Development

EDG 673 School Board Relations

EDG 675 Administrative Behavior

**EDG 680 Special Topics in Education.** Study of selected topics in education. One, two, or three credits. Offered upon sufficient demand.

**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. Three and six credits. Offered at least once a year.

EDG 685A Elementary Education

EDG 685B Secondary Education

EDG 685C Gifted and Talented 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 Educational Technology

EDG 685K English as a Second Language

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.

**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. Three credits. Offered at least once a year. Prerequisite: permission of advisor and completion of at least 27 semester hours.

EDG 695A Early Childhood Education

EDG 695B Educational Technology

EDG 695C Elementary Education

EDG 695D Gifted and Talented Education

EDG 695F Educational Leadership

EDG 695G Teaching English to Speakers of Other Languages

EDG 695H Middle and High School Education

EDG 695I 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.

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**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. Prerequisite: Permission of the advisor and completion of at least 27 semester credits. Three credits. Offered fall, winter, and summer semesters.

### Reading

**EDR 599 Independent Study.** Individual study of a theoretical or applied problem in education. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. One to four credits. Offered fall, winter, and summer semesters.

**EDR 600–601 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. These courses are graded credit/no credit.

**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. Prerequisite: Teaching experience or acceptance into a graduate certification program. Three credits. Offered at least once a year.

**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. Prerequisite: Teaching experience or acceptance into a graduate certification program. Three credits. Offered at least once a year.

**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. Prerequisite: Teaching experience or acceptance into a graduate certification program. Three credits. Offered at least once a year.

**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. Prerequisites: none. Three credits. Offered at least once a year.

**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. Prerequisites: none. Three credits. Offered at least once a year.

**EDR 626 Field Experiences: Diagnosis and Instruction.** Course examines current research and theories of assessment and corrective reading instructional strategies. Students will use a variety of diagnostic reading tests, materials, and remedial procedures in a multi-cultural practicum setting to enhance correction of reading disabilities. Appropriate communication and supervision strategies will also be developed. Prerequisites: EDR 621, EDR 622 and EDR 623, or EDR 627. Three credits. Offered at least once a year.

**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. Prerequisites: EDR 621 and EDR 622 or 623. Three credits. Offered at least once a year.

**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. Prerequisites: none. Three credits. Offered at least once a year.

**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. Three credits. Offered every other year.

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**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. Prerequisites: Teaching experience or acceptance into a graduate certification program. Three credits. Offered every semester.

**EDR 680 Special Topics in Education.** Study of selected topics in education. One, two, or three credits. Offered upon sufficient demand.

**EDR 685 Practicum/Graduate Field Experience** Field-based experience designed to provide clinical and curriculum adaptation experience for reading specialist 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. Prerequisite: EDR 626. Three credits. Offered at least once a year. Candidates must apply separately to the College of Education by February 15 for spring/summer, by May 15 for fall semester and by September 15 for winter semester.

**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. Prerequisite: Admission to a graduate program, completion of 27 semester hours, permission of advisor. Three credits. Offered at least once a year. 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.

**EDR 696 Program Development and Administration.** Course is an advanced level course designed for the professional who is responsible for the development, implementation, and assessment of PK—12 school-wide literacy programs. Current views, insights, and information about the oversight of reading programs will be addressed. Prerequisites: EDR 695. Three credits. Offered winter, even years.

**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. Prerequisite: Permission of the advisor and completion of at least 27 semester credits. Three credits. Offered fall, winter, and summer semesters.

## 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.

**EDS 599 Independent Study.** Individual study of a theoretical or applied problem in education. Prerequisites: Consent of advisor and demonstrated ability to pursue special study or investigation proposed. One to four credits. Offered fall, winter, and summer semesters.

**EDS 600–601 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. These courses are graded credit/no credit.

**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. Prerequisite: ED 650. Three credits. Offered winter.

**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. Three credits. Offered at least once a year.

**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. Prerequisites: None Three credits. Offered: Winter.

**EDS 618 Studies in Cognitive Impairment.** Intermediate studies in the etiology of cognitive impairments and its implications for teaching strategies and materials. Recommended for

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students who do not have endorsement in cognitive impairment. Three credits. Offered in even-numbered years.

**EDS 620 Programs for Severe Cognitive Impairment.** Advanced study in special education. Three credits. Offered in odd-numbered years.

**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. Three credits. Offered at least once a year.

**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. Prerequisite: EDS 636. Three credits. Offered: fall and winter.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered: Fall.

**EDS 636 Diagnostic and Interpretative Procedures.** Review of evaluative instruments used for identification and programming for exceptional persons. Three credits. Offered at least twice a year.

**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. Prerequisite: EDS 627. Three credits. Offered: fall and winter.

**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. Prerequisite: EDS 637. Three credits. Offered: fall and winter.

**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. Prerequisite: EDS 638. Three credits. Offered: fall and winter.

**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. Three credits. Offered at least once a year.

**EDS 647 Preschool Special Needs Child.** Research implications, teaching strategies, and curricula for the instruction of special-needs infants and preschool children. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**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. Three credits. Offered at least once a year.

**EDS 667 Administration of Special Education.** Theory and practice of personnel, finance, curriculum, and law in special education. Prerequisite: EDS 665. Three credits. Offered at least once a year.

**EDS 668–675 Advanced Studies in Special Education.** A series of competency modules dealing with various areas of special education. One to three credits. Offered at least once a year.

EDS 668 Budget and Accounting

EDS 669 Special Education Law

## Engineering

EDS 670 Computers in Instruction  
EDS 671 Computers in Management  
EDS 672 Special Education Finance  
EDS 673 School and Community Relations  
EDS 674 In-Service Education  
EDS 675 Facilities Planning

**EDS 680 Special Topics in Education.** Study of selected topics in education. One, two, or three credits. Offered upon sufficient demand.

**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. Three and six credits. Offered at least once a year.

EDS 685A Special Education Supervisor  
EDS 685B Special Education Director  
EDS 685C Emotional Impairment  
EDS 685E Cognitive Impairment  
EDS 685F Severe Cognitive Impairment  
EDS 685H Learning Disabilities  
EDS 685J Early Childhood Developmental Delay  
EDS 685K Autism

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.

**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. Nine credits. Fee required. Offered fall and winter semesters. Requires special application and admission procedure, done during winter semester.

**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. Three credits. Offered at least once a year. Prerequisite: permission of advisor and completion of at least 27 semester hours.

EDS 695A Learning Disabilities  
EDS 695B Emotional Impairments  
EDS 695C Special Education Supervisor  
EDS 695D Special Education Director

Candidates must apply separately to the College of Education by February 15 for spring/summer, May 15 for fall semester and by September 15 for winter semester.

**EDS 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. Prerequisite: Permission of the advisor and completion of at least 27 semester credits. Three credits. Offered all semesters.

## The Seymour and Esther Padnos School of Engineering

Director: Plotkowski. Professors: Fleischmann, Garrett, Johnson, Larson, Plotkowski; Associate Professors: Jack, Ray, Standridge; Assistant Professors: Anyalebechi, Adamczyk, Blauch, Blekhman, Choudhuri, Dunne, Farris, Jiao, Mohamadzadeh, Rahman, Reffeor, Sterian.

Degrees offered: Bachelor of Science in Engineering (B.S.E.) with computer, electrical, interdisciplinary, manufacturing and mechanical emphases that include

## Engineering

cooperative engineering education; 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. program is accredited by the Accreditation Board for Engineering and Technology (ABET); the manufacturing and mechanical emphases in the B.S.E. program have separate programmatic accreditation by ABET.

### Introduction

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 imbedded within a supportive general education program. Engineers must have the ability to visualize a problem in its total context.

### The Padnos Legacy

Grand Valley State University has named the School of Engineering in honor of Seymour and Esther Padnos to recognize their commitment to creating an environment where students and faculty can reach their full potential in the field of engineering. It is the aim of the University to inspire future engineers to live up to the personal and professional ideals of the Padnos family.

One of the hallmarks of the Seymour and Esther Padnos School of Engineering is its focus on environmental responsibility. This important societal issue has been integrated into all facets of the engineering curriculum.

### Mission and Values Statements

**Mission:** Our mission is to prepare students to assume engineering positions in industry with the potential to advance to leadership positions.

It is the mission of the faculty to provide a curriculum that 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

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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.

### The Bachelor of Science in Engineering (B.S.E.) Program

The Padnos School of Engineering offers a four-year program leading to the degree of bachelor of science in engineering (B.S.E.). During the first two years students take courses fundamental to engineering in preparation for admission to major standing and cooperative education in industry. The 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 that allows either a computer, electrical, interdisciplinary manufacturing, or mechanical emphasis. The four-year program is capped by a two-semester senior design project requiring initiative, planning, and design. Throughout the program, computers are used to develop and support the analytical and design skills required of engineers. The program is accredited by the Accreditation Board for Engineering and Technology.

### B.S.E. Program Goal and Objectives

The goal of the B.S.E. 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, 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

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responsibility, must frame the continued professional and scholarly growth of the graduate.

### Engineering Design

Design is central to the practice of engineering. To prepare graduates who are well versed in contemporary design practice, the curriculum has been developed to integrate design education throughout all four years of the program. This experience begins in the freshman year with instruction and practice in computer-aided design and product realization, the design of computer software, and the engineering problem-solving method using contemporary 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 involved in the cooperative education program. Woven throughout the curriculum are a series of exercises that address environmentally responsible design.

### Industry Involvement

Grand Valley's B.S.E. degree program has wide community and industrial support. Individuals and industries in West Michigan have supported the program financially as well as by providing opportunities for cooperative engineering education. The program is served by an Engineering Advisory Board composed of practicing engineers and others in the field. The School of Engineering is also supported by the Minority Engineering Committee, which is composed of practicing engineers. 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, so careful planning by students, in consultation with their engineering advisor, is essential. Students considering an engineering career should consult an engineering program advisor at the earliest possible opportunity, preferably before registering for their first semester. A consultation with a program advisor can be arranged by contacting the School of Engineering. Students who have declared engineering as their major will be 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; two years of a foreign language; and three years of social studies. In addition, it is recommended that the student develop keyboard typing skills, mechanical/CAD drawing 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.



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Properly prepared students can complete the B.S.E. program in four and one-third 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 fundamentals course sequence are admitted to the School of Engineering as pre-majors. The fundamentals of engineering course sequence spans the freshman and sophomore years and develops the foundation on which an engineering emphasis is built.

Each year the Padnos School admits a select few students directly to major standing in the Engineering School 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 early-admitted 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 Padnos School using 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 fundamentals course sequence, (2) completion of each course in the engineering fundamentals 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 will be based upon no more than one repeat per required course in the pre-major engineering fundamentals 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. Students may be dismissed from the program for violations of ethical standards or insufficient 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. Notification letters are issued no later than the second week of the winter semester.

### **Cooperative Education**

Cooperative engineering education in industry begins during the spring/summer semester following admission to major standing in the B.S.E. program. Students

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then alternate periods of cooperative education with periods of academic study for the next 28 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.

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 four-year programs.

### Career Opportunities

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.

### Requirements for the Bachelor of Science in Engineering (B.S.E.)

Students earning a B.S.E. degree must complete the following:

1. **General university degree requirements:** As identified in the General Academic Regulations section of the catalog, with the exceptions that (1) the engineering degree requires a minimum of 131 credits plus cooperative education credits, (2) the general education program includes the following courses:

BIO 105 Environmental Science or BIO 103 The Biology of People or BIO 120 General Biology I or HS 202 Anatomy and Physiology (Life Science Foundation)

PHI 102 Ethics (Philosophy and Literature Foundation) or one course from the Ethics theme

ECO 211 Introductory Microeconomics or ECO 210 Introductory Macroeconomics (Social Sciences Foundation) or EGR 304 Creativity and Innovation (Creativity Theme);

2. **Fundamentals of engineering:** 62–63 semester credits in the following fundamentals of engineering sequence of courses (engineering, science, mathematics, and communications):

CHM 115 Principles of Chemistry I

EGR/CS 261 Structured Programming in C

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 (Manufacturing or Mechanical Emphasis)

or

EGR 255 Materials for the Electrical Sciences (Electrical Emphasis)

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or

CS 162 Computer Science I (Computer Emphasis)

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 234 Engineering Physics

or

PHY 231 Principles of Physics II

STA 313 Probability and Stochastic Processes (Computer or Electrical Emphasis)

or

STA 314 Statistical Quality Methods (Manufacturing or Mechanical Emphasis)

WRT 150 Strategies in Writing

3. **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 fundamentals course sequence, (2) completion of each course in the engineering fundamentals course sequence with a grade of C (2.0) or above with not more than one repeat, 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 before they can be admitted to major standing.

4. **Senior design project courses:** three semester credits in the required senior design project course sequence with a minimum grade of C (2.0) in each course:

EGR 485 Senior Engineering Project I\*

EGR 486 Senior Engineering Project II\*

5. **Emphasis courses:** 37–38 semester credits in the chosen emphasis sequence.

In addition to the required courses, a student must select engineering electives in an emphasis area to form a coherent plan of study. The approval of the student's academic advisor is required to insure that 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 emphasis.

### Computer Emphasis:

Required Courses:

EGR 314 Circuit Analysis II

EGR 315 Electronic Circuits I

EGR 326 Advanced Digital Systems

CS 163 Computer Science II

CS 263 Data Structures and Algorithms

CS 350 Introduction to Software Engineering

CS 452 Operating Systems Concepts

Elective Courses 10–12 credits (three courses) selected from the following:

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

\*Satisfies capstone course requirement for the B.S.E. degree.

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CS 451 Computer Architecture  
CS 457 Data Communications  
CS 459 Embedded Computer Systems

### Electrical Emphasis:

#### Required Courses:

EGR 314 Circuit Analysis II  
EGR 315 Electronic Circuits I  
EGR 316 Electronic Circuits II  
EGR 323 Signals and Systems Analysis  
EGR 326 Advanced Digital Systems  
EGR 340 Electromagnetic Fields  
EGR 360 Thermodynamics

Elective Courses—12 credits (three courses) selected from the following:

EGR 370 Engineering Acoustics  
EGR 415 Communications Systems  
EGR 416 Design with Analog Integrated Circuits  
EGR 423 Digital Signal Processing Systems  
EGR 424 Design of Microcontroller Applications  
EGR 426 Integrated Circuit Systems Design  
EGR 430 Electromechanics  
EGR 455 Automatic Control Systems  
EGR 474 Systems Integration

### Interdisciplinary Emphasis:

#### Required Courses:

EGR 314 Circuit Analysis II  
or  
EGR 345 Dynamic Systems 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:

1. Be approved by the faculty of the Padnos School of Engineering.
2. Ensure that the program includes not less than 16 credits of engineering design.
3. Ensure that the program includes not less than 32 credits of engineering science.

### Manufacturing Emphasis:

#### Required Courses:

EGR 309 Machine Design I  
EGR 345 Dynamic System Modeling and Control  
EGR 360 Thermodynamics  
EGR 367 Manufacturing Processes  
EGR 371 Manufacturing Systems Simulation  
EGR 373 Production Scheduling and Control  
EGR 450 Manufacturing Control Systems

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Elective Courses—12 credits (three courses) selected from the following:

EGR 409 Machine Design II  
EGR 470 Product and Process Design  
EGR 473 Strategic Manufacturing Engineering Considerations  
EGR 474 Integrated Manufacturing Systems

### Mechanical Emphasis:

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 (3 courses) selected from the following:

EGR 350 Vibration  
EGR 352 Kinematics and Dynamics of Machinery  
EGR 367 Manufacturing Processes  
EGR 370 Engineering Acoustics  
EGR 430 Electromechanics  
EGR 450 Manufacturing Control Systems  
EGR 469 Applications of Heat and Mass Transfer  
EGR 470 Product and Process Design  
EGR 475 Design of HVAC Systems

6. **Residency requirement:** A minimum of 24 credit hours in engineering courses must be completed at Grand Valley at the 300 level or above. These courses must include EGR 485 and 486.

7. **Completion of cooperative engineering education.**

EGR 289 Engineering Co-op Preparation  
EGR 290 Engineering Co-op 1  
EGR 390 Engineering Co-op 2  
EGR 490 Engineering Co-op 3

## Sample Curriculum for the B.S.E. Degree

The following course sequence assumes an appropriate mathematics background for the entering student.

### First Semester: Fall

MTH 201 Calculus I  
WRT 150 Strategies in Writing  
EGR 101 Computer Aided Design and Manufacturing  
CHM 115 Principles of Chemistry I

### Second Semester: Winter

MTH 202 Calculus II  
PHY 230 Principles of Physics I  
EGR 103 Engineering Measurement and Analysis  
EGR/CS 261 Structured Programming in C

### Third Semester: Fall

MTH 203 Calculus III  
PHY 234 Engineering Physics  
EGR 209 Statics and Solid Mechanics

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EGR 226 Introduction to Digital Systems  
EGR 289 Engineering Co-op Preparation

### Fourth Semester: Winter

MTH 302 Linear Algebra and Differential Equations  
EGR 214 Circuit Analysis I  
EGR 250 Materials Science and Engineering or EGR 255 Materials for the Electrical Sciences  
or CS 162 Computer Science I  
STA 313 Probability and Stochastic Processes or STA 314 Statistical Quality Methods  
PHI 102 Ethics (Philosophy and Literature Foundation)  
(Admission to major standing in the B.S.E. program at this time.)

Spring-summer cooperative education experience: EGR 290

### Fifth Semester: Fall

EGR 314 Circuit Analysis II or EGR 345 Dynamic System Modeling and Control  
EGR 315 Electronic Circuits I or EGR 367 Manufacturing Processes  
or EGR 360 Thermodynamics  
EGR 326 Advanced Digital Systems or EGR 371 Manufacturing Systems Simulation  
or EGR 312 Dynamics  
ECO 211 Introductory Microeconomics (Social Sciences Foundation)

Winter cooperative education experience: EGR 390

### Sixth Semester: Spring-Summer

CS 163 Computer Science II or EGR 340 Electromagnetic Fields or EGR 309 Machine Design I  
CS 350 Introduction to Software Engineering or EGR 316 Electronic Circuits II  
or EGR 373 Production Scheduling and Control or EGR 365 Fluid Mechanics  
Computer engineering emphasis elective or EGR 323 Signals and Systems Analysis  
or EGR 450 Manufacturing Control Systems or a mechanical engineering emphasis elective  
BIO 105 Environmental Science

Fall cooperative education experience: EGR 490

### Seventh Semester: Winter

CS 263 Data Structures and Algorithms or EGR 360 Thermodynamics  
or EGR 409 Machine Design II  
CS 452 Operating Systems or an electrical or manufacturing engineering emphasis elective  
or EGR 468 Heat Transfer  
Engineering emphasis elective  
EGR 485 Senior Project I  
General education course

### Eighth Semester: Spring-Summer

Engineering emphasis elective  
EGR 486 Senior Project II  
Three general education courses

## 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 finishing 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 Emphasis articulated with M.S.E. with Manufacturing Engineering Emphasis,

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(2) B.S.E. with Mechanical Emphasis articulated with M.S.E. with Mechanical Engineering Emphasis, and (3) B.S.E. with Manufacturing 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. Each requires completion of the entire program plan to receive the B.S.E. degree as well as the M.S.E. degree, because 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 follow with 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 fundamentals course sequence, (2) completion of each course in the engineering fundamentals with a grade of B 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 out 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.

Students earning articulated B.S.E./M.S.E. degrees must complete the following:

1. **General university degree requirements:** As identified in the General Academic Regulations section of the catalog, with the exceptions that (1) the articulated engineering degrees require a minimum of 153 credits plus cooperative education credits, (2) the general education program includes the following courses:

BIO 105 Environmental Science or BIO 103 The Biology of People or BIO 120 General Biology I or HS 202 Anatomy and Physiology (Life Science Foundation)

PHI 102 Ethics (Philosophy and Literature Foundation) or one course from the Ethics theme

ECO 211 Introductory Microeconomics or ECO 210 Introductory Macroeconomics (Social Sciences Foundation) or EGR 304 Creativity and Innovation (Creativity Theme);

2. **Fundamentals of engineering:** 62–63 semester credits in the following fundamentals of engineering sequence of courses (engineering, science, mathematics, and communications):

CHM 115 Principles of Chemistry I

EGR/CS 261 Structured Programming in C

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

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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 234 Engineering Physics  
or  
PHY 231 Principles of Physics II  
STA 314 Statistical Quality Methods  
WRT 150 Strategies in Writing

3. **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 fundamentals course sequence, (2) completion of each course in the engineering fundamentals course sequence 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 before they can be considered for admission to major standing.
4. **Masters design project courses:** six semester credits in the required masters design project course sequence with a minimum grade of B (3.0) in each course:  
EGR 692 Masters Project Planning\*  
EGR 693 Masters Project\*
5. **Articulated emphasis courses:** 54–55 semester credits in the chosen emphasis sequence.

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).

### **B.S.E. Manufacturing Emphasis/M.S.E. Manufacturing Operations Emphasis:**

#### Required Undergraduate Courses:

EGR 309 Machine Design I  
EGR 345 Dynamic Systems Modeling and Control  
EGR 360 Thermodynamics  
EGR 367 Manufacturing Processes  
EGR 371 Manufacturing Systems Simulation  
EGR 373 Production Scheduling and Control  
EGR 470 Product and Process Design

#### Required Graduate Courses:

EGR 601 Engineering Project Management  
EGR 603 Law, Ethics and the Environment  
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

\* Satisfies capstone course requirements for the B.S.E. and M.S.E. degrees.



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EGR 611 Computer-Aided Design and Engineering  
EGR 620 Material and Process Selection  
EGR 632 Integrated Manufacturing Systems  
STA 615 Design of Experiments for Engineers

### **B.S.E. Mechanical Emphasis/M.S.E. Mechanical Engineering Emphasis:**

#### Required Undergraduate Courses:

EGR 309 Machine Design I  
EGR 312 Dynamics  
EGR 345 Dynamic Systems 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 601 Engineering Project Management  
EGR 603 Law, Ethics and the Environment  
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 Emphasis/M.S.E. Manufacturing Engineering Emphasis:**

#### Required Undergraduate Courses:

EGR 309 Machine Design I  
EGR 312 Dynamics  
EGR 345 Dynamic Systems 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 601 Engineering Project Management  
EGR 603 Law, Ethics and the Environment  
EGR 610 Engineering Design  
EGR 611 Computer Aided Design and Engineering  
EGR 630 Contemporary Manufacturing Controls  
EGR 632 Integrated Manufacturing Systems  
EGR 643 Manufacturing Simulation

#### 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

6. **Residency requirement:** A minimum of 45 credit hours in engineering courses at the 300 level or above must be completed at Grand Valley. These courses must include EGR 692 and 693.

**7. Completion of cooperative engineering education.**

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

**Minor Programs**

**Requirements for the Computer Engineering Minor**

The minor in computer engineering requires a minimum GPA of 2.0 in eight courses as follows:

Required Courses:

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 Advanced Digital Systems  
EGR 424 Design of Microcontroller Applications

Elective Courses (choose one of the following):

CS 263 Data Structures and Algorithms  
CS 452 Operating Systems Concepts  
CS 457 Data Communications

**Requirements for the Engineering Science Minor**

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 Padnos School of Engineering offers the Master of Science in Engineering (M.S.E.) degree program with four emphases: (1) electrical and computer engineering, (2) manufacturing engineering, (3) manufacturing operations, and (4) mechanical engineering. The electrical and computer engineering, manufacturing engineering and mechanical engineering emphases are open to students having an undergraduate engineering degree, while the manufacturing operations emphasis is intended for students with an undergraduate engineering technology or related physical science degree. In addition, the Padnos School offers post-baccalaureate engineering certificate programs in manufacturing controls and automation, manufacturing design, mechanical design, production operations,

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and professional practice. These programs can be completed in one to three years of part-time study. All credits earned in a certificate program can be applied toward the M.S.E. degree.

These programs are designed to meet the technical and professional development needs of practicing engineers as well as students preparing for advanced study. The programs focus on engineering design, development, manufacture, and production. A thesis option is provided for students preparing for doctoral study. The programs capitalize on the industrial experiences of the students and projects can be tailored to the needs of students to provide a richer, personalized educational experience.

The programs are scheduled for the engineering practitioner currently employed in local industry, but can also serve the needs of full-time students. All courses are offered in a one-night-per-week format during the fall and winter semesters. The 600-level courses are each three credits and offered in the 6:00–8:50 p.m. time block. Students completing two courses per semester by attending classes two nights per week can complete the degree in two calendar years of part-time study. For full-time students, it is possible to complete the M.S.E. degree in as little as four semesters. A certificate program may be completed in one year.

### Admission

The Padnos School seeks motivated and intellectually inquisitive graduate students who desire to deepen their professional education in engineering. The Padnos School expects candidates to make effective use of opportunities to obtain academic and program advice from the faculty and to make maximum use of the courses to 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:

1. Graduation from an accredited undergraduate program in either engineering, engineering technology, or an approved physical science. This program of study should have, as a minimum, 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. Of the currently offered emphasis areas, the electrical and computer engineering, manufacturing engineering and mechanical engineering emphases require the additional mathematics and design components included in an undergraduate engineering degree.
2. 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.
3. Acceptable recommendations from at least two individuals attesting to the likelihood of the candidate's successful completion of the program, if requested by the Padnos School Graduate Admissions Committee.

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4. At least one year of relevant industrial experience in an engineering-related position.
5. 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 EGR 500-level courses or equivalent undergraduate courses form 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 concerning admission into the program within one month after their application is complete. Candidates can be admitted to the program in either the fall or winter semester provided their application and transcripts of prior college work are in the Admissions Office at least two weeks before the semester begins.

Students who have not become degree-seeking may be allowed to enroll in 500-level engineering courses with permission of the graduate program chair. Potential graduate degree-seeking candidates may enroll in equivalent undergraduate courses.

All students registering for 600-level engineering courses must be degree-seeking in the M.S.E. program, or have permission of the graduate program chair.

Once admitted to the M.S.E. program, students are expected to demonstrate initiative, teamwork, and 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 Padnos School of Engineering for an appointment.

Graduate course registration can be completed by telephone or Internet or at an on-site registration session. The graduate program chair will assist the candidate in making registration arrangements.

Candidates will be sent or given tuition payment information and basic forms to complete and mail to the university before the semester begins.

### 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 courses may be substituted for professional practice courses or for area emphasis courses as determined by the graduate program chair.

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### 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 repeating 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. Candidates may complete special accelerated 500-level courses offered by the Padnos School in the relevant area(s); complete appropriate courses in the undergraduate engineering program at Grand Valley; or complete appropriate courses in any other accredited undergraduate engineering program. 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.

Students who are not proficient with contemporary engineering computer applications must complete the background course in contemporary computer tools (EGR 501) during their first semester. Computer-based writing skills, presentation skills, mathematical analysis skills, as well as Internet usage skills, are required for all other accelerated background courses and 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. Students may, with the permission of the graduate program chair, complete background studies during the same semester they enroll in professional practice courses EGR 601 or 603.

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.

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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 the traditional manufacturing processes. To address background subjects in which students may be deficient, three accelerated background courses are provided. These courses are

EGR 501 Contemporary Engineering Computer Tools  
EGR 520 Traditional Manufacturing Processes  
STA 513 Probability and Statistics for Engineers

The engineering and statistics 500-level background courses are each two credits. These courses are offered in an accelerated (half-semester, double pace) format held in the 5:30–8:45 p.m. time block. This scheduling format allows a student to complete two background courses each semester, if needed.

### Background Equivalencies

Background requirements may be met by completion of either the 500-level accelerated courses or the undergraduate equivalent courses, as indicated below.

Background Area	Background Course	Grand Valley
		Undergraduate Course
Contemporary Computer Tools	EGR 501 (two credits)	Integrated in B.S.E. curriculum
Traditional Manufacturing Processes	EGR 520 (two credits)	EGR 367 (four credits)
Probability and Statistics	STA 513 (two credits)	EGR 103 and STA 314 (six credits)

### Requirements for the Certificate Programs

Several of the content areas in the M.S.E. program constitute certificate programs. A certificate in Manufacturing Controls and Automation, Manufacturing Design, Mechanical Design, Production Operations or Professional Practice is awarded to the student who successfully completes the respective content area. The last two courses in a content area must be completed at Grand Valley State University.

Each of the content areas requires 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. Certificate candidates enroll in standard M.S.E. degree program courses, with grading criteria being identical. 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 content 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 600-level graduate coursework distributed as follows:

1. **Professional Practice.** (nine credit hours)

EGR 601 Project Management  
EGR 603 Law, Ethics, and the Environment  
EGR 610 Engineering Design

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### 2. Emphasis.

The student must pursue either an electrical and computer engineering, 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 Communications 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)

EGR 424 Design of Microcontroller Applications  
EGR 426 Integrated Circuit Systems Design  
CS 459 Embedded Computer Systems  
CS 654 Computer Networking

- b. Complete three approved graduate elective courses (seven to eight credit hours).
- c. Complete the capstone experience (six credit hours).  
EGR 692 Masters Project Planning  
EGR 693 Masters Project  
or  
EGR 696 Masters Thesis Research  
EGR 697 Masters Thesis

#### B. Manufacturing Engineering Emphasis:

- a. Complete one of the following content areas (nine credit hours).

**Production Operations** (select three courses)

EGR 640 Production Operation Models  
EGR 642 Materials Handling and Plant Layout  
EGR 643 Manufacturing Simulation  
EGR 644 Manufacturing Work Environments

**Manufacturing Design** (select three courses)

EGR 611 Computer-Aided Design and Engineering  
EGR 612 Design for Manufacturability  
EGR 620 Material and Process Selection  
STA 615 Design of Experiments for Engineers

**Manufacturing Controls and Automation**

EGR 630 Contemporary Manufacturing Controls  
EGR 632 Integrated Manufacturing Systems  
EGR 643 Manufacturing Simulation

- b. Complete three approved graduate elective courses (nine credit hours).
- c. Complete the capstone experience (six credit hours).  
EGR 692 Masters Project Planning  
EGR 693 Masters Project

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or  
EGR 696 Masters Thesis Research  
EGR 697 Masters Thesis

### C. Manufacturing Operations Emphasis:

- a. Complete the following content area (nine credit hours).

**Production Operations** (select three courses)

EGR 640 Production Operation Models  
EGR 642 Materials Handling and Plant Layout  
EGR 643 Manufacturing Simulation  
EGR 644 Manufacturing Work Environments

- b. Complete three approved graduate elective courses (nine credit hours).

- c. Complete the capstone experience (six credit hours).

EGR 692 Masters Project Planning  
EGR 693 Masters Project

or  
EGR 696 Masters Thesis Research  
EGR 697 Masters Thesis

### D. Mechanical Engineering Emphasis:

- a. Complete the following content area (nine credit hours).

**Mechanical Design**

EGR 611 Computer—Aided Design and Engineering  
EGR 615 Applied Finite Element Analysis  
EGR 616 Experimental Stress Analysis

- b. Complete three approved graduate elective courses (nine credit hours).

- c. Complete the capstone experience (six credit hours).

EGR 692 Masters Project Planning  
EGR 693 Masters Project

or  
EGR 696 Masters Thesis Research  
EGR 697 Masters Thesis

## Independent Study

Independent study is available for candidates interested in pursuing relevant special interests in areas where regular courses are not offered. These may consist of problem-solving projects, design projects, or other appropriate endeavors related to the student's intellectual or career interests.

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

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.



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### Graduate Assistantships

Graduate assistants work with the Padnos School 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 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). One credit. Offered fall semester.

**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. Prerequisite: MTH 122 and 123 or college preparatory algebra and trigonometry. Co-requisite: MTH 201. (2-0-3). Three credits. Offered every semester.

**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. Co-requisite: WRT 150 and MTH 202. (2-0-3). Three credits. Offered fall and winter semesters.

**EGR 105 Product Design and Prototyping.** Introduction to the fundamentals of product design and prototyping, including the safe use of hand and power tools commonly employed in engineering shop practice. Various exercises and short projects that involve the use of common tools and machines. Intended for students with little or no exposure to shop practice. Laboratory. (1-0-2) Two credits. Offered winter semester.

**EGR 180 Special Topics in Engineering.** Readings, lectures, discussions, or laboratories (or any combination) on specific engineering topics appropriate for freshman engineering students. Prerequisites: Variable depending on topic. One to four credits. Offered on sufficient demand.

**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. Prerequisite: MTH 202 and PHY 230. (4-0-0). Four credits. Offered fall and spring/summer semesters.

**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. Prerequisite: Sophomore-level course in statics. (1-0-0). One credit. Offered fall semester.

**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, an introduction to the operational amplifier, capacitance and inductance, AC phasor analysis, AC power, and use of computer-aided circuit analysis software. Laboratory. Prerequisite: MTH 202. Co-requisite: PHY 234 or PHY 231. (3-0-3). Four credits. Offered fall and winter semesters.

**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. Prerequisite: EGR/CS 261 or equivalent. (3-0-3). Four credits. Offered fall and winter semesters.

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**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. Prerequisites: CHM 115 and PHY 234 or PHY 231. (3-0-3). Four credits. Offered winter and spring/summer semesters.

**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. Prerequisites: CHM 115 and PHY 231. (3-0-0). Three credits. Offered winter semester.

**EGR/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. A dual listing of CS 261. Prerequisite: MTH 110 or equivalent. Co-requisites: MTH 122 or equivalent and MTH 123 or equivalent. (0-2-2). Three credits. Offered every semester.

**EGR 280 Special Topics in Engineering.** Readings, lectures, discussions, or laboratories (or any combination) on specific engineering topics appropriate for sophomore engineering students. Prerequisites: Variable depending on topic. One to four credits. Offered on sufficient demand.

**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. Prerequisite: 103. Co-requisites: 209 and 226. (1-0-0). One credit. Offered fall semester.

**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. 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. Offered spring/summer semester.

**EGR 304 Creativity and Innovation.** Part of Creativity theme. 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. Prerequisite: Completion of General Education Foundations Requirements. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: 209. (3-0-3). Four credits. Offered spring-summer semester.

**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. Prerequisite: 209. (3-0-0). Three credits. Offered fall semester.

**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. Laboratory. Prerequisites: 214 and MTH 302. (3-0-3). Four credits. Offered fall semester.

**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. Co-requisite: 314. (3-0-3). Four credits. Offered fall semester.

**EGR 316 Electronic Circuits II.** A continuation of EGR 315. Topics covered include Bode plots, frequency response of transistor circuits, differential amplifiers, multistage amplifiers,

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power amplifiers, operational amplifier structures and design, feedback and its implementation, active filters, oscillators, and use of computer-aided design software. Laboratory. Prerequisite: 315. (3-0-3). Four credits. Offered spring/summer semester.

**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. Prerequisite: 314. (3-0-0). Three credits. Offered spring/summer semester.

**EGR 326 Advanced Digital Systems.** An advanced course in digital logic design. Topics include design and analysis of combinatorial and sequential circuits, programmable logic devices, microcontrollers, peripherals, CAD techniques for schematic capture, board layout, and routing. A significant term project is required. Laboratory. Prerequisite: 214, 226. (3-0-3). Four credits. Offered fall semester.

**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. Prerequisites: PHY 234 or PHY 231 and MTH 302. (4-0-0). Four credits. Offered spring/summer semester.

**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, statevariable formulation, and computer simulation. Emphasis on mechanical systems. Laboratory. Prerequisites: 214 and MTH 302. (3-0-3). Four credits. Offered fall semester.

**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. Prerequisites: 345. (4-0-0). Four credits. Offered spring/summer semester.

**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. Prerequisite: 312, MTH 302. (4-0-0). Four credits. Offered winter semester.

**EGR 360 Thermodynamics.** Basic concepts of thermodynamics and an introduction to heat transfer. Properties of pure substances, equation of state, work, heat, first and second laws of thermodynamics, closed systems and control volume analysis, irreversibility and availability, refrigeration and power cycles, thermodynamic relations, introduction to conduction, convection, radiation, heat transfer, and heat exchanger design. Prerequisites: PHY 231 and MTH 302. (4-0-0). Four credits. Offered fall and winter semesters.

**EGR 365 Fluid Mechanics.** Fluid statics, control volume analysis, continuity, momentum, and energy equations, Bernoulli equation, dimensional analysis and similitude, laminar and turbulent pipe flows, differential analysis, Navier-Stokes equations, external flow, lift and drag, an introduction to compressible flow, inviscid flow, stress and potential functions, and Laplace equation. Applications to fluid machinery. Laboratory. Prerequisites: 312, 360, or permission of the instructor. MTH 302 and PHY 231. (3-0-3). Four credits. Offered spring-summer semester.

**EGR 367 Manufacturing Processes.** The fundamentals of manufacturing processes and the machinery of production. The forming of metals, plastics, ceramics and composites with an emphasis on the economics of engineering designs and designs that can be practically manufactured. Computer Aided Manufacturing and quality control processes. Metrology. Laboratory. Prerequisite: 250. (3-0-3). Four credits. Offered fall and winter semesters.

**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. Prerequisite: 314. (3-0-3). Four credits. Offered winter semester.

**EGR 371 Manufacturing Systems Simulation.** The application of the basic techniques of discrete event computer simulation to current manufacturing engineering practice. Process

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world view modeling, experiment design and analysis, and animation. Emphasis on case studies involving systems organization, operational strategies, material handling, scheduling, and logistics. Multiple case problems and a significant term project are required. Laboratory. Prerequisite: STA 314. (2-0-3). Three credits. Offered fall semester.

**EGR 373 Production Scheduling and Control.** Techniques for demand forecasting, capacity planning, production planning, inventory control, and operations scheduling are developed. Experience is gained in understanding the dynamics of production operations and production control systems. Prerequisite: Admission to major standing in the School of Engineering. (4-0-0). Four credits. Offered spring-summer semester.

**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. Prerequisites depend on the nature of the topic. One to four credits. Offered upon demand.

**EGR 390 Engineering Co-op 2.** The second full-time four-month cooperative engineering work experience as described in 290. Prerequisites: 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. Offered each semester.

**EGR 399 Readings in Engineering.** Independent supervised readings on selected topics. Prerequisite: Permission of instructor. One to four credits. Offered fall, winter, and spring/summer semesters.

**EGR 409 Machine Design II.** Topics include design of screws, clutches, brakes, belts, gears, journal bearings, roller bearings, and planetary gear trains. Prerequisite: 309. (4-0-0). Four credits. Offered winter semester.

**EGR 414 Network Synthesis.** An introduction to active and passive network synthesis. RC, RL, and RLC passive synthesis; active synthesis with an emphasis on active filter design. Laboratory. Prerequisite: 314. (3-0-3). Four credits. Offered fall semester.

**EGR 415 Communication Systems.** Topics include: noise, AM, FM, PM, PWM, and FSK modulation, multiplexing, and transmitter and receiver design. Laboratory. Prerequisite: 314 (3-0-3). Four credits. Offered winter semester.

**EGR 416 Design with Analog Integrated Circuits.** An introduction to analog electronic circuit design using operational amplifiers, instrumentation amplifiers, timers, D/A and A/D converters. Laboratory. Prerequisite: 316. (3-0-3). Four credits. Offered winter semester.

**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. Prerequisite: 323, 326. (3-0-3). Four credits. Offered winter semester.

**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. Prerequisite: 326. (3-0-3). Four credits. Offered spring/summer semester.

**EGR 426 Integrated Circuit Systems Design.** An introduction to the analysis and design of digital and analog integrated circuits. Topics include digital devices, semiconductor memories, analog devices, programmable logic devices, FPGAs, and CPLDs. The laboratory exercises introduce the student to the programming of PLDs and FPGAs using VHDL. Laboratory. Prerequisite: 326. (3-0-3). Four credits. Offered spring/summer semester.

**EGR 430 Electromechanics.** A course covering the engineering science and design of electrical to mechanical transducers. Topics include three-phase circuit analysis and power, magnetic circuit design, solenoids, transformers, DC motors, synchronous alternators and motors, brushless DC motors, stepper motors, and an introduction to dynamic systems analysis. Laboratory. Prerequisite: 314 or 345. (3-0-3). Four credits. Offered winter semester.

**EGR 450 Manufacturing Control Systems.** An introduction to the computer control of machines and processes widely used in manufacturing. Topics include programmable logic controllers, actuators and sensors for discrete and continuous systems, control computers, computer interfacing, A/D and D/A converters, command generation, and hierarchical control. The technical issues involved in implementing control schemes are presented. Laboratory. Prerequisites: 345. (0-3-3). Four credits. Offered spring/summer semester.

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**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. Prerequisites: 323. (3-0-3). Four credits. Offered winter semester.

**EGR 468 Heat Transfer.** Study of the mechanisms by which heat is transferred in different media: conduction, convection, and radiation. One- and two-dimensional steady-state conduction, transient conduction, finite differences, methods in conduction, forced and free convections, heat exchangers, radiation processing and properties, and radiation exchange between surfaces. Laboratory. Prerequisite: 365. (3-0-3). Four credits. Offered winter semester.

**EGR 469 Applications of Heat and Mass Transfer.** Advanced modeling of unidirectional and multidirectional steady conduction, time dependent conduction, internal forced convection, flow of non-newtonian fluids (with special emphasis on plastics), mass transfer principles, and applications to molding/casting processes for plastics and metals. Prerequisite: 468. (0-3-0). Three credits. Offered spring/summer semester.

**EGR 470 Product and Process Design.** Principles of mechanical design, material selection, and manufacturing processes are integrated to support the design of products that are robust, affordable, and easily produced. The course includes product development, process planning, tool design, and design for manufacturability. Laboratory. Co-requisite: 367. (3-0-3). Four credits. Offered winter semester.

**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. Prerequisite: 367. (4-0-0). Four credits. Offered spring/summer semester.

**EGR 474 Systems Integration.** An introduction to systems integration with an emphasis on manufacturing systems. Topics include programming, robots, databases, serial communication, networking and system architecture. The course includes extensive use of hands-on laboratories and projects. Laboratory. Prerequisite: 450 or permission of instructor. (0-3-3). Four credits. Offered spring/summer semester.

**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. Prerequisite: 468. (0-3-3). Four credits. Offered spring/summer semester.

**EGR 480 Special Topics in Engineering.** Readings, lectures, discussions, or laboratories (or any combination) on specific engineering topics appropriate for senior engineering students. Prerequisites: Variable depending on topic. One to four credits. Offered on sufficient demand.

**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. Open only to senior engineering students in good standing. (0-1-3). One credit. Offered winter semester.

**EGR 486 Senior Engineering Project II (capstone).** Continuation of student's work in 485. Both an oral report and a final written technical report are required. Prerequisite: 485. (0-0-6). Two credits. Offered spring/summer semester.

**EGR 490 Engineering Co-op 3.** The third full-time, four-month cooperative engineering work experience as described in 290. Prerequisites: 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. Offered each semester.

**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. Prerequisites: 25 credits in engineering and permission of the director of the School of Engineering. One to four credits. Offered on demand.

## Graduate Courses of Instruction

**EGR 501 Contemporary Engineering Computer Tools.** Focus on contemporary computer tools and methods widely used in the practice of engineering. Topics include Internet communication and research, creation of written reports and presentations, performance of mathematical analysis, and manipulation and evaluation of data. Prerequisite: Permission of instructor. (0-2-0). Two credits. Offered fall and winter semesters.

**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. Prerequisite: 250 or equivalent and 309 or equivalent. Co-requisite: 501 or equivalent. (0-2-0). Two credits. Offered winter semesters.

**EGR 601 Engineering Project Management.** Introduction to the project management of engineering projects. Topics include problem identification, project planning, communicating and monitoring, project closeout, cost estimating, risk management, and managing small projects. Project work is used to reinforce the concepts covered. Prerequisite: admission to the M.S.E. program. (0-3-0). Three credits. Offered fall semester.

**EGR 603 Law, Ethics and the Environment.** A discussion-oriented course to expose students to relevant legal principles and ethical problems facing the practicing engineer. Case studies are used to develop opinions by examining private and public sector examples, and special attention is paid to environmental issues. Prerequisite: admission to the M.S.E. program. (0-3-0). Three credits. Offered winter semester.

**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. Prerequisites: STA 513 or equivalent. Co-requisite: 520 or equivalent. (0-3-0). Three credits. Offered winter semester.

**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. Prerequisites: An undergraduate CAD course, 601, 610, or permission of instructor. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: 520 or equivalent, 611. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: 611. (0-3-0). Three credits. Offered winter semester.

**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. Prerequisites: 309 or equivalent. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: 520 or equivalent. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: Admission to the program. (0-3-0). Three credits. Offered winter semester.

**EGR 632 Integrated Manufacturing Systems.** Topics required to implement an integrated manufacturing system are examined. Introductory topics include robots, CNC machines, networking, and databases. Advanced topics involve system modeling and integration of

## Engineering

dissimilar functions using computers. Prerequisite: 630. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisite: STA 513 or equivalent. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: STA 513 or equivalent, 643 (may be taken concurrently). (0-3-0). Three credits. Offered winter semester.

**EGR 643 Manufacturing Simulation.** Discrete-event simulation of processes and systems used in manufacturing. Topics include probability modeling, random events generation, statistical analysis of output, and modeling of various material handling systems. A simulation language is used to model manufacturing facilities. Case studies are used to illustrate the capabilities of simulation languages. Prerequisites: STA 513 or equivalent. (0-3-0). Three credits. Offered winter semester.

**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. Prerequisite: STA 513 or equivalent. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: 415, 423, 455 or equivalent and STA 313 or equivalent. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: 315, 340 or equivalent. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: 655 or equivalent. (0-3-0). Three credits. Offered winter semester.

**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. Prerequisites depend on the nature of the topic. One to three credits. Offered upon demand.

**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. Prerequisites: Completion of 12 credit hours of 600-level courses, permission of program administrator. Three credits. Offered every semester.

**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. Prerequisites: Completion of 12 credit hours of 600-level courses. (0-3-0). Three credits. Offered fall semester.

**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. Prerequisites: 692. (0-3-0). Three credits. Offered winter semester.

**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

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by the student in consultation with the advisor. The topic must be approved by a thesis committee. Prerequisites: Permission of the graduate program chair. Three credits. May be repeated once. Offered every semester.

**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. Prerequisites: 696. Three credits. Offered every semester.

**EGR 699 Independent Study in Engineering.** Independent supervised study on selected topics. Prerequisite: Permission of instructor. One to three credits. Offered upon demand.

## English (ENG)

Chair: Miller. Professors: Blumreich, Chown, Ford, Franciosi, Lockerd, Osborn, Persoon, Smith, Tyson, Wenner, White. Associate Professors: Bloem, Brehm, Ihrman, Jellema, Lai, Miller, Remlinger, Schneider, Soljan, Tucker, Vander Broek, Watson, Webster, Westra, Wu; Assistant Professors: Alvarez, Anderson, Eicke, Hewitt, Pearson, Rozema, Sumner, Tendero, VanAntwerp.

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.

### 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)



## English

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:

1. ENG 220 British Literature I
2. ENG 221 British Literature II
3. ENG 225 American Literature I: to 1860
4. ENG 226 American Literature II: from 1860
5. 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.

1. ENG 303 Studies in World Literature
2. ENG 304 International Literature for Children and Young Adults
3. ENG 375 Studies in Comparative Literature
4. CLA 345 Tradition and Reception
5. CLA 461 Studies in the Classical Tradition

##### 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

## English

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).

1. ENG 313 British Literature: Shakespeare
2. ENG 321 British Literature: Medieval
3. ENG 322 British Literature: Renaissance
4. ENG 323 British Literature: 18th-Romantic
5. ENG 324 British Literature: Victorian-Present

### 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 offered each semester on a rotating basis.

1. ENG 325 American Literature to 1800
2. ENG 326 Nineteenth-Century American Literature
3. ENG 327 Modern American Literature
4. 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 offered each semester on a rotating basis.

1. ENG 335 Literature of American Minorities
2. ENG 436 Women and Literature
3. ENG 440 Studies: Major Author(s)
4. 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 offered each semester on a rotating basis.

1. ENG 320 Studies in Poetry
2. ENG 330 Studies in Fiction
3. ENG 340 Studies in Drama
4. ENG 360 Studies in Non-Fiction

### 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.

1. ENG 362 History of the English Language
2. ENG 363 Applied Linguistics
3. ENG 364 Sociolinguistics
4. ENG 365 Teaching English as a Second Language
5. ENG 366 English Grammar and Usage
6. ENG 461 Language and Gender

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### 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.

1. WRT 200 Introduction to Professional Writing
2. 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.

1. ENG 307 Teaching Writing: Elementary
2. ENG 308 Teaching Reading
3. ENG 309 Teaching Literature to Children
4. ENG 310 Teaching Writing: Secondary
5. ENG 311 Teaching Literature to Adolescents
6. ENG 400 Language Arts for Teachers (must be taken with Teacher Assisting or Student Teaching)

## Literature and Language 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)

**Elective requirements** (21 hours):

Two courses from category B, one of which must be ENG 313, British Literature: Shakespeare. One course from each of these categories: A, C, D, and E. One additional ENG course numbered 300 or above, or one course from category G.

**Capstone** (3 hours).

Total: 39 hours

## Teaching Emphases

### Language Arts (Elementary) Emphasis Requirements:

**Foundation courses** (15 hours)

**Track requirements** (nine hours)

ENG 307 Elementary Teaching Writing (taken before admission to College of Education)

ENG 309 Teaching Literature to Children

ENG 400 Language Arts for Teachers

## English

### Elective requirements (nine hours):

ENG 204 or one course from category A; one course from category F; one additional ENG course numbered 300 or above, or one course from category G.

### Capstone (3 hours)

Total: 36 hours

### English Education (Secondary) Emphasis Requirements

#### Foundation courses (15 hours)

#### Track requirements (nine hours)

ENG 310 Teaching Writing (taken before admission to College of Education)

ENG 311 Teaching Literature to Adolescents

ENG 313 British Literature: Shakespeare

#### Elective requirements (nine hours)

Select any course from Category F, G, and one additional ENG course numbered 300 or above.

### Capstone (3 hours)

Total: 36 hours

## 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.

WRT 200 Introduction to Professional Writing	
or 219 Creative Writing Workshop	
or 352 Advanced Composition	3
ENG 220 British Literature I	
and 221 British Literature II	
or 225 American Literature I: to 1860	
and 226 American Literature II: from 1860	6
ENG 313 British Literature: Shakespeare	3
ENG 261 The Study of Modern English	3
One course from category A	3
One course from category B, C, D, or E	3
	<hr/>
	21 credits
For students seeking certification in English:	
Basic minor	21
ENG 310 Teaching Writing	3
ENG 311 Teaching Literature to Adolescents	3
	<hr/>
	27 credits

## Sample Curriculum

The following schedules assume 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

### English Major—Language and Literature Emphasis

#### First Year

WRT 150 Strategies in Writing  
MTH 110 Algebra  
Foreign Language 101 and/or 102  
ENG 220 British Literature I  
Four General Education Foundation Courses

#### Second Year

Foreign Language 201  
ENG 221 British Literature II  
ENG 225 American Literature I  
ENG 226 American Literature II  
ENG 261 Study of Modern English  
ENG Elective (Category A)  
Four General Education Foundation Courses

#### Third Year

ENG 313 British Literature:  
Shakespeare  
ENG Elective (Category B)  
ENG Elective (Category C)

#### Fourth Year

ENG 495  
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 Course

### English Major—Language Arts (Elementary Education) Emphasis

#### First Year

WRT 150 Strategies in Writing  
MTH 110 Algebra  
Foreign Language 101 and/or 102  
ENG 220 British Literature I  
ENG 221 British Literature II  
ENG 225 American Literature  
PSY 101 Introductory Psychology  
MTH 221 Mathematics for Elementary Teachers (or MTH 223)  
Four General Education Foundation Courses

#### Second Year

Foreign Language 201  
MTH 222 Mathematics for Elementary Teachers (or MTH 223)  
ENG 226 American Literature II  
ENG 261 Study of Modern English  
ED 225 Diversity in Education  
ENG Elective (ENG 204 or Category A)  
ED 200 Introduction to Education  
ED 205 Computers in Education  
Four General Education Foundation Courses  
Two General Education Cultural Designation Courses (ENG 204 and ED 225 are options)

## English

### Third Year

ENG 308 Teaching Reading  
ENG 310 Teaching Writing  
ENG Elective (Category F)  
ENG Elective (One additional ENG course numbered 300 or above)  
ENG 309 Teaching Literature to Children  
PSY 301 Child Development  
PSY 325 Educational Psychology  
ART 230 or MUS 350  
PED 305 or CTH 366  
Three General Education Theme Courses

### Fourth Year

ENG 400 Language Arts  
ENG 495 Capstone  
Teacher Assisting  
Student Teaching

## English Major—Secondary Education Emphasis

### First Year

WRT 150 Strategies in Writing  
MTH 110 Algebra  
Foreign Language 101 and/or 102  
ENG 220 British Literature I  
ENG 221 British Literature II  
ENG 225 American Literature  
ED 205 Computers in Education  
PSY 101 Introductory Psychology  
Four General Education Foundation Courses

### Second Year

Foreign Language 201  
ENG 226 American Literature II  
ENG 261 Study of Modern English  
ED 200 Introduction to Education  
WRT 200 or WRT 219  
ED 225 Diversity in Education  
PSY 301 Child Development  
Two courses in teachable minor  
Four General Education Foundation Courses  
One General Education Cultural Designation Course

### Third Year

ENG 310 Teaching Writing  
ENG 311 Teaching Literature to Adolescents  
ENG 313 British Literature: Shakespeare  
ENG Elective (Category F)  
ENG Elective (one additional ENG course numbered 300 or above)  
PSY 325 Educational Psychology  
Three courses in teachable minor  
Three General Education Theme Courses

### Fourth Year

ENG 495 Capstone  
Two courses in teachable minor

## English

Teacher Assisting  
Student Teaching  
One General Education Cultural Designation Course

### 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: ENG 309, 310, 400, and CTH 107 or CTH 366 or COM 201.
  - b. For secondary: ENG 261, 310, 311, and either 220 and 221 or 225 and 226.

### 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 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 6 graduate credits earned prior to graduate admission may apply to degree requirements. Exceptions must have approval of program coordinator.

#### 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 (12 credit hours):**

ENG 600: Graduate Literary Studies Seminar  
ENG 661 or 663: Author or Topic Seminar/ Shakespeare Seminar  
ENG 651: Literary Period Seminar  
ENG 624: Genre Studies

Degree-seeking students must take ENG 600, Graduate Literary Studies Seminar, before completion of more than 9 credit hours in the program.

**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



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5. Submit final draft for approval of committee. Minimum length for the thesis will be 50 pages (double-spaced, not including bibliography).
6. Thesis defense. The thesis director will schedule a time for the defense when the entire committee can be present. The student must have registered for a total of at least 6 credit hours of ENG 695 before the defense is scheduled.
7. If, after the defense, the student's committee votes not to accept the thesis, the student would have the option of changing to Track 1, which would require taking 6 additional credit hours of coursework and passing the Qualifying Examinations.

## 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 Seminar  
ENG 695 Master's Thesis

## 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 Seminar

Literature focusing outside the traditional canon—one course from the following:

ENG 612 Women Writers  
ENG 614 Literature of American Ethnic Minorities  
ENG 616 Third World Literature

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 undergraduate 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 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, 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.

***Italics: 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.

## English

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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 Designation. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall semester.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered winter semester.

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**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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall semester, odd years.

**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. Three credits. Offered fall and winter semesters.

**ENG 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. Cross-listed with CLA 275. Students may not receive credit for both classes. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered even years, winter semester.

**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. Prerequisite: Fulfillment of the freshman writing requirement and one literature course. Three Credits. Offered odd years, winter semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement and one literature course. Three credits. Offered even years, winter semester.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Four credits. Offered fall and winter semesters.

**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). Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Should be taken prior to Student Teaching (ED 407). Three credits. Offered fall and winter semesters.

**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,

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History, Romance, and poetry. Prerequisites: 220 and 221 or permission of instructor. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Two foundation courses or declared Writing major or minor. Three hours. Offered odd years, fall semester.

**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. Prerequisite: Fulfillment of the freshman writing requirement and ENG 220 and 221 or permission of instructor. May be repeated for credit if content varies. Three credits. Offered odd years, fall semester.

**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. Prerequisites: Fulfillment of freshman writing requirement and ENG 220 and 221 or permission of instructor. May be repeated for credit if content varies. Three credits. Offered even years, winter semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement and ENG 220 and 221 or permission of instructor. May be repeated for credit if content varies. Three credits. Offered even years, fall semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement and ENG 220 and 221 or permission of instructor. May be repeated for credit if content varies. Three credits. Offered odd years, winter semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement, ENG 225 and 226 or permission of instructor. May be repeated for credit if content varies. Three credits. Offered odd years, fall semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement, ENG 225 and 226 or permission of instructor. May be repeated for credit if content varies. Three credits. Offered even years, winter semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement, ENG 225 and 226 or permission of instructor. May be repeated for credit if content varies. Three credits. Offered even years, fall semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement, ENG 225 and 226 or permission of instructor. May be repeated for credit if content varies. Three credits. Offered odd years, winter semester.

**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. Prerequisite: Any two foundation courses or declared Writing major or minor. Three credits. Offered even years, winter semester.

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**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. Prerequisite: Completion of the freshman writing requirement. Three credits. Offered fall semester.

**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. Prerequisites: Two foundation courses or declared Writing major or minor. Three credits. Offered even years, fall semester.

**ENG 360 Studies in Non-Fiction.** Focuses on the formal properties of one or more non-fictional genre as the genre develops within or across historical periods and/or cultures. Prerequisite: Two foundation courses or declared Writing major or minor. Three credits. Offered odd years, winter semester.

**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. Prerequisite: 261. Three credits. Offered fall semester.

**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. Prerequisite: 261. Three credits. Offered winter semester.

**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. Prerequisite: 261. Three credits. Offered winter semester.

**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. Prerequisite: 261. Three credits. Offered even years, fall semester.

**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. Prerequisite: English 261 Study of Modern English, or with permission of instructor. Three credits. Offered fall semesters.

**ENG 375 Studies in Comparative Literature.** English 375 introduces the methodologies and foundations of Comparative Literature, a discipline which systematically studies literatures 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. Prerequisite: WRT 150. Three credits. Offered odd years, winter semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement and one literature course cross listed with SPA 330 and LAS 375. Students may not receive credit for both. Three credits. Offered even years, winter semester.

**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.

**ENG 381 Regional Discourses in US Civil Rights** Regional differences in US Civil Rights' discourse. Prerequisite: WRT 150. Three credits. Offered even years, fall semester.

**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

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nature. In addition to writing analytical papers, students will try several forms of nature writing. Part of Earth and Environment theme. Three credits. Offered winter semester.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered fall semester.

**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. Three credits. Offered winter semester.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered winter semester.

**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. Prerequisites: Fulfillment of the freshman writing requirement. Three credits. Offered even years, winter semester.

**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. Prerequisite: Fulfillment of the freshman writing requirement. Three credits. Offered winter semester.

**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 English 399 may be applied to the major or minor. Prerequisite: Fulfillment of the freshman writing requirement. One to four credits. Offered fall and winter semesters.

**ENG 400 Language Arts for Teaching.** Integrates the theories of teaching elementary children the skills of reading, writing, speaking, and listening. Prerequisites: Senior standing. Taken concurrently with ED 330 or ED 331. Three credits. Offered fall and winter semesters.

**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. Prerequisites: Completion of foundation courses and one 300-level literature course. Offered even years, winter semester.

**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. Prerequisites: Completion of foundation courses and one 300-level literature course. May be repeated for credit if content varies. Three credits. Offered even years, fall semester.

**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. Prerequisites: Completion of foundation courses and one 300-level literature course. Three credits. Offered odd years, winter semester.

**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

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theories to analyses of data with particular attention to contexts of the classroom, workplace, and media. Prerequisite: English 261. Three credits. Offered winter semester.

**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. One to three credits. Offered every semester.

**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. Prerequisites: English foundation courses and senior standing. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**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.

**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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**ENG 616 World Literature in English.** An in-depth study of selected pieces of Asian, African, or South American literature. Issues concerning the development of Third World literature and its status with regard to the canon will be addressed. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. May be repeated for credit when content varies. Offered every year.

**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



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writing. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**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. Prerequisite: Application and interview. Three credits. Offered summer semester.

**ENG 633 Advanced Writing.** An intensive writing course designed to help teachers develop their own writing using various forms of creative and expository writing. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**ENG 651 Literary Period Seminar.** Intensive study of a period of British, American, or world literature. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. May be repeated for credit when content varies. Offered every year.

**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. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year (odd years).

**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. Required of those seeking Michigan ESL endorsement. Three credits. Offered fall semester.

**ENG 661 Author or Topic Seminar.** Intensive study of a work (or works) of a single author or focused literary topic. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. May be repeated for credit when content varies. Offered every year.

**ENG 662 Structure of English** An advanced course in contemporary syntactic analysis of English. The course focuses on both descriptive and prescriptive properties of English, primarily in the generative-transformational framework. It also addresses pedagogical issues in teaching grammar in ESL and other settings. While designed for TESOL majors, other students of English, such as prospective English and language arts majors, may also find it beneficial. Prerequisite: English 660, or with permission of instructor. Three credits. Offered spring semester.

**ENG 663 Shakespeare.** An in-depth study of selected plays, focusing on historical context, interpretive methods, and the development of Shakespeare's genius. Prerequisite: Completion of English major or minor or consent of instructor. Three credits. Offered every other year.

**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. Prerequisite: Completion of 660 or equivalent. Three credits. Offered winter semester.

**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. Prerequisite: Completion of 660 or equivalent. Three credits Offered winter semester.

## Freshman Studies

**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. Prerequisite: Completion of 660 or equivalent. Three credits. Offered fall semester.

**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. Prerequisite: completion of 27 credits and approval of thesis proposal. Offered every semester.

### Reading Skills

**ENG 095 Reading Skills I.** Required for entering students whose scores on a standardized test indicate a need for a developmental reading program. Includes work in the areas of comprehension, word study, and vocabulary development. Three (non-graduation) credits. Credit/no credit. Offered fall and winter semesters.

**ENG 097 Reading Skills II.** A continuation of 095 for those students needing further instruction in developmental reading. Also required for students whose standardized test scores indicate that they may have difficulty comprehending minimum college-level materials. Three (non-graduation) credits. Credit/no credit. Offered fall and winter semesters.

**ENG 099 College Efficiency and Reading Training.** For students whose standardized test scores indicate proficiency with minimum college level material, but who want to learn to make the most efficient use of their reading and thinking skills. Emphasis on reading efficiency, vocabulary development and critical reading. Three (non-graduation) credits. Offered fall and winter semesters.

### 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. Four (non-graduation) credits. Offered winter semester.

## Freshman Studies (FS)

Director: Donald Williams.

The Freshman Studies Program assists first-year students in their transition to university life by guiding them through the academic portion of summer orientation, providing academic advising, and offering a one-credit course called Freshman Seminar (FS 100) each fall semester. Institutional data suggest that students who enroll in FS 100 tend to have slightly better grade point averages and are more likely to remain enrolled in the university through the first two years.

Faculty members who work with students in the summer orientation and teach FS 100 have been selected because they have a special interest in and a record of effectiveness in working with first-year students.

Student orientation leaders become the student associates who assist faculty teaching Freshman Seminar and provide a perspective from experienced and successful students. The faculty/student associate team works with students in small classes, guiding them through a curriculum that covers such varied topics as the meaning of education, the role of general education, time management, multicultural enrichment, student life, and others.

Many first-year students are uncertain about what future career best suits their abilities and interests. A second course, US 102, Career Education Class, is offered

## Geography and Planning

to assist these students, as well as students of higher class standing, who need assistance in developing career goals.

**FS 100 Freshman Seminar.** An elective course, meeting one hour per week, that deals with such topics as intellectual development, campus services, study skills, time management, course selection, academic requirements, objectives of higher education, multicultural enrichment, and the general purposes of college. There are several sections taught by various faculty members. Enrollment in each section limited to 20 students. Grading is on a credit/no credit basis. One credit. Offered fall semester only.

## Geography and Planning Program (GPY)

Interim Chair: Wagendorp. Associate Professor: Cole; Assistant Professors: Joseph, Lioubimtseva, Wagendorp; Instructors: Gasahl, Ma, Penn.

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, geography emphasis.

### 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

Students majoring in geography are required to complete a minimum 36 unduplicated hours, including these core courses: GPY 220, GPY 400, GPY 495 and GEO

## Geography and Planning

111. 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.

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 STA 215, SS 300, and GPY 420.

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: 13 credits (GPY 220, 400, 495 and GEO 111).
2. Regional Studies: 18 credits (GPY 235 plus 12 credits from any of the following: GPY 335, 345, 350, 351, 352, 353, 354, 355, 356; ANT 215; SS 324).
3. Geographic Methods: 7 credits (combination of GPY 200, 307, 309, 420; NRM 250, NRM 350)

### Geographic Methods Emphasis

Total credits for the geographic methods concentration is 39, as indicated below.

1. The core: 13 credits (GPY 220, 400, 495 and GEO 111).
2. Regional Studies: 3 credits (GPY 235)
3. Geographic Methods: 23 credits (CS 230 plus 20 additional credits from any of the following: GPY 200, 307, , 407, 420, 470, NRM 250, NRM 350, NRM 395)

### 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: 13 credits (GPY 220, 400, 495 and GEO 111).
2. Regional Studies: 3 credits (GPY 235).
3. Geographic Methods: 7 credits (GPY 307 plus one course from any of the following: GPY 200, 407, 420, NRM 250, NRM 350, NRM 395.)
4. City and Regional Planning: 12 credits (GPY 309 plus nine credits from any of the following: GPY 310, 410, 420; ECO 435, PA 307, PA 439, SS 324, SOC 351).
5. Internship: 3 credits (GPY 490).

### Community and Organizational Leadership Emphasis

Total credits for the community and organizational leadership concentration is 38, as indicated below.

1. The core: 13 credits (GPY 220, 400, 495 and GEO 111).
2. Regional Studies: 6 credits (GPY 235 plus three credits from any of the following: GPY 345, 350, 351, 352, 353, 354, 355, 356; ANT 215, SS 324).
3. Geographic Methods: 7 credits (GPY 307 plus three credits from the following: GPY 200, 407, NRM 250, NRM 350, NRM 395).
4. Community and Organizational Leadership: 9 credits (GPY 309, 420; SS 324; SOC 351, SOC 356).
5. Internship: 3 credits (GPY 490).

## Geography and Planning

### Environmental Emphasis

Total credits for the environmental emphasis is 41, as indicated below.

1. The Core: 12 credits (GPY 100, 220, 400 and 495).
2. Regional Studies: 3 credits (GPY 235)
3. Environmental concentration (including prerequisites): 22 credits (GPY 412, ECO 345, GEO 320, NRM 240).
4. Geographic Methods: 4 credits (GPY 307).

### 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 below.

#### Teacher Certification Minor (22 hours)

Students seeking certification to teach geography at the secondary level are required to complete the following courses:

1. Two core courses: GPY 100 and GPY 220.
2. Four regional studies courses (one must be GPY 235): GPY 235, 345, 350, 351, or 352, 353, 354 or 355, 356. among their regional courses teachers should include GPY 345, Geography of Michigan/Great Lake Regions and GPY 353 Geography of Canada and the United States.
3. One methods course from the following: GPY 200, 307, 309, NRM 250 or 350.

#### GIS Minor (24 hours)

Students following the technical track are required to complete the following courses:

1. Two core courses: GPY 100 and GPY 220.
2. GPY 235 World Regional Geography (required).
3. CS 230 Microcomputer Operating System (required).
4. At least four methods courses from the following: (GPY 200, 307, 320, 407, NRM 250, 350, or 395).

### Minor in City and Regional Planning

Coordinator: Gasahl.

A minor in planning offers students an opportunity to prepare for careers in the profession of urban and regional planning. See City and Regional Planning.

### 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. Three credits. Offered every semester.

**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. Three credits. Offered fall semester of even-numbered years.

**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 Foundation. Three credits. Offered every semester.

## Geography and Planning

**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. Three credits. Offered every semester.

**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. Prerequisite: Sophomore standing or permission of instructor. Three credits. Offered fall and winter semester.

**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. Three credits. Offered fall semester.

**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. Prerequisite: GPY 309. Three credits. Offered winter semester in odd-numbered years.

**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. Prerequisite: GPY 235 or permission of instructor. Part of Global Change Theme. Three credits. Offered winter semester.

**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. Prerequisite: GPY 235 or permission of instructor. Lecture and discussion. Three credits. Offered summer and fall semester.

**GPY 350 Geography of Russia and Its Neighbors.** With all the exciting and dynamic changes that are occurring in this region, an analysis of the physical and cultural aspects of Russia and its neighbors will be examined. Cross-listed with RST 350. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisite: GPY 235 or permission of instructor. Fulfills World Perspectives requirement. Three credits. Offered winter semester of odd-numbered years.

**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. Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisite: GPY 235 or permission of instructor. Three credits. Offered summer and winter semester.

**GPY 354 Geography of Asia.** Introduction to the physical and cultural geography of Asia: The Indian subcontinent, China, the Koreas, Japan, Taiwan, and Southeast Asia. Prerequisite: GPY 235 or permission of instructor. Three credits. Offered fall semester of even-numbered years.

**GPY 355 Geography of Southwest Asia (The Middle East).** Introduction to physical and cultural geography of Southwest Asia and North Africa. Prerequisite: GPY 235 or permission of instructor. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisite: GPY 235 or approval of instructor. Three credits. Offered winter semester of odd-numbered years.

## Geography and Planning

**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. Three credits. Offered on sufficient demand.

**GPY 399 Independent Readings.** Independent supervised readings in selected topics. Prerequisite: Permission of program coordinator. One to three credits. Offered on a credit/no credit basis. Offered every semester.

**GPY 400 Geographic Inquiry.** An introduction to diverse threads of geographic theory and practice, from ancient Egypt and Mesopotamia to the present day. Prerequisites: GPY 220 and GEO 111. Three credits. Offered on sufficient demand.

**GPY 407 Advanced GIS.** Concepts, principles, and techniques of advanced GIS using ARC/INFO. Course is both theoretical and practical, addressing the structure of GIS and its use for spatial analysis and data management. Prerequisite: GPY 307. Four credits. Offered winter semester.

**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. Prerequisites: GPY 100 and 310. Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisites: GPY 100 or BIO 105. Three credits. Offered winter semester of odd-numbered years.

**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. Prerequisites: GPY 220, STA 215, and SS 300. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisite: GPY 307 and NRM 350 (or co-requisite) or permission of instructor. Three credits. Offered winter semester of odd-numbered years.

**GPY 490 Internship.** Supervised work experience in an area related to geography. Prerequisite: Permission of program coordinator. One to nine credits. Offered on a credit/no credit basis. Offered every semester.

**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. Prerequisite: Senior standing in the department. Three credits. Offered fall and winter semester.

**GPY 499 Independent Research.** Research conducted individually with faculty supervision. Attention given to written and oral presentation of research findings. Prerequisite: Permission of program coordinator. One to three credits. Offered on a credit/no credit basis. Offered every semester.

**SS 324 Urbanization.** Examines the process of urbanization and its impact on various cultures. Considers the dynamic growth of urbanization in third world countries and the significant increase in global urbanization, emphasizing the evolution of cities over time, space, and vastly different social, political, and cultural environments. Fulfills World Perspective requirement. Part of Cities Theme. General education course CGE/B. Three credits. Offered summer semester.

## Geology (GEO)

Chair: Cole. Professors: Neal, Videtich; Associate Professors: Cole, Peterson, Weber; Assistant Professors: Colgan, Hessler, Mattox, Mekik, Riemersma; 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 this 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 people's activities. 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 atmosphere, oceans, and continents.

### Major Requirements: Geology

Completion of a B.S. in geology requires the following:



## Geology

1. General education requirements as identified in the General Academic Regulations section of the catalog.
2. 45–50 semester hours of geology courses with a minimum GPA of C (2.0):
  - GEO 111 Exploring the Earth (4)
  - GEO 112 Earth History (5)\*
  - GEO 211 Mineralogy (4)
  - GEO 212 Petrology (5)\*
  - GEO 311 Structural Geology (3)
  - GEO 312 Sedimentation-Stratigraphy (4)
  - GEO 320 Geomorphology (4)
  - GEO 485 Geology Seminar (2)
  - GEO 495 Global Tectonics (3)\*\*
  - GEO electives—two courses at the 300 or 400 level (6–8)
  - An approved Summer Field Camp in geology (taught by another college) (5–8).
3. 32–35 semester hours of cognate science courses in chemistry, physics, and mathematics/computer science as outlined below:
  - a. Two chemistry courses:
    - CHM 115 Principles of Chemistry I (5)
    - CHM 116 Principles of Chemistry II (5)
  - b. Two physics courses (one of the following pairs):
    - PHY 220 General Physics I (5)
    - PHY 221 General Physics II (5)
    - or
    - PHY 230 Principles of Physics I (5)
    - PHY 231 Principles of Physics II (5)
  - c. Two basic mathematics courses:
    - MTH 122 College Algebra (3)
    - MTH 123 Trigonometry (3)\*
  - d. Two additional mathematics or computer science courses (one of the following pairs)
    - MTH 201 Calculus I (5)
    - MTH 202 Calculus II (4)
    - or
    - STA 215 Introductory Applied Statistics (3)
    - STA 216 Intermediate Applied Statistics (3)
    - or
    - CS 150 Introduction to Computing (3)
    - CS 162 Computer Science I (4)

## Sample Curriculum for B.S. in Geology

### First Year

Fall Semester		Winter Semester	
CHM 115 Principles of Chemistry I	5	CHM 116 Principles of Chemistry II	5
GEO 111 Exploring the Earth	4	GEO 112 Earth History	5
WRT 150 Strategies in Writing	3	General education courses	6
MTH 122 College Algebra	3		
	15		16

\*Completion of GEO 112, 212, and MTH 123 satisfies the general education B.S. degree cognate for geology majors.

\*\*Capstone course.

## Geology

### Second Year

Fall Semester		Winter Semester	
GEO 211 Mineralogy	4	GEO 212 Petrology	5
MTH 123 Trigonometry	3	General education courses	9
General education courses	6		14
Geology elective	3		
	16		

### Third Year

Fall Semester		Winter Semester	
GEO 311 Structural Geology	3	GEO 312 Sedimentation—Stratigraphy	4
GEO 320 Geomorphology	4	MTH 202 Calculus II	4
MTH 201 Calculus I	5	PHY 230 Principles of Physics I	5
General education course	3	General education course	3
	15		16
Summer Field Course	5–8		

### Fourth Year

Fall Semester		Winter Semester	
PHY 231 Principles of Physics II	5	GEO 495 Global Tectonics	3
Geology elective	3–5	GEO 485 Geology Seminar	1
General education course	3	General education course	3
GEO 485 Geology Seminar	1	Geology elective	3
	12–14	Electives	6
			16

### 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 catalog.
2. 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  
 GEO 445 Introduction to Geochemistry\*  
 GEO 485 Geology Seminar (one credit hour)

3. 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 (1 credit hour)

## Geology

4. Five (5) semester credit hours of mathematics.

MTH 201 Calculus I\*

5. A three-credit hour capstone course.

GEO 495 Global Tectonics\*\*

or

CHM 351 Introduction to Physical Chemistry

### Major Requirements: Earth Science

Michigan teacher certification requires completion of the College of Education professional program and a minor area of study. 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 catalog.
2. 19–22 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

GEO 320 Geomorphology†

GEO 430 Oceanography

GEO 485 Geology Seminar (two credits)

3. 32–33 semester credit hours of science cognate courses with a minimum GPA of C (2.0).

CHM 115 Principles of Chemistry I

PHY 105 Descriptive Astronomy

PHY 220 General Physics I

PHY 221 General Physics II

MTH 122 College Algebra

NRM 140 The Climatic Factor

or

NRM 281 Principles of Soil Science

One biology or life science course.

4. Twelve semester credit hours of general education B.S. degree cognate courses with a minimum GPA of C (2.0).

GEO 211 Mineralogy

GEO 212 Petrology

MTH 123 Trigonometry

### Minor Requirements: Geology

Completion of a minor in geology requires the following:

GEO 111 Exploring the Earth

GEO 112 Earth History

GEO 211 Mineralogy

GEO 212 Petrology

\*Completion of CHM 116, GEO 445, and MTH 201 satisfies the general education B.S. degree requirements for dual majors.

\*\*Capstone course

†Capstone course for earth science majors.

GEO 311 Structural Geology

GEO Elective (one course at the 300 or 400 level)

Participation in GEO 485 (Geology Seminar) is encouraged but not required.

### **Minor Requirements: Earth Science**

Completion of a minor in earth science requires the following: 24 semester credit hours of approved geology courses with at least one course from the 300 or 400 level. One course in astronomy/climatology or soils science may be substituted for one of the required geology courses. See the Department Chairperson for approval.

### **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 between the scientific disciplines, their relationship to technology, and their relevance to society. In order to be certified students must complete this major with at least a 2.8 GPA and the elementary teaching minor. See the Science section for details.

### **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 nonscience majors; not for geology or earth science majors. Lectures and field trips. Fulfills Physical Sciences Foundation. (3-0-0). Three credits. Offered each semester and in summer.

**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). Three credits. Offered fall semester and in summer.

**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). Three credits. Offered in fall semester and in summer.

**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). Four credits. Offered each semester and in summer.

**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. Prerequisite: A course in physical or general geology. (3-1-2). Five credits. Offered fall and winter semesters.

**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. Prerequisites: 111 and 112 (can be taken concurrently). One credit. Offered fall and winter.

**GEO 180 Selected Topics in the Geological Sciences.** Topics covered will reflect special interests of students and the instructor. Prerequisite: Variable depending on topic. One to four credits. Offered on sufficient demand.

## Geology

**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). Four credits. Offered fall and winter semesters.

**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). Four credits. Offered fall and winter semesters.

**GEO 203 Weather for K-8 Pre-Service Teachers.** Introduction to how the atmosphere works emphasizing a descriptive approach. Includes daily, seasonal, and long-term changes, weather patterns, and relationships between human activities and the atmosphere. Course is intended for integrated science majors. Does not fulfill requirements for other majors or minors. Content reflects national and Michigan science standards. Lecture and laboratory. (1-0-2). Two credits. Offered fall and winter semesters.

**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). Four credits. Offered summer semester.

**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. Prerequisites: 111 and Chemistry 115. (3-1-2). Four credits. Offered fall semester.

**GEO 212 Petrology.** Topics include the origin, nature, occurrence, and identification of rocks. Lectures and laboratory. Prerequisites: 112, 211, and Chemistry 115. (3-1-2). Five credits. Offered winter semester.

**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. NS/A with laboratory. (3-0-3). Four credits. Offered fall semester. See University Honors College.

**GEO 280 Selected Topics in the Geological Sciences.** Topics covered will reflect special interests of students and the instructor. Prerequisite: Variable depending on topic. One to four credits. Offered on sufficient demand.

**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. Prerequisite: 111 and permission of instructor. One or two credits. Offered on sufficient demand.

**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. Prerequisites: Junior standing and completion of natural science (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: Junior standing and completion of physical and life sciences foundation. General Education requirement. (3-0-0). 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. Prerequisite:

## Geology

Completion of physical or life science foundations General Education requirement. (3-0-0). 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. Prerequisites: 212 and Math 123. (2-0-2). Three credits. Offered fall semester.

**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. Prerequisite: 112. (3-1-2). Four credits. Offered winter semester.

**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. Prerequisites: 112 and permission of instructor. (1-0-3). Two credits. Offered fall semester of even-numbered years.

**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. Prerequisites: Earth Science major or minor, teacher certification candidate, and 18 credits of Earth Science. (3-0-2). Four credits. Offered winter semester.

**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. Prerequisite: 112. (3-1-2). Four credits. Offered fall semester; winter semester of even-numbered years.

**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 geologic events in the Western Hemisphere. Part of the Revolution and Evolution in the Americas theme; not part of the Geology/Earth Science major. Prerequisite: Completion of physical or life science General Education requirement. (3-0-0). Three credits. Offered fall semester.

**GEO 380 Selected Topics in the Geological Sciences.** Topics covered will reflect special interests of students and the instructor. Prerequisite: Variable depending on topic. One to four credits. Offered on sufficient demand.

**GEO 399 Readings in Geology.** Independent study of geological literature. Topics to be prearranged with appropriate staff members. Discussion and seminar. Term paper required. One to four credits. Offered all semesters. Must be prearranged with supervising faculty.

**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. Prerequisites: 112; 312 strongly recommended. (2-1-2). Three credits. Offered winter semester of even-numbered years.

**GEO 420 Glacial and Quaternary Geology.** A study of the physical characteristics of glaciers, their deposits, and their history. Lectures, laboratory, and field trips. Prerequisites: 112; 312 strongly recommended. (3-1-2). Four credits. Offered winter semester of odd-numbered years.

**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. Prerequisite: 112. (3-0-0). Three credits. Offered fall semester.

**GEO 440 Geohydrology.** A study of the geologic principles that govern the occurrence, movement, and quality of groundwater. Lectures, laboratory, and field trip. Prerequisites: 111. (3-0-0). Three credits. Offered fall semester of odd-numbered years.

**GEO 445 Introduction to Geochemistry.** Topics include crystal chemistry (nuclear/solid-state chemistry), water geochemistry (kinetics) and mineral stability (thermodynamics). Lectures and laboratory. Prerequisites: 112; MTH 120 and CHM 116 (may be taken concurrently);

## Health Professions

MTH 201 strongly recommended. (3-0-2). Four credits. Offered fall semester of even-numbered years.

**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. Prerequisite: 212. (2-0-3). Three credits. Offered on demand.

**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. Prerequisites: 212; MTH 201 or permission of instructor; PHY 220 or 230 recommended. (3-0-3). Four credits. Offered winter semester of even-numbered years.

**GEO 480 Selected Topics in the Geological Sciences.** Topics covered will reflect special interests of students and the instructor. Prerequisite: Variable depending on topic. One to four credits. Offered on sufficient demand.

**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. Prerequisite: Geology or earth science major or minor. (0-1-0). One credit. Offered fall and winter semesters.

**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. (490 may be substituted on approval for the field camp requirement of the major.) Prerequisites: Major in geology or earth science, GEO 112 and permission of supervisor. One to ten credits. Offered on request.

**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. Prerequisite: 311. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: Permission of supervisor. One to four credits. Offered fall, winter, and summer semesters.

**NRM 540 Weather and Climate.** For certified teachers who wish to investigate the underlying causes of changes in weather and climate. Concepts include composition and physical behavior of the atmosphere, patterns, measurement, the water cycle, severe weather, and changes over time. Tools include direct observation, instruments, maps, graphs, computers, and satellite images. Prerequisites: teacher certification. (2-0-3). Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisites: teacher certification. (2-1-3). Four credits. Offered fall semester of even-numbered years.

## College of Health Professions (HPR)

Dean: Toot; Professors: Bottles, Peck, Toot, Van Fleet; Associate Professors: Alderink, Bacon-Baguley, Beck, Brooks, Carlton, Combs, Goossen, Powell, Stevenson, Ward; Assistant Professors: Allaben, Baker, Boeve, Crone, Grapczynski, G. Green, M. Green, Hoogenboom, Ozga, Sisco, Vaughn; Instructor: Pawloski; Affiliate Faculty: Harro, Stoddard; Visiting Faculty: Van Ryn; Chair of Student Services: Lewis.

## Health Professions

The College of Health Professions houses **seven** programs. One program—physical therapy—offers the doctoral degree. Two programs—occupational therapy, and physician assistant studies—offer the master's degree. **Four** programs—clinical laboratory science, medical imaging/radiation 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, lifelong 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.



## Health Professions

### 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

The College of Health Professions has identified the following courses as interdisciplinary.

**HPR 111 Medical Terminology.** The construction and translation of common medical terms. Much of the instruction is in the autotutorial mode. (2-0-0). Two credits. Offered fall, winter, and occasionally summer semesters.

**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. Offered fall and winter semesters.

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**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. Two credits. Offered fall and winter semesters.

**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. Prerequisite: At least junior standing and/or admission to one of the HPR professional programs . (2-0-0). Two credits. Offered fall semester.

**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. Offered fall semester.

**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: HS 427 and 428 and admission to one of the programs in the College of Health Professions. Three credits. Offered spring/summer semester.

**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 499 Independent Study—College of 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. Prerequisite: One semester of professional curriculum; permission of professional curriculum director. One to three credits. Offered fall, winter, spring/summer semesters.

**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. Prerequisite: Good standing in one of the HPR professional programs. (2-0-0). One credit. Offered spring/summer semester.

**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. Prerequisite: HPR 510 and good standing in one of the HPR professional programs.(2-0-0). Two credits. Offered fall semester.

**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. Prerequisite: Good standing in one of the HPR professional programs or consent of instructor. (2-0-0). Two credits. Offered winter semester.

**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. Prerequisite: Successful completion of all previous didactic and clinical professional work or consent of instructor. (2-0-0). Two credits. Offered winter semester.

**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

## History

personal and professional goals. Prerequisite: Successful completion of all previous didactic and clinical professional work or consent of instructor. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: HPR 610 and good standing in one of the HPR professional programs. One to three credits. Offered every semester.

**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. Prerequisite: HPR 688 and good standing in one of the HPR professional programs. Three credits. Offered every semester.

**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. Prerequisite: HPR 610 and good standing in one of the HPR professional programs. One to three credits. Offered every semester.

**HPR 695 Master's Thesis.** Continuation of research activity developed in SHP 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. Prerequisite: 690 and good standing in one of the HPR professional programs. Three credits. Offered every semester.

**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. Prerequisite: Good standing after three semesters on one of the HPR professional programs; permission of the professional program director. One to three credits. Offered fall, winter, and spring/summer semester.

## History (HST)

Chair: Smither. Professors: Cole, Devlin, Goode, Kelleher, Mapes, O'Neill, G. Stark, Travis, Tripp; Associate Professors: Buckridge, Galbraith, Murphy, Shapiro-Shapin, Smither, Underwood, Welch; Assistant Professors: Benjamin, Daley, Cooley, Coolidge, Crouthamel, Montagna, Morison, Shan, Stabler, D. Stark, Walker, 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.

### 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 pursuing teacher certification must also take SST 310 and six

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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  
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 (Teacher certification only)

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, 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 2.8.

Courses that fulfill the United States history requirement include

HST 301 Colonial and Revolutionary America  
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 American Democracy  
HST 320 American Indians  
HST 323 Michigan History  
HST 325 History of American Sports  
HST 326 Industrializing America  
HST 327 History of American Urban Society  
HST 328 Constitutional History of the United States  
HST 329 Intellectual History of the United States  
HST 370 History of Medicine and Health  
HST 371 History of Gender, Family, Sexuality

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 371 History of Gender, Family, Sexuality  
HST 376 History of Witches  
HST 377 History of Warfare  
HST 384 Revolutionary Europe, 1789–1900  
HST 385 Europe 1900–1945

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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 West Indies  
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 History of East Asia to 1800  
HST 341 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

HST 380, Special Topics in History, depending on the topic studied, may be used for any of the three categories.

### Requirements for the History Minor

Students who minor in history must complete at least 20 credit hours, including:

HST 203 World History to 1500  
HST 204 World History since 1500  
HST 205 American History to 1877  
HST 206 American History since 1877

The remaining three courses must be selected from HST 210, 301–391; 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 2.8.

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. Transfer students seeking a minor in history must complete at least six credits from among the Grand Valley history offerings.

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 2.8 in previous work. Post-graduate 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 2.8 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.

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

## History

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  
STA 215 Introductory Applied Statistics  
SS 300 Research Methods in the Social Sciences

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.

Advanced Placement and CLEP tests are offered for History:

HST 203 World History to 1500 (AP only)  
HST 204 World History since 1500 (AP only)  
HST 205 American History to 1877  
HST 206 American History since 1877

### Phi Alpha Theta

The local chapter of this international history honor society promotes the study of history by honoring students who have maintained high academic standards throughout their college careers. Members participate in a variety of intellectual and social activities throughout the academic year. Students who have completed at least four history classes and who have maintained a GPA of at least 3.25 are encouraged to apply. Contact Professor Grace Coolidge or Gary Stark Chapter Advisors, for more information.

### Graduate Work

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

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

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European History (minimum of one course):

HST 643 The French Revolution

HST 648 European Origins of World Wars I and II

HST 680, depending on the topic, may be used for any of the categories.

## 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

HST 203 World History to 1500

HST 204 World History since 1500

ENG 150 Strategies in Writing

MTH 110 Algebra

Three General Education Foundation courses

Two foreign language courses (B.A. candidates)

CS 150 Introduction to Computing

STA 215 Introductory Applied Statistics (B.S. candidates)

### Second Year

HST 205 American History to 1877

HST 206 American History since 1877

HST 300 Writing History

Four General Education Foundation courses

HST 210 Empire, Culture and Conflict (non-teachers)

Or

One elective (teacher certification candidates)

One foreign language course (B.A. candidates)

SS 300 Research Methods in the Social Sciences (B.S. candidates)

### Third Year

Three 300-level history courses

Five elective courses (non teachers)

Or

SST 310 and four elective courses (teacher certification candidates)

Two General Education Theme courses

### Fourth Year

Three 300-level history courses

History 495 Varieties of History (capstone)

One General Education Theme course

Six elective courses

## 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

## History

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. Three credits. Offered every semester.

**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. Three credits. Offered every semester.

**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. Three credits. Offered every semester.

**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. Three credits. Offered every semester.

**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. Three credits. Offered every semester.

**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. Three credits. Offered every semester.

**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. Three credits. Offered every semester.

**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. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Completion of writing skills course. Required for majors. Three credits. Offered fall and winter semesters.

**HST 301 Colonial and Revolutionary America.** American history from the early settlements to ratification of the U.S. Constitution. Emphasizes Native American cultures, Indian-white relations, origins of slavery, and the diverse ethnic, religious, and cultural origins of American society. Includes examination of the causes, nature, and effects of the Revolution and the making of the federal constitution. Prerequisites: 205, 206, or junior standing. Three credits. Offered winter semester, odd-numbered years.

**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. Prerequisites: 205 or junior standing. Three credits. Offered winter semester, even-numbered years.



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**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. Prerequisites: 206 or junior standing. Three credits. Offered fall semester, even-numbered years.

**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. Prerequisite: 206 or junior standing. Three credits. Offered fall semester, odd-numbered years.

**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. Prerequisites: 205, 206, or junior standing. Three credits. Offered winter semester, even-numbered years.

**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. Prerequisites: 205, 206, or junior standing or consent of the instructor. Three credits. Offered fall semester, even-numbered years.

**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. Prerequisites: 206 or junior standing. Three credits. Offered winter semester, odd-numbered years. Part of American Mosaic theme.

**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. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits. Offered fall semesters.

**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. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 205, 206, or junior standing. Three credits. Offered winter semester. Part of Perception theme.

**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. Prerequisite: 206 or junior standing. Offered fall and winter semesters. 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. Prerequisites: HST 205, 206 or junior standing. Three credits. Offered winter semester, odd-numbered years.

**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.

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These structures will be seen as metaphorical theatrical stages upon which ethnic, racial, gender, and economic groups create social and cultural formations. Part of Cities theme. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Offered fall and winter semesters. 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. Prerequisite: 205 and 206 or junior standing. Three credits. Offered winter semester, even-numbered years.

**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. Prerequisite: 205 and 206 or junior standing. Three credits. Offered winter semester, odd-numbered years.

**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. Prerequisites: 210 or junior standing. Three credits. Offered fall semester, even-numbered years.

**HST 331 Modern Latin America.** A comparative examination of common socio-economic, political, and cultural topics in 19th and 20th century Latin American societies. Prerequisites: 210 or junior standing. Three credits. Offered fall semester, odd-numbered years.

**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. Prerequisite: Junior standing. Three credits. Offered fall semester, odd-numbered years.

**HST 334 The Making of the West Indies.** 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. Prerequisite: HST 210 or junior standing. Offered fall semester, even-numbered years. 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. Prerequisites: 210 or junior standing. Three credits. Offered winter semester, even-numbered years.

**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. Prerequisite: HST 210 or junior standing; students are encouraged to take HST 335. Three credits. Offered winter semester, odd numbered years.

**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. Prerequisite: 203 and 204 or junior standing. Three credits. Offered winter semester, odd-numbered years.

**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. Prerequisite: 204 and 206 or junior standing. Three credits. Offered winter semester, even-numbered years.

**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. Three credits. Offered in odd-numbered years.

**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

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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. Three credits. Offered winter semester, even-numbered years.

**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. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Part of Religion theme. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Junior standing or 203. Three credits. Offered fall semester, odd-numbered years.

**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. Prerequisites: 203 or junior standing. Three credits. Offered fall semester.

**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. Prerequisite: 203 or junior standing. Three credits. Offered winter semester.

**HST 360 Tudor and Stuart England.** English history from 1485 to 1714 with appropriate attention to political, constitutional, and religious issues. Prerequisite: 204 or junior standing. Three credits. Offered winter semester, even-numbered years.

**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. Prerequisites: 204 or junior standing. Three credits. Offered winter semester, even-numbered years.

**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. Prerequisites: 203 or 204 or junior standing. Three credits. Offered fall semester, even-numbered years.

**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. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits. Offered fall semester.

**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. Prerequisite: 204 or junior standing. Three credits. Offered fall semester, odd-numbered years.

**HST 370 History of Medicine and Health.** Survey of medical and health-related topics from ancient Greece through the present. Course units will include disease migration, unorthodox medicine, professionalization, sanitary science, bacteriology, medicalization of deviance, nursing, philanthropy, gender, colonialism, environmental/industrial medicine, Medicare/Medicaid, and AIDS. A supplemental writing skills course. Part of Health, Illness, and Healing theme. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits. Offered fall semester.

**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 Gender, Society, and Culture theme. Prerequisite: 204 or junior standing. Three credits. Offered winter semester.

**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

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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. Prerequisite: 210, LAS 210 or junior standing. Three credits. Offered fall semester.

**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 Americas theme. Prerequisite: 210, LAS 210 or junior standing. Three credits. Offered winter semester.

**HST 376 History of Witches.** Examines the wave of witch trials in Europe and New England in the 16<sup>th</sup> and 17<sup>th</sup> centuries, from its origins in medieval Christianity and folklore to the Salem witch trials of 1692, from a variety of perspectives, with emphasis on the marginalization of the accused witches within their communities. Part of Marginality and Difference theme. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits. Offered winter semester.

**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. Prerequisite: Completion of Historical Perspectives Foundation or junior standing. Three credits. Offered winter semester.

**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. Three 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. Prerequisite: 204 or junior standing. Three credits. Offered winter semester, odd-numbered years.

**HST 385 Europe 1900–1945.** Examination of European history from 1900 to 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. Prerequisite: 204 or junior standing. Three credits. Offered fall semester, odd-numbered years.

**HST 386 Europe since World War II.** Examines Europe from the end of the Second World War to the present. Topics include: post-war Europe; the Soviet bloc; the Cold War; decolonization; political, social, and cultural developments in East and West Europe; the European Economic Community; the disintegration of the Communist bloc; contemporary Europe. A supplemental writing skills course. Part of Global Change theme. Prerequisite: Historical Perspectives Foundation or junior standing. Three credits. Offered fall semester.

**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. Prerequisite: Historical Perspectives Foundation or junior standing. Three credits. Offered winter semester, odd-numbered years.

**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. Prerequisite: 203 and 204 or junior standing. Three credits. Offered fall semesters, even-numbered years.

**HST 390 Soviet History.** From the Russian Revolution to the recent past. Topics include Lenin, Stalin, World War II, and the Cold War. Prerequisite: HST 204 or junior standing. Three credits. Offered winter semester, odd-numbered years.

**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.

## History of Science

Prerequisites: 203 and 204 or junior standing. Three credits. Offered fall semester, odd-numbered years.

**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 History 399 may be applied to the major or minor. Prerequisites: Junior standing. One to three credits. Offered on arrangement.

**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. Prerequisite: 15 hours of coursework in history and permission of the department chair. One to three credits. Offered every semester.

**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. Prerequisite: 300 and senior standing. For history majors only except by permission of the chair. Required for majors. Three credits. Offered fall and winter semesters, every year.

**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.

**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. Three credits. Offered summers of even-numbered years.

**HST 625 The United States in the Nuclear Age.** A study of major political and diplomatic developments in U.S. history, 1945–1975. Three credits. Offered every third year.

**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. Three credits. Offered every third year.

**HST 632 A History of Brazil.** Larger than the continental United States, Brazil offers much to the study of the modern world. The course uses Brazilian history from 1500 to the present to examine major questions that continue to perplex analysts of the human condition. Course requires no prior knowledge of the history of Brazil. Prerequisites: Consent of the instructor or graduate standing. Three credits. Offered every other year.

**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. Three credits. Offered every other year.

**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. Three credits. Offered every third year.

**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. Three credits. Offered every third year.

**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. Prerequisites: Consent of instructor. Three credits. Offered every year.

## History of Science Minor (HSC)

Faculty: Castelao-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

## University Honors College

history of their discipline as a part of the progress of human civilization. Non-scientists, 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

A student choosing history of science as a minor program must complete 20 hours of study in the history of science, normally including 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 for SWS credit during the spring/summer semester. Three credits. Offered fall, winter, and occasional spring/summer semesters.

**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. Three credits. Offered fall, winter, and occasional spring/summer semesters.

**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. Prerequisites: Two history of science courses and permission of instructor. One to three credits. Offered fall and winter semesters.

## University Honors College (HNR)

Director: G. Huang. Faculty Fellows: M. Al-Mallah, B. Ambrose, D. Balfour, E. Baum, D. Bernstein, D. Burg, E. Cole, G. Coolidge, J. Crouthamel, S. Danielson, K. DenDulk, D. Devlin, M. deYoung, C. Fitzpatrick, B. Flaschenriem, R. Franciosi, J. Goode, J. Gross, D. Herman, A. Hewitt, C. Hull, R. Joannis, J. Joseph, K. Kantz, F. Kelleher, W. Levitan, B. Lockerd, B. Maschewske, D. McGee, D. Montagna, M. Morison, W. Morison, P. Murphy, C. Pazdernik, M. Pestana, G. Pozzi, D. Rayor, R. Rediske, C. Rydel, J. Scott, M. Seeger, C. Shapiro-Shapin, J. Shontz, J. Stillerman, S. Swartzlander, P. Taylor, J. Toot, S. Tripp, R. Watson, M. Webster, G. Wilson, D. Wright.

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

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

## University Honors College

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.

These 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. Original work done as a part of a major may satisfy this requirement. The objective of University Honors College courses is not to make the students do more work than in regular courses but to provide a qualitatively richer 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 treated seriously. By participating with other select students in small classes and by living with these students in Glenn A. Niemeyer Living Center (optional), students in the program 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:

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 the University Honors College permits a student to live in Glenn A. Niemeyer Living Center, a combined residential and instructional building;
5. Students in the University Honors College 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, 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 GVSU Student Scholarship Day, the National Collegiate Honors Council annual meeting, and other professional meetings;

Perhaps the most significant advantages of an honors education are less obvious:

8. 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

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facilitate student-faculty interaction. In addition to greater classroom interaction with students, most faculty are also involved in activities in the residential setting. (Some faculty have offices in Glenn A. Niemeyer Living Center.)

9. 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.
10. Honors students benefit from the most advanced instructional technology at the university.
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 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 director, the Honors Faculty Fellows, the Honors Advisory Committee and student representatives advise and aid in the process.

### **Admission**

Qualified students will be invited to participate in the University Honors College if they have a 3.5 high school grade point average and an ACT score of at least 28. 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/honor](http://www.gvsu.edu/honor)).

Transfer students and students already enrolled at Grand Valley may request substitutions for Honors College requirements. Admission criteria are not waived.



## **University Honors College**

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 program 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 should select honors housing as their first option. These can be submitted online.

## **Honors Council**

Students share in the governance of the Living Center. The Honors Council 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 Honors Council, 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 program 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 110. 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.
2. Writing 150. Many Honors students satisfy this requirement by taking AP English in high school and scoring 3 or better on the AP test. Each first-year student must discuss her/his status with the director or with Honors Arts and Humanities faculty regarding WRT 150. Completion of any Arts and Humanities sequence with a B average satisfies the WRT 150 requirement.
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 Academic 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; MTH 122, 123, 125, 131, 201 221; PHI 103; STA 215.
5. General education theme. Honors students satisfy this requirement by completing one of the four Arts and Humanities sequences with a B or better grade average.

### 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 (HNR 213, 214, 223, 224)  
Classical World (HNR 211, 212, 221, 222)  
European Civilization (HNR 215, 216, 225, 226)  
The Making of Europe (HNR 217, 218, 227, 228)  
American Civilization, Classical World, 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.
2. Students taking American Civilization will need a World Perspectives course. Students taking Classical World, European Civilization, 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 and 234) or two courses from The Holocaust (HNR 231), Trauma, Culture, Memory (HNR 232) or Democracy and Political Thinking (HNR 235). Students may request approval to choose courses from Anthropology, Economics, Political Science, or Sociology.
4. Honors Natural Sciences. All students must take two natural science courses, one in life sciences and one in physical sciences. One of those two must

## University Honors College

be a course that includes a laboratory component. Honors students majoring in engineering, pre-health curricula, or the sciences may use science courses required in their majors. Other Honors students must take one of the following two-course science sequences. The Earth, A Global View (HNR 241) and Plants and People (HNR 242); OR Chemistry in Perspective (HNR 246) and Molecules of Life in Perspective (HNR 247); OR The Human Body in Motion I (HNR 243) and The Human Body in Motion II (HNR 244). These two courses must be taken in the same academic year.

5. Honors Junior Seminar. Each student takes at least one course from among HNR 300, 311, 312 or HNR 331 during her/his junior or senior year.
  6. Honors Senior Project, HNR 499. See course description under course offerings.
- 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 must see either the director or a University Honors College advisor to prepare a course of study, which satisfies University requirements and University 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.

Some students who begin the University Honors College choose to withdraw. The information given in Course Offerings (below) helps the student and her/his advisor determine which requirements in General Education have been satisfied.

### Course Offerings

Note: Enrollment in all courses requires admission to the University Honors College or permission from the director.

**HNR 211 and 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. HNR 211 and 212 must be taken concurrently. Historical Perspectives, Philosophy and Literature. LD. Six credits. Offered fall semester.

**HNR 213 and 214 American Civilization I.** Courses provide a survey of American history, literature, and intellectual progress from European Colonization through Reconstruction. HNR 213 and 214 must be taken concurrently. Historical Perspectives, Philosophy and Literature. LD. Six credits. Offered fall semester.

**HNR 215 and 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. HNR 215 and 216 must be taken concurrently. Historical Perspectives, Philosophy and Literature. LD. Six credits. Offered fall semester.

**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. Historical Perspectives Three credits. Offered fall semester

## University Honors College

**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. Philosophy and Literature. Prerequisite: HNR 217; Three credits. Offered winter semester.

**HNR 223 and 224 American Civilization II.** Courses continue the study of American Civilization begun in HNR 213/214. Emphasis is on philosophy and arts in American culture. Arts, U.S. Diversity. LD. Prerequisites: HNR 213 and 214. Six credits. Offered winter semester.

**HNR 225 and 226 European Civilization II.** Courses continue the study of European history, philosophy and culture begun in HNR 215 and 216. Arts, World Perspectives. LD. Prerequisites: HNR 215 and 216. Six credits. Offered winter semester.

**HNR 221 and 222 Classical World II.** Courses continue the study of history, philosophy, and culture of the Classical period begun in HNR 211 and 212. Arts, World Perspectives. Prerequisite: HNR 211 and 212. Offered winter semester.

**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. World Perspectives. Prerequisites: HNR 217 and 218. Three credits. Offered fall semester.

**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. Arts. Prerequisites: HNR 217, 218, 227. Three credits. Offered winter semester.

**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. Three credits. Offered fall and winter semesters.

**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. Prerequisite: HNR 231 or permission of instructor. Three credits. Offered winter semester.

**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. Social Sciences. LD. Co-requisite: HNR 234. Three credits. Offered fall semester.

**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. Social Sciences. LD. Co-requisite: HNR 233. Three credits. Offered fall semester.

**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. U.S. Diversity. LD. Three credits. Offered fall semester.

**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. Lecture, laboratory, and field trips. Physical Science with laboratory. Four credits. Offered fall and winter semesters.

**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

## University Honors College

food, oxygen, shelter, medicines, and pleasure. Life Sciences. LD. Three credits. Offered fall and winter semesters.

**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. Four credits. Offered fall semester.

**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. Physical science with laboratory and life science. Prerequisite: HNR 243. Three credits. Offered winter semester.

**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. Physical science with laboratory. LD and Lab. Four credits. Offered fall and winter semesters.

**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. Three credits. Offered fall semester.

**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. Prerequisites: admission to the University Honors College; previous HNR coursework. One to three credits. Offered on demand.

**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. World Perspectives. LD. Three credits. Offered winter semester.

**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.

**HNR 311 and 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. 311 World Perspectives, 312 U.S. Diversity. LD. 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. World Perspectives. LD. Three credits. Offered fall semester.

**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. Prerequisites: junior standing or 12 previous credits in HNR courses. One to three credits. Offered on demand.

**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.

Transfer students or those who are admitted to the program beyond the freshman year and who still need to fulfill distribution or general education requirements will enroll in the appropriate Honors sequence. They will take at least one Honors Junior Seminar and complete one Honors Senior Project.

Transfer students with an associate's degree and students who enter the program after their general education or distribution requirements have been fulfilled must select a minimum of 12 hours of University Honors College courses to complete requirements

## Hospitality and Tourism Management

for graduating from the program. These hours must include one Honors Junior Seminar and one senior project.

### Hospitality and Tourism Management (HTM)

Chair: Baker-Clark. Assistant Professors: Adams, Baker-Clark, Stansbie. Visiting instructors: Jack, Longstreet

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

Our mission is to prepare students who have chosen hospitality and tourism as their career vocation for success in entry-level management positions, leadership roles, and life. 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 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\*\*
  - 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 The Tourism System
3. Hospitality and tourism management **field requirement** (seven credits):
  - 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 HTM 213, Food Service Systems (core/systems requirement); HTM 112, Food Science and Technology; 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 HTM 222, Lodging Systems (core/systems requirement); HTM 333, Property Management; 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 HTM 235, The Tourism System (core/systems requirement); HTM 402, Tourism Planning and Development; three additional credits in HTM; and nine credits of electives as part of their emphasis. The approval of the student's academic advisor is required to ensure that the course choices meet program requirements.
  - d. Other emphasis. An emphasis of the student's own choosing *with prior advisor and department chair approval*. Examples of other emphases include computer applications, meetings and events management, facilities management, health care, human resource management, clubs, and security.
5. Science and mathematics core (nine credits).

\*Successful completion of CS 150, STA 215, and HTM 373 satisfies the B.S. degree cognate for all HTM majors.

\*\*Capstone course.

## Hospitality and Tourism Management

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 socioeconomic and political force. Four credits. Offered fall and winter semesters.

**HTM 112 Food Science and Technology.** The application of chemical, physical, safety, and sanitation principles to food preparation, production, and processing. Prerequisite: CHM 102 or permission. (3-0-2). Four credits. Offered winter semester.

**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. Prerequisites: None. Three credits. Offered winter semester.

**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. Variable credit. Offered on sufficient demand.

**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. Prerequisite or co-requisite: 101. One credit. Offered fall and winter semesters.

\*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 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. Prerequisites None, HTM 101 suggested. Three credits. Offered fall semester.

**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. Prerequisites: MTH 110, HTM 101, 112 (or concurrence) or permission; CS 150 recommended. Four credits. Offered fall semester.

**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. Prerequisites: ACC 212, HTM 101, or permission; CS 150 recommended. Four credits. Offered winter semester.

**HTM 235 The Tourism System.** An introduction to tourism as one of the world's largest industries, focusing on tourism's strong links to cultural pursuits, foreign policy initiatives, and economic development. Additional emphasis on tourism's relationship to the economy, specifically the many diverse and different products and services tourism requires from other sectors, both public and private. Prerequisite: 101 or permission. Three credits. Offered on sufficient demand.

**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. Prerequisite: HTM 101. Three credits. Offered winter semester.

**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. Variable credit. Offered on sufficient demand.

**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. Prerequisite: 190 and permission. Two credits. Offered every semester.

**HTM 301 Hospitality and Tourism Systems.** In-depth analysis of food service, tourism and lodging operations, organizational structures and functional models, systems, and procedures. Emphasis on operational standards and efficiency, productivity and profitability, and service. Required for and limited to articulating students. Permission required. Four credits. Offered on sufficient demand.

**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. Prerequisites: 213 and 361 or concurrency, with permission. Three credits. Offered fall semester.

**HTM 333 Property Management.** The care of the hospitality facility with emphasis on preventive maintenance, energy, management systems, security, and sanitation. Prerequisite: 101 or permission. Three credits. Offered fall semester.

**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. Prerequisites: 101 or permission; junior standing. Four credits. Offered fall and winter semesters.

**HTM 353 Meeting Planning.** A study of the planning, marketing, execution, and follow-up of meetings, conferences, conventions, and package promotions. Prerequisites: MKT 350, HTM 222, or permission. Three credits. Offered fall semester.

## International Relations

**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. Prerequisite: BUS 201 or permission; junior standing. Three credits. Offered fall and winter semesters.

**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. Prerequisites: CS 150, ACC 213, and STA 215; junior standing. Four credits. Offered fall and winter semesters.

**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. Prerequisites: Junior standing; permission. One to four credits. Offered fall and winter semesters.

**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. Prerequisite: 290 and permission. Two credits. Offered every semester.

**HTM 399 Independent Study.** Study of an advanced topic of interest in hospitality and tourism management. Prerequisite: Permission. Variable credit. Offered every semester.

**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. Prerequisites: HTM 222 or HTM 213 or HTM Department permission; STA 215; and MKT 350. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered on sufficient demand.

**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. Prerequisites: 290 and 390 or their equivalents; senior standing; permission. Two credits. Offered every semester.

**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. Prerequisite: Completion of the HTM Core through the 300 level; senior standing. Three credits. Offered fall and winter semesters.

**HTM 499 Independent Research.** Supervised research in hospitality and tourism management for junior and senior majors. Prerequisite: Permission. Variable credit. Offered every semester.

## International Relations Program (IR)

Coordinator: Constantelos.

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

## **International Relations**

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, marketing, 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**

Students in the international relations program are strongly encouraged to take advantage of opportunities to study abroad. Grand Valley has institutional agreements with East China University of Science and Technology, China; Eastern Institute of Technology, Hawke's Bay, New Zealand; ESSCA Business School, Angers, France; Groupe ESC Grenoble, France; Kingston University, England; International Christian University, Japan; the Japan Center for Michigan Universities, Japan; St. Petersburg State University, Russia; Universidad De Las Americas, Mexico; University of Economics, Poland; University of Finance and Economics, Russia; University of Sarajevo, Bosnia; University of Stuttgart, Germany; and the Uppsala University, Sweden. Opportunities for exchange are available with all institutions.

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. Students are strongly advised to consult with the 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.

## International Relations

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 economics and business, history and foreign culture, 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.

### 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

#### Economics and Business Courses

ECO 349 Emerging Markets Issues  
ECO 365 Comparative Economic Systems  
ECO 369 International Economic Issues  
FIN 429 International Financial Management  
HTM 202 International Tourism  
MGT 466 International Management and Multinational Corporations  
MKT 359 Multinational Marketing

#### History and Foreign Culture 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  
HST 386 Europe since World War II

## Latin American Studies

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 321 The European Union  
PLS 327 Politics of Developing Countries

### International Relations Courses

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 Michigan growing rapidly but Latinos will soon constitute the most populous ethnic group in the United States. In the meantime, U.S. economic, political, and cultural relations with our Latin America 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

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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 and South America are constantly being pursued. Consult the Padnos International Center or the LAS Coordinator for information on other study abroad opportunities in Latin America.

Minors in Latin American Studies 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 Latin American Studies (LAS) that may apply to the minor. (Students majoring in Spanish and minoring in Latin American Studies 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)

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 The African Diaspora  
ANT 355 Migration in the Americas  
ANT 360 Ethnology of MesoAmerica  
BIO 310 Biological Diversity in the Americas  
ENG 378 Contemporary Latin American Literature  
ENG 385 Writing and Revolution in the Americas  
GPY 352 Geography of Latin America  
GEO 350 Geology's Great Debate in the New World  
HST 315 Latinos: The Forging of Ethnic Identities  
HST 330 Early Latin America  
HST 331 Modern Latin America  
HST 334 The Making of the West Indies  
HST 372 From Slavery to Freedom  
HST 632 History of Brazil  
LAS 378 Contemporary Latin American Literature

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LAS 380 Topics in Latin American Studies  
LAS 399 Independent Study  
LAS 475 Latinos in West Michigan  
LAS 490 Latin American Studies Internship  
SPA 311 Latin American Civilization and Culture I  
SPA 312 Latin American Civilization and Culture II  
SPA 324 Spanish American Novel in Translation  
SPA 329 Sociolinguistics of the Spanish  
SPA 410 Spanish American Narrative  
SPA 430 U.S. Latino/a Literature  
SPA 460 Women Authors

One course (excluding Spanish below 202) from the Grand Valley Study Abroad Programs in Guadalajara, Mexico, or Belize or from another study abroad program in Latin America approved by 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.

Note: The following courses may not always deal with Latin America. Before registering for Latin American Studies minor credit, consult the instructor or the coordinator of LAS.

ANT 330 Ethnology of Selected World Areas  
BIO 417 International Field Biology  
ENG 203 World Literature  
ENG 616 Third World Literature  
GPY 235 World Regional Geography  
HST 210 Empire, Culture, and Conflict  
HST 633 Issues in Third World History  
SS/WGS 351 Family & Gender in the Developing World.

For more information, check our Web page at [www4.gvsu.edu/las](http://www4.gvsu.edu/las)

## 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. Three credits. Offered fall semester.

**LAS 374 Revolution in the Americas.** Men and women make history, sometimes through gradual, passive means and sometimes through sudden, active means. In the Americas, both categories of history-making have been common. This course explores international relations in the hemisphere by comparing revolutionary and evolutionary processes of change from Tierra del Fuego to the Northwest Territories. Cross-listed with HST 374. Prerequisite: 210 or junior standing. Three credits. Offered winter semester.

**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. Prerequisite: 210 or junior standing. Three credits. Dual listed with ENG 378 and SPA 378. Offered winter semester of even-numbered years.

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**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. Variable credit. Offered winter semester.

**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. One to three credits. Offered every semester.

**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. Prerequisite: 210 or junior standing. Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisites: Nine hours, LAS-related coursework, and permission of the program coordinator. Offered every semester.

## Law

The Michigan State University-DCL College of Law offers law courses in specialized topics at the Grand Rapids Pew Campus in the DeVos Center and at the Cook-Dewitt Center for Health Sciences. The Steelcase Library at the Pew Campus DeVos Center houses a law library to support these law programs. Grand Valley students have the option of enrolling in select law classes as a guest student or pursuing a Certificate in Law which can be completed in Grand Rapids or in East Lansing.

The Business and Tax Law Center offered by the Legal Institute of West Michigan is a rigorous academic program for business and law professionals who desire to advance their organizations and their careers. It is a 14 credit Certificate program 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. For more information you can visit [www.lawcenters.law.msu.edu](http://www.lawcenters.law.msu.edu) or contact Tami Passeno, [passenot@law.msu.edu](mailto:passenot@law.msu.edu).

## Legal Studies (LS)

Director: Fisk. Associate Professors: McKenzie, Mullendore; Assistant Professor: Yalda.

The School of Criminal Justice administers the major in legal studies. The legal studies major is designed to prepare students 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 work in law firms, corporations, or government agencies. Some legal studies courses may be applied to a criminal justice major. Check with your advisor for possible selections.

### 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



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cognate requirements of the School of Criminal Justice, i.e., third-semester proficiency in a foreign language to earn a B.A., or STA 215, SS 300, and CJ 400 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.

### Major Program Requirements

A minimum of 36 credit hours is required. All majors must take the following core courses: LS 301, 420, 422, 424, 426, 428, 490, and 495 (24 hours). In addition, all majors must take ACC 212 and three of the following courses: CS 150, CS 233, CS 238, LS/CJ 455, WRT 350, LS/WGS 370, and either PLS 306 or CJ 305.

### Minor Program Requirements

Minors must complete 21 credit hours, including LS 301, 420, 422, 424, 426, 428, and 490 or 495.

### 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. Three credits. Offered fall and winter semesters.

**LS/WGS 370 Women and the Law.** An overview of the American 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. Three credits. Offered winter semester.

**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 studies major. Three credits. Offered on sufficient demand.

**LS 420 Property and Probate Law.** A study of property and probate law through the examination of key concepts, case law, statutory law, and documents. Fact-gathering techniques and drafting considerations will be highlighted. Topics include real estate, personal property, environmental law, wills, and probate. Prerequisites: 301 (may be taken concurrently) or permission of instructor. Three credits. Offered fall semester.

**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. Prerequisites: 301 (may be taken concurrently) or permission of instructor. Three credits. Offered winter semester.

**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. Prerequisites: 301 (may be taken concurrently) or permission of instructor. Three credits. Offered fall and winter semesters.

**LS 426 Civil Litigation.** Introduction to civil litigation. Particular attention paid to jurisdiction, venue, service of process, pleading, motions, and the discovery process. Prerequisites: 301 (may be taken concurrently) or permission of instructor. Three credits. Offered fall semester.

**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. Prerequisites: 301 (may be taken concurrently) or permission of instructor. Three credits. Offered fall semester.

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**LS/CJ 455 Leadership Principles.** An overview of leadership issues, strategies, and techniques, an understanding of leadership philosophies, knowledge of critical leadership skills, principles of decision-making and risk-taking, effective communication skills, coaching and counseling for results, and team building skills applicable to criminal justice organizations. Prerequisites: Criminal Justice or Legal Studies major and junior or senior standing. Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisites: 301, senior status, permission of instructor attained through completion of an application form submitted during the semester before the internship, and LS 424 and 426 (taken before or concurrently with 490). Three credits. Offered every semester.

**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. Prerequisites: 301, senior status in the program, and LS 424 (may be taken concurrently). Three credits. Offered winter semester.

## Liberal Studies (LIB)

Coordinator: Whipps; Affiliate Professors: Drewel, Krohmer, Povoio.

Liberal studies 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. The program stresses dialogue, a dialogue that includes a variety of disciplines and scholars who have helped shape our understanding of the world, a dialogue that helps us to understand ourselves, and a dialogue that helps us to understand each other.

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 what individuals want to do and think they need to do on one hand, and a tradition of inquiry and questioning on the other. 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.

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 our pursuit of career goals.

### 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 (12 credits)

The Emphasis (18 credits)

Electives (9 credits)

## **Liberal Studies**

Practicum (2 or more credits)

Senior Seminar (3 credits)

### **The Core (12 credits)**

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 through which to engage 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 (18 credits, 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, The Self and Its Commitments, Childhood Development and Literature, and Management and Society.

### **Liberal Studies Electives (nine credits)**

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. The Liberal Studies Committee recommends that younger students in particular consider structuring their electives as a career component to their study plan, including areas such as business, computer science, and international study.

### **Senior Seminar and Practicum (5 or more credits)**

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 program coordinator 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 program coordinator for review and approval. Changes in study plans must be made in consultation with advisors and approved by the program coordinator.

### Courses of Instruction

**LIB 100 Introduction to Liberal Studies.** 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. Three credits. Offered every semester.

**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 310 Creativity.** An examination of human creativity and the nature of the creative process. Characteristics of the creative process in artistic and scientific endeavors. Three credits. Offered every year. Part of Creativity Theme.

**LIB 311 Meaning: The Humanities Resource.** Introduction to several humanities areas, such as literature, philosophy, and art, as resources for understanding the nature of human values and the process by which we perceive meaning in our lives. Readings include novels and philosophical writings as well as material dealing with art and its relationship to meaning. Three credits. Offered every other year.

**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. Three credits. Offered every semester.

**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. Three credits. Offered every other year.

**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

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homosexual and heterosexual lifestyles. Part of Gender and Identity theme. Three credits. Offered once a year.

**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. Three credits. Offered once a year, winter semester.

**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. Three credits. Offered every other year.

**LIB 335 Scriptures as Literature.** A comparative study of Scriptures as literary masterpieces that shape and influence their respective cultural expressions and literary traditions. Readings include Scriptures from major world religions such as *The Dhammapada*, *The Lotus Sutra*, *The Rig Veda*, *Upanishad*, *The Bible*, *The Koran*, and *Tao Te Ching*. Part of Religion theme. Fulfills World Perspectives requirement. Three credits. Offered fall semester.

**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. Three credits. Offered fall semester.

**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. Three credits. Offered fall semester.

**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.

**LIB 370 Universities: History, Function, Future.** An examination of the changing role of universities in American and non-American societies. Examines the evolution of the university since the 12<sup>th</sup> 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. Three credits. Offered every other year.

**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. Three credits. Offered every year.

**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. Three credits. May be repeated for credit.

**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. Variable credit. Offered every semester.

**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. Three credits. May be repeated for credit. Offered once a year.

**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. Three credits. May be repeated for credit. This is offered only as an online course. Offered winter semester.

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**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. One credit. May be repeated for credit. Offered winter semester.

**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. Prerequisite: Senior standing and a 3.0 GPA in the major. Variable credit. Offered every semester.

**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. Variable credit. Offered every semester.

**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. Three credits. Offered winter semester.

**LIB 499 Independent Research.** Independent research and investigation from an interdisciplinary perspective. Variable credit. Offered every semester.

## Mathematics (MTH)

Chair: Schlicker. Professors: Arendsen, Beckmann, Kindschi, Schlicker, Sundstrom, VanderJagt; Associate Professors: Aboufadel, Austin, Fishback, Gardner, Golden, Haidar, Mack, Novotny, Sorensen, C. Wells, P. Wells; Assistant Professors: Barber, Billings, Boelkins, Coffey, Dickinson, Dogru, Heidenreich, Hodge, Kasman, Klingler, Tefera, Walker, Yu; Instructors: Alexander, Friar, Mays; Visiting Assistant Professor: Wodarz; Math Lab Director: Mays.

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 statistics major and minor are described in the Statistics section of the catalog.

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 catalog.
2. Mathematics core

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All mathematics majors must complete the following courses

MTH 201 Calculus I*	5 credits
MTH 202 Calculus II*	4 credits
MTH 210 Communicating in Mathematics	3 credits
MTH 227 Linear Algebra I	3 credits
MTH 310 Modern Algebra I	3 credits
MTH 495 Nature of Modern Mathematics** or MTH 496 Senior Thesis**	3 credits

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	4 credits
MTH 408 Advanced Calculus I	3 credits

b. One of the following upper-level two-course sequences:

MTH 310 and MTH 410 (Modern Algebra)
MTH 408 and MTH 409 (Advanced Calculus)
MTH 341 and MTH 431 (Geometry)
MTH 300 and MTH 400 (Applied Analysis)
MTH 345 and MTH 360 (Discrete Mathematics and Applications)

c. Additional course(s) from the following list for a total of 37 credits in mathematics: 300, 304, 327, 341, 345, 360, 400, 402, 405, 409, 410, 431, 441, 465.

d. Cognate Requirements

STA 312\*; CS 160 or CS 162; and one course from the following: PHY 230, ECO 342, ECO 480, GEO 440, GEO 470, STA 314, STA 316, STA 412, SS 300, PSY 300, BIO 355, BIO 375, CHM 351, HSC 201, or EGR 304.

Majors who plan to complete graduate work in mathematics are encouraged to (1) take as many upper-division mathematics courses from the courses listed above as possible; (2) complete at least one of the two-course upper-level sequences in modern algebra or advanced calculus; (3) consult with their advisor about other courses that might be appropriate for their interests and about procedures for applying to graduate school; and (4) complete a B.A. degree by completing the third semester of French, German, or Russian.

4. Elementary Certification Emphasis

A minimum GPA of 2.8 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 321 Number Systems and Structures	3 credits
MTH 322 Geometry for Elementary Teachers	3 credits

\*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.

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MTH 323 Probability and Statistics for Elementary Teachers	3 credits
MTH 341 Euclidean Geometry	3 credits
MTH 345 Discrete Mathematics	3 credits

b. Cognate Requirements

STA 312\* and one course from the following: PHY 220, PHY 230, CS 160, CS 162, ECO 342, ECO 480, GEO 440, GEO 470, STA 314, STA 316, STA 345, STA 412, SS 300, PSY 300, BIO 355, BIO 375, CHM 351, HSC 201, or EGR 304.

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, and at least two of MTH 321, 322, or 323.

5. Secondary Certification Emphasis

A minimum GPA of 2.8 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	4 credits
MTH 229 Mathematical Activities for Secondary Teachers	3 credits
MTH 329 Teaching Middle Grades Mathematics	3 credits
MTH 341 Euclidean Geometry	3 credits
MTH 345 Discrete Mathematics	3 credits

b. One additional elective course from the following (your elective course must be different than your capstone course): 300, 304, 327, 360, 400, 402, 405, 408, 409, 410, 431, 441, 465, 495, 496.

c. Cognate Requirements

STA 312\* and one course from the following: PHY 230, CS 160, CS 162, ECO 342, ECO 480, GEO 440, GEO 470, STA 314, STA 316, STA 345, STA 412, SS 300, PSY 300, BIO 355, BIO 375, CHM 351, HSC 201, or EGR 304.

d. College of Education requirements for secondary 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, 229, and 341.

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.

\*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.

\*Completion of MTH 201, 202, and STA 312 satisfies the B.S. degree cognate for all mathematics majors. Students completing a B.A. degree must complete these courses plus the foreign language requirement for a B.A.



## Mathematics

- A minimum cumulative GPA of 2.8 (on a 4.0 scale) in mathematics courses from the accredited institution.
- Completion of the College of Education requirements for certification.

### 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: 110, 122, 123, 125, 131, 221, 225, 302, 307, 321, 322, 323, and STA 215. There is one exception: 321, 322, and 323 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  
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.  
Note: Credit in only one of MTH 302 or MTH 304 may be applied toward this minor.

2. Mathematics (for secondary teacher certification). Minors seeking a mathematics endorsement must complete the following courses (27 credits) with a minimum GPA of 2.8 as required for teacher certification.

MTH 201 Calculus I  
MTH 202 Calculus II  
MTH 210 Communicating in Mathematics  
MTH 227 Linear Algebra I  
MTH 229 Mathematical Activities for Secondary Teachers  
or MTH 329 Teaching Middle Grades Mathematics  
MTH 310 Modern Algebra I  
MTH 341 Euclidean Geometry  
STA 312 Probability and Statistics

3. Mathematics for elementary teacher certification. Minors seeking a mathematics endorsement must complete a minimum of 24 hours with a minimum GPA of 2.8 as required for teacher certification. Courses must include

MTH 201 Calculus I  
MTH 202 Calculus II  
MTH 210 Communicating in Mathematics  
MTH 321 Number Systems and Structures  
MTH 322 Geometry for Elementary Teachers  
MTH 323 Probability and Statistics for Elementary Teachers  
One additional approved course.

### 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

## Mathematics

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 pre-algebra 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

MTH 201 Calculus I  
MTH 202 Calculus II  
MTH 210 Communicating in Mathematics  
Appropriate courses in general education

##### Second Year

MTH 203 Calculus III  
MTH 227 Linear Algebra I  
MTH 310 Modern Algebra I  
CS 162 Computer Science I  
Appropriate courses in general education

##### Third Year

MTH 408 Advanced Calculus I  
MTH 409 Advanced Calculus II  
STA 312 Probability and Statistics  
Cognate course in the major  
Appropriate courses in general education

##### Fourth Year

Two electives for the major  
Capstone course  
Appropriate courses in general education

#### Mathematics Major (Secondary Certification Emphasis)

##### First Year

MTH 201 Calculus I  
MTH 202 Calculus II  
MTH 210 Communicating in Mathematics  
PSY 101 Introductory Psychology  
Appropriate courses in general education

##### Second Year

MTH 203 Calculus III  
MTH 227 Linear Algebra I  
MTH 229 Mathematical Activities for  
Secondary Teachers  
MTH 329 Teaching Middle Grades  
Mathematics  
Appropriate courses in general education

##### Third Year

MTH 310 Modern Algebra I  
MTH 341 Euclidean Geometry  
STA 312 Probability and Statistics  
Elective in the major  
Student Assisting  
Cognate course for major  
Appropriate courses in general education

##### Fourth Year

MTH 345 Discrete Mathematics  
Capstone course  
Student Teaching  
Appropriate courses in general education

## Mathematics

### Mathematics Major (Elementary Certification Emphasis)

#### First Year

MTH 201 Calculus I  
MTH 202 Calculus II  
MTH 210 Communicating in Mathematics  
PSY 101 Introductory Psychology  
Appropriate courses in general education

#### Second Year

MTH 227 Linear Algebra I  
MTH 310 Modern Algebra I  
MTH 321 Number Systems and Structures  
STA 312 Probability and Statistics  
Appropriate courses in general education

#### Third Year

MTH 322 Geometry for Elementary Teachers  
MTH 323 Probability and Statistics for Elementary Teachers  
MTH 341 Euclidean Geometry  
Student Assisting  
Cognate course for major  
Appropriate courses in general education

#### Fourth Year

MTH 345 Discrete Mathematics  
Capstone course  
Student Teaching  
Appropriate courses in general education

### Master of Education Degree

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 this 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 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

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

All students must take MTH 629 Secondary Student Issues.

### 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 110. Designed for students who are unprepared for 110. Credits earned for this course do not count toward the number of credits required for graduation. Prerequisite: Assignment through Grand Valley math placement. Four credits. Offered fall and winter semesters.

**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. Prerequisite: 097 or assignment through Grand Valley math placement. Four credits. Offered fall, winter, and spring/summer semesters.

**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. Prerequisite: 110 or assignment through Grand Valley math placement. Fulfills Mathematical Sciences Foundation. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 110; Co-requisite: 122 or satisfactory score on the placement test. Fulfills Mathematical Sciences Foundation. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 110. Fulfills Mathematical Sciences Foundation. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 110. Fulfills Mathematical Sciences Foundation. Three credits. Offered on sufficient demand.

**MTH 180 Special Topics.** Readings, lecture, discussions, or lab (or any combination) in specific mathematics topics at an introductory or elementary level. Prerequisite: Permission of the instructor. One to four credits. Offered on sufficient demand.

**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. Prerequisites: 122 and 123. Fulfills Mathematical Sciences Foundation. Five credits. Offered fall and winter semesters.

**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. Prerequisite: 201. Four credits. Offered fall and winter semesters.

**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

\*See information regarding placement test.

## Mathematics

scalar functions of several variables. Prerequisite: 202. Four credits. Offered fall and winter semesters.

**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. Prerequisites: 201 and fulfillment of the composition requirement. Three credits. Offered fall and winter semesters.

**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. MTH 221 and 222 (or MTH 223) required of all elementary teachers applying to the College of Education for winter 1996 or later. Does not count toward a major or minor in mathematics. Prerequisites: 110 and at least sophomore standing. Fulfills Mathematical Sciences Foundation. (3-0-2) Four credits. Offered fall and winter semesters.

**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. MTH 221 and 222 (or MTH 223) required of all elementary teachers applying to the College of Education for winter 1996 or later. Prerequisites: 110 and at least sophomore standing; 221 strongly recommended. (2-0-2) Three credits. Offered fall and winter semesters.

**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 222. Prerequisite: 201. (4-0-2) Five credits. Offered winter semester.

**MTH 225 Discrete Structures: Computer Science.** Logic, sets, counting techniques, cardinality, relations, functions and sequences, matrices, mathematical induction, and computer science applications. Prerequisite: 122 or equivalent. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 202. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 201 and sophomore standing. (2-0-2) Three credits. Offered fall and winter semesters.

**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. Prerequisite: 203. Three credits. Offered fall semester.

**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. Prerequisite: 203. Four credits. Offered fall and winter semesters.

**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. Prerequisites: 203 and 227. Three credits. Offered winter semester.

\*See information regarding placement test.

## Mathematics

**MTH 307 Mathematics Teacher Assisting Seminar.** Strategies for teaching mathematics in junior and senior high school. Coordinated and taken concurrently with ED 331. Prerequisites: CS 205 or 309, PSY 301 and at least 12 hours in the major, including 229. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 210, and 227 or 225. Three credits. Offered fall and winter semesters.

**MTH 321 Number Systems and Structure.** Analyze characteristics and properties of number systems, patterns, 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. Prerequisite: 221. (2-0-2) Three credits. Offered at least one semester per year.

**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. Prerequisite: 221. (2-0-2) Three credits. Offered at least one semester per year.

**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, standards, and relevant research for K–8. Fieldwork includes designing/teaching activities and units. Within the mathematics major or minor applies only to Elementary Certification Emphasis. Prerequisite: 221. (2-0-2) Three credits. Offered at least one semester per year.

**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. Prerequisite: 225. Three credits. Offered fall and winter semesters.

**MTH 327 Linear Algebra II.** Vector spaces, bases, dimensions, linear transformations, canonical forms, eigen values and geometric applications. Prerequisites: 202 and 227. Three credits. Offered summer semester.

**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. Prerequisites: C or better in MTH 202, MTH 210, and one of MTH 229, 321, 322, or 323. Junior standing. Three credits. Offered fall and winter semesters.

**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. Prerequisites: Math 110, Writing 150, and completion of the Mathematical Sciences Foundation. Three credits. Offered winter semesters.

**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. Prerequisites: 210 and either 227 or 322. Three credits. Offered fall and winter semesters.

**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.

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Algorithms and proof techniques. Prerequisite: 210. Three credits. Offered fall and winter semesters.

**MTH 360 Operations Research.** Mathematical modeling under conditions of certainty and uncertainty. Linear programming, duality, and sensitivity analysis. Markov chains and other stochastic processes. Applications to problems in transportation, scheduling, and resource allocation. Prerequisites: MTH 227, STA 312; (STA 312 may be taken concurrently). Offered fall of even-numbered years.

**MTH 380 Special Topics.** Readings, lecture, discussions, or lab (or any combination) in specific mathematics topics. Prerequisites dependent upon topic selected. Permission of the instructor required. One to four credits. Offered on sufficient demand.

**MTH 399 Independent Readings.** Hours, credit, topics, and time to be arranged with individual staff members with approval of the department. One to four credits. Offered fall and winter semesters.

**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. Prerequisites: 300 and either 302 or 304. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisite: 203 and either 227 or 302. Three credits. Offered winter semester of odd-numbered years.

**MTH 405 Numerical Analysis.** Numerical methods in solving equations of a single variable, matrix algebra, numerical differentiation and integration, numerical solution to differential equations, polynomial approximations, and error estimates. Prerequisites: 227, either 302 or 304, and CS 162. Three credits. Offered fall semester of even-numbered years.

**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. Prerequisites: 203 and 210. Three credits. Offered fall semester.

**MTH 409 Advanced Calculus II.** Infinite series, improper integrals, development of the topology of Euclidean  $n$ -space and rigorous examination of limits, continuity, and differentiability of functions of several variables. Prerequisites: 227 and 408. Three credits. Offered winter semesters of even-numbered years.

**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. Prerequisite: 310. Three credits. Offered winter semester.

**MTH 431 Non-Euclidean Geometry.** A critical examination of several non-Euclidean geometries, including finite geometries, hyperbolic geometry, and spherical geometry; their relationships to Euclidean geometry; and the historical and philosophical significance of the development of Non-Euclidean geometries. Prerequisites: 210 and either 341 or permission of the instructor. Three credits. Offered fall semester.

**MTH 441 Topology.** An introduction to the fundamental concepts of topology. The topology of the real number system and its generalizations to metric spaces and topological spaces. Topics include subspaces, neighborhood spaces, open and closed sets, interior and boundary of sets, continuity and homeomorphisms, connected and locally connected spaces, compact sets and spaces. Prerequisites: 203, 210, and 227. Three credits. Offered winter semester of odd-numbered years.

**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. Prerequisites: CS 162 and either 325 or 345. Three credits. Offered fall semester of odd-numbered years.

**MTH 480 Special Topics.** Readings, lecture, discussions, or lab (or any combination) in specific mathematics topics. Prerequisites dependent upon topic selected. Permission of the instructor required. One to four credits. Offered on sufficient demand.

## Mathematics

**MTH 490 Mathematics Internship Seminar.** Prerequisite: Approval of the department; senior status. Two credits. Offered fall and winter semesters.

**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. Prerequisites: 210, 227, 310, and at least three other 300–400 level mathematics courses. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Open to senior mathematics majors in good standing. Consent of instructor required. Three credits. Offered upon arrangement.

**MTH 499 Independent Study and Research.** Hours, credit, topics, and time to be arranged with individual staff members with approval of the department. One to four credits. Offered fall and winter semesters.

**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 distributions, 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. Prerequisite: Permission of the department. One to three credits. Offered on sufficient demand.

**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. Prerequisite: Permission of department. One to three credits. Offered on sufficient demand.



## Medical Imaging/Radiation Sciences

**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. One to three credits. Offered fall and winter semesters.

## Medical Imaging/Radiation Sciences

Director: Carlton; Associate Professor: Carlton; Instructor: Pawloski; Adjunct Faculty: Bichay, Ph.D.; Rowland, R.T.T.N.

Degree offered: B.S. in Medical Imaging/Radiation Sciences

This degree program will offer three emphases. The projected timeline for implementation of these offerings is as follows:

Radiation Therapy—Fall 2003

Diagnostic Medical Sonography—Fall 2005

Radiography—Fall 2007

The curriculum is in the process of final approval. Please contact Chris Lewis for full information about the Radiation Therapy professional curriculum. Mr. Lewis may be reached at (616) 331-3958 or by email at lewisch@gvsu.edu.

### Radiation Therapy

Radiation Therapy is an Allied Health specialty that uses ionizing radiation in the treatment of disease, especially cancer. The primary responsibilities of a radiation therapist include implementing treatment programs prescribed by a radiation oncologist and assisting in the planning of treatment with the medical dosimetrist and radiation physicist. These responsibilities require highly specialized clinical skills as well as highly developed critical thinking skills in order to effectively contribute to the team approach to patient treatment.

### Diagnostic Sonography

The diagnostic medical sonographer practices a form of medical imaging that uses high frequency sound waves to produce an image of the soft tissue organs of the body and to display blood flow information from the blood vessels and the heart. It is safe, it is non or semi invasive and can be used in a wide variety of cases to aid in the diagnosis of disease. Grand Valley State University's sonography programs will include a general concentration in abdomen and obstetrics/gynecology and an echocardiography program. The role of ultrasound in medicine is continually growing. New applications and imaging equipment are in a constant state of development. The role of diagnostic sonography in medical imaging and continued quality health care is very secure. Its continued growth and development are dependent on highly qualified and well-trained medical, cardiac and vascular sonographers.

### Radiography

Radiographers provide patient services using imaging equipment as directed by physicians qualified to order and/or perform radiologic procedures. When providing patient services, radiographers continually strive to give quality patient care while limiting radiation exposure to patients, themselves and others. Professional competence requires that radiographers apply knowledge of anatomy, physiology, positioning, radiographic technique, and radiation biology and protection in the performance of their responsibilities. They may also evaluate radiologic

## Medical Imaging/Radiation Sciences

equipment, conduct a radiographic quality assurance program, provide patient education, and manage a medical imaging department.

### Career Opportunities

In May of 2001, the American Hospital Association conducted a survey of 715 hospitals, which indicated an 18 percent vacancy rate for radiological technologists. The number of job openings in these areas are predicted to grow at an above average rate through 2008 (U.S. Bureau of Labor Statistics). The vacancy rate in rural hospitals is even higher at 21percent.

An American Hospital Association 2002 study reported that the 15.3 percent hospital vacancy rate for radiologic and imaging sciences professionals was the highest of all health care workers, including nursing.

### Admission to Medical Imaging/Radiation Sciences

Admission to the Medical Imaging/Radiation Sciences program will be competitive, requiring completion of a secondary application. Applications are due February 1 of the sophomore year. Applicants must meet the following criteria:

Academic Achievement. Students must have a minimum overall GPA of 3.0 overall and a science GPA of 3.0.

Written essay and interview skills are required.

Recommendations. Two recommendations must be submitted on university forms.

Volunteer time: Sixteen hours of volunteer time must be recorded.

Additional considerations. Additional educational, leadership, scholarly, and volunteer activities are valued and may impact selection criteria.

Class size is limited to no more than 20 students in each emphasis.

### Degree Requirements

Completion of a major in medical imaging with an emphasis in radiation therapy requires the following:

1. General university degree requirements as identified in the General Academic Regulations of the catalogue.
2. Medical Imaging Pre-requisites
  - BIO 120 General Biology I
  - BIO 328 Biomedical Ethics
  - CHM 109 Introductory Chemistry
  - CHM 230 Introduction to Organic and Biochemistry
  - HS 208 Human Anatomy
  - HS 290 Human Physiology
  - HS 291 Laboratory in Human Physiology
  - HS 309 Laboratory in Human Anatomy
  - HS 310 Basic Pathophysiology
  - MTH 123 Trigonometry
  - PHY 220 General Physics I
  - PHY 221 General Physics II
  - PSY 101 Introductory Psychology
  - PSY 364 Life-span Developmental Psychology
  - HPR 111 Medical Terminology
  - HPR 220 Health Care Delivery

## Middle East Studies

HPR 340 Health Care Management  
WRT 150 Strategies in Writing

### 3. Medical Imaging core

The medical imaging core acquaints students across the emphases with basic foundations necessary for clinical practice.

Courses are currently under development. Contact the department for details.

### 4. Radiation Therapy Professional Requirements

Courses are currently under development. Contact the department for details.

## Middle East Studies Minor (MES)

Coordinator: J. Goode. Professors: J. Brashler, J. Goode; Associate Professors: B. Roos, M. Webster; Assistant Professors: R. Cole, M. Schaub, M. Al-Mallah, C. Fitzpatrick.

In the tradition of liberal education at Grand Valley State University, courses in this minor introduce students to the “heritage, problems, and perspectives” of Middle Eastern cultures, thus helping them to better understand their own culture. Michigan, for example, is home to the nation’s largest Arab American community, half Christian, half Muslim, with substantial Jewish congregations.

The Middle East studies program focuses on the area stretching from Morocco in the west to Oman in the east, from Iran and Turkey in the north to Sudan in the south—a region inhabited by more than 350 million people. Not only does the history and art of this region form the basis of Western civilization, but the Middle East today is central to issues of global peace and prosperity. This area incorporates largely Muslim lands, but Christians and Jews have also made important contributions. All receive appropriate attention in this program.

Students come from anthropology, business, communications, geography, history, and international relations—indeed, from all those disciplines in which there is increasing interest in the non-Western world. For example, for aspiring teachers, knowledge of Islamic civilization provides tools for understanding—and teaching about—areas far removed from the Middle East, such as South Asia, Indonesia, and sub-Saharan Africa. Business majors who can demonstrate some understanding of regional customs, cultural practices, and language, can gain advantage with the many local firms with Middle East trade links.

A study-abroad program in Egypt is offered during spring term. 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 simulation held annually in late February and in field trips to points of cultural interest locally and in the Detroit area.

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.

## Modern Languages

All minors are required to complete the following courses:

ARA 202 Intermediate Arabic  
GPY 355 Geography of Southwest Asia  
HST 338 Modern Middle East *or* HST 337 Age of Islamic Empire  
MES 201 Introduction to the Middle East

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.

In addition to the above required courses, students will select two courses (six credits) from the following list:

ANT 330 Anthropology of Selected World Areas (when focus is the Middle East)  
ANT 350 Archaeology of the Middle East  
ENG 303 Topics in World Literature (when focus is the Middle East)  
HST 210 Empire, Culture, and Conflict (when focus is the Middle East)  
HST 337 The Age of Islamic Empire  
HST 338 The Modern Middle East  
MES 380 Special topics in Middle East Studies  
MES 399 Independent study (No more than three credits)

### 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. Three credits. Offered fall and winter semesters.

**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. One to three credits. Offered every semester.

## Modern Languages and Literatures

Chair: Pozzi. Professors: Fernandez-Levin, Rydel, M. Seeger, W. Seeger; Associate Professors: Caillaud, Cata, Pozzi, C. Smith, Wright; Assistant Professors: Al-Mallah, Eick, Fidalgo-Eick, Fox, Fuentes, Gadhoun, Golembeski, Moret, Namaste, Gomez, R. Smith, Vrooman, Watts.

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.

## Modern Languages

### 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. 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.

## Modern Languages

Students with non-college language learning may be able to earn college credit by achieving an appropriate score on an approved national test, such as Advanced Placement (see “Credit by Examination” below).

Native speakers are not eligible to take the placement exam, nor are they eligible to enroll in 100- or 200-level courses, except SPA 203. The students should talk to an advisor in the 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 Learning Resource Center (Laboratory)

The Learning Resource Center offers access to state-of-the-art audio, video, and computer equipment. 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. LRC equipment and software are being constantly updated and expanded. Most audio drill materials can be duplicated for foreign language students’ private use.

### 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 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.

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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.

**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.

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**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 321 Ancient Chinese Culture.** Explores the beautiful and rich lifestyle of ancient China through art, 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 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.

### 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.

**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.



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**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.

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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 C-) or better in 201, or credit, or appropriate placement test score. (World Perspective designation.) 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.

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**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 17<sup>th</sup> and 18<sup>th</sup> 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 19<sup>th</sup> and 20<sup>th</sup> 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 curriculum 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 major. 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

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(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 16<sup>th</sup> 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 17<sup>th</sup> or 18<sup>th</sup> Century.** Course focus alternates. 17<sup>th</sup>: Classical literature in social context. Social mobility, court / city rivalry, the female condition, education, social distinction. 18<sup>th</sup>: 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 19<sup>th</sup> Century.** Study of drama, criticism, poetry, and the novel of the 19<sup>th</sup> 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 20<sup>th</sup> 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, 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 the GER 201 course, including GER 301, GER 302, a 400-level course, and GER 495 (Capstone). They must take at least two Literature courses (selected from

## Modern Languages

GER 303, GER 304, GER 401 or GER 401) at least two Culture and Civilization courses (selected from GER 310, GER 311, or GER 315, and at least one Linguistics courses (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 in addition to the above requirements.

### Requirements for the Minor

Minors must take at least two courses numbered 303, 304, or 401, and at least one course numbered 310, 311, 312 or 315 (Culture and Civilization). Teaching minors are strongly advised to take a linguistics course as well, preferably GER 322.

**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. (World Perspective designation.) 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

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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.

**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 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 102. Recommended courses for students interested in acquiring

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a good background 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).

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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 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



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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. (World Perspectives designation.) 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 semester.

**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.

**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

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cliente. 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 winter semester.

**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

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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.

**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

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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: Giardina; Professors: Giardina, Glass; Associate Professors: Albrecht, Kilbourne, Rowe, Schutten, Scott; Assistant Professors: Bartz, Cerullo, Coe, Hatzel, Munk; Instructors: Newsome, Woods

Degrees offered: B.S. in physical education. Certification: teacher certification K—12 in the physical education major with emphasis A. Secondary-level teachable minor in physical education or school health education is available. B.S. in athletic training.

Accreditation: The athletic training program holds probationary accreditation by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

The Department of Movement Science serves the diverse preprofessional needs of Grand Valley State University students who seek careers in K—12 professional instruction sports pedagogy, fitness/wellness, exercise science, athletic training. 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 goal of the core curriculum in physical education is to provide students with a broad theoretical and conceptual foundation. The curriculum is designed to encourage the examination of the philosophical, historical, psycho-social, scientific, ethical, and legal constructs of the profession. In addition, the curriculum provides the opportunity for majors to complete at least one of four emphasis

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areas within the major: K—12 professional instruction, fitness/wellness, exercise science, and sports pedagogy. The combination of the core curriculum plus one or more areas of emphasis is intended to accommodate the diverse professional preparation needs of our undergraduate students.

### Career Opportunities: Physical Education

The degree in physical education is designed for the preparation of teachers, coaches, fitness/wellness, and exercise science leaders. Career opportunities include positions as teachers (K—12), coaches, intramural directors, recreation leaders, athletic officials, athletic administrators, consultants, camp directors, youth leaders, wellness/fitness leaders and administrators, and personal trainers.

### Major Requirements: 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 catalog.
2. Core curriculum for the major in Physical Education (19 credit hours)

MOV 101 Foundations of Physical Education and Sport	3 credits
PED 102 First Aid	2 credits
MOV 201 Psychosocial Aspects of Physical Education and Sport	3 credits
MOV 300 Kinesiology	3 credits
MOV 309 Measurement and Evaluation	2 credits
MOV 310 Motor Skills Development	3 credits
PED 401 Organization and Administration of Physical Education and Sport (SWS) (capstone)	3 credits
3. Skills development activity courses (five credit hours) selected from PED 120 through 179, one of which must be aquatics. Each skills course must be from a different numerical category.
4. Emphasis areas.

Emphasis areas are designed to allow students to pursue in-depth knowledge in one or more areas, which will provide a specialized focus for their professional preparation. Four emphasis areas are available. At least one must be completed.

#### A. K—12 Professional Instruction (24 credit hours).

Physical education majors selecting emphasis A, K—12 professional instruction, must meet requirements of the College of Education if they intend to pursue teacher certification. PED 306/307 must be taken before teacher assisting. Elementary take ED 330/350 and Secondary take ED 331. Elementary must also attend the content area seminar during teacher assisting. **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:

PED 306 Teaching Physical Education—Elementary*	3 credits
PED 307 Teaching Physical Education—Secondary*	3 credits
PED 301 Methods of Teaching Health Education	3 credits
PED 200 Rhythms and Dance, K—12	3 credits
PED 210 Tumbling and Gymnastics, K—12	3 credits
PED 220 Individual Sports, K—12	3 credits
PED 230 Team Sports, K—12	3 credits
MOV 320 Exercise Testing and Prescription (with MOV 321)	3 credits

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PED 202 is required for PED majors by the College of Education for teacher certification candidates. Emphasis A students must take MOV 321 co-requisite with MOV 320. MOV 321 fulfills one of the five-credit skills development course requirements.

### B. i. Fitness/Wellness (32–35 credit hours).

Physical education majors selecting emphasis B. i., Fitness/Wellness **must** complete the following courses in addition to the core curriculum, B.S. degree cognates, and skills development activity courses:

HS 105 Basic Nutrition	3 credits
CS 150 Introduction to computing	3 credits
PED 206 Conditioning Activity	2 credits
MOV 320 Exercise Testing and Prescription (with MOV 321)	3 credits
MOV 404 Static Human Performance Laboratory	2 credits
MOV/HS 466 Dynamic Human Performance Laboratory	2 credits
SOC 384 Sociology of Drug Use and Abuse	3 credits
PSY 310 Behavior Modification	3 credits
MGT/MKT One Course/Advisors Approval	3 credits

Emphasis B. i., elect three courses from the following:

HS 208/309 Human Anatomy/Lab	4 credits
HS 290/291 Human Physiology/Lab	4 credits
PED 307 Teaching Physical Education—Secondary	3 credits
PED 210 Tumbling and Gymnastics	3 credits
PED 204 Theory and Organization of Intramurals	2 credits
MOV 217 Modern Principles of Athletic Training	3 credits
PSY 366 Stress, Personality, and Perception	3 credits
BIO 325 Human Sexuality	3 credits
REC 307 Recreation for the Aging** or SOC 388 Middle Age and Aging**	3 credits
OSH/HS 110 Introduction to Occupational Safety and Health	3 credits
MGT 331 Concepts of Management	3 credits
MGT 332 Administrative Behavior	3 credits
MKT 350 Marketing Management	3 credits
PA 375 Public Budgeting and Finance	3 credits

Emphasis B. i. students must take the following skills development activity classes toward fulfillment of the five-credit major requirement:

PED 150 or 151 Swimming	1 credit
PED 126 or 127 Conditioning and Flexibility	1 credit
PED 122 Weightlifting	1 credit
MOV 321 Exercise Testing and Prescription Lab (with MOV 320)	1 credit

### B. ii. Exercise Science Emphasis

Graduates from this emphasis will be prepared to follow career opportunities within cardiac rehabilitation and Wellness programs. A clinical internship is normally required before entering such fields but is currently not part of the degree program. Students are encouraged to arrange a clinical internship with their advisors for the semester after completing required coursework.

1. General university degree requirements as identified in the General Academic Policies section of the catalog.
2. Health sciences core requirements:

HS 208 Human Anatomy
HS 212 Introductory Microbiology
HS 213 Laboratory in Microbiology

\*Students may use only one of these two courses to fulfill requirements.

\*\*Capstone course

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HPR 220 Health Care Delivery  
 HS 290 Human Physiology\*  
 HS 291 Laboratory in Human Physiology  
 HS 301 Introduction to Research  
 HS 495 Concepts in Wellness\*\*

### 3. 27 semester credit 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 Health Sciences  
 STA 215 Introductory Applied Statistics\*\*\*

### 4. 18 semester credit hours of emphasis courses to include all of the following:

HS 305 Clinical Nutrition\*\*\*  
 HS 310 Basic Pathophysiology\*\*\*  
 HS 311 Pharmacological Aspects of Health Sciences  
 HS 365 Clinical Exercise Physiology\*\*\*  
 HS 375 Biology of Aging\*\*\*  
 PSY 310 Behavior Modification

### C. Sport Pedagogy (coaching) (24 credit hours).

Majors who select emphasis D, sport pedagogy, must complete the following courses in addition to the core curriculum, B.S. degree cognates, and skills development activity courses.

PED 206 Conditioning Activity	2 credits
PED 217 Modern Principles of Athletic Training	3 credits
PED 218 Officiating Seasonal Sports	2 credits
PED 220 Individual Sports	3 credits
PED 230 Team Sports	3 credits
Psychology Elective	3 credits

Elect 8 credit hours from the following:

PED 250 Baseball Coaching Theory	2 credits
PED 251 Basketball Coaching Theory	2 credits
PED 252 Football Coaching Theory	2 credits
PED 253 Tennis Coaching Theory	2 credits
PED 254 Track and Field, Cross-Country Coaching Theory	2 credits
PED 255 Volleyball Coaching Theory	2 credits
PED 256 Wrestling Coaching Theory	2 credits
PED 257 Swimming and Diving Coaching Theory	2 credits
PED 258 Softball Coaching Theory	2 credits
PED 259 Golf Coaching Theory	2 credits

### 5. Cognate Electives.

Students in certain emphasis areas are required to take selected prerequisites, as follows:

Cognate Elective	Emphasis Area	Credits
PSY 101 Introductory Psychology (GenEd SS/A) Prerequisite for MOV 310.	A B C D	3 credits
HS 202 Anatomy and Physiology Prerequisite for MOV 300 and MOV 304.	A B C D	4 credits

\*Capstone course

\*\*These courses may be substituted with Movement Science courses by advisement with a professor in the Movement Science Department.

\*\*\*BS Cognate course sequence: STA 215; Bio 120; HS 290–291.

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PED 306 is a prerequisite for PED 307 (for emphasis A students only)	A	3 credits
HS 208 Human Anatomy	C	3 credits
HS 309 Human Anatomy Lab Prerequisite for MOV 314.	C	1 credit
PSY 301 Child Development Prerequisite for ED 303, Elementary take ED 330/350 and Secondary take ED 331	A	3 credits
6. B.S. degree cognates: Physical Education Major (10 credit hours).		
MOV 304 Physiology of Activity		3 credits
STA 215 Introductory Applied Statistics (Gen. Ed. CGE/A)		3 credits
HS 202 Anatomy and Physiology (Gen. Ed. NS/B)		4 credits

### 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 are designed so that material mastered in a lower number course is expected to be expanded upon or applied during subsequent courses.

100-level courses are meant to be taken during the freshman year.

200-level courses are meant to be taken during the sophomore year.

300-level courses are meant to be taken during the junior year.

400-level courses are meant to be taken during the junior and senior years.

#### Recommended Sequences:

For the core and cognates

MOV 101 before any/all other PED/MOV courses.

HS 202 before MOV 300, 304, and 320/321.

MOV 300, 304 before MOV 320.

MTH 110 before STA 215.

STA 215 before MOV 309

PSY 101 is recommended before MOV 201

For emphasis A, K—12 Professional Instruction:

PED 200, 210, 220, 230, MOV 309, and 310 before PED 306.

PED 306 before PED 307 (for emphasis A students).

PED 306 and PED 307 before College of Education Teacher Assisting. Elementary take ED 330/350 and Secondary take ED 331. For Student Teaching Elementary take ED 430/480 and Secondary take ED 431.

For emphasis B. i., Fitness/Wellness

MOV 300, 304, 309, 320/321 before MOV 404

MOV 404 before MOV 466

For emphasis C, Sport Pedagogy/Coaching

Follow sequence for Core and Degree Cognates.

#### Minor Requirements: Physical Education (24 credit hours)

Students seeking a teachable minor in physical education **must** complete the following:

MOV 101 Foundations of Physical Education and Sport	3 credits
MOV 201 Psychosocial Aspects of Physical Education and Sport	3 credits
PED 220 Individual Sports	3 credits
PED 230 Team Sports	3 credits



## Movement Science

MOV 300 Kinesiology (Prerequisite: HS 202, General Education NS/B)	3 credits
MOV 304 Physiology of Activity (Prerequisite: HS 202, General Education NS/B)	3 credits

Students seeking a minor in physical education must elect six credit hours from the following courses, in addition to the required courses:

PED 102 First Aid	2 credits
PED 200 Rhythms and Dance, K—12	3 credits
PED 210 Tumbling and Gymnastics, K—12	3 credits
PED 306 Teaching Physical Education—Elementary	3 credits
PED 307 Teaching Physical Education—Secondary	3 credits
MOV 309 Measurement and Evaluation	2 credits
MOV 310 Motor Skills Development	3 credits
MOV 320 Exercise Testing and Prescription (Prerequisites: MOV 300 and 304) (Co-Requisite: MOV 321)	3 credits

## Minor Requirements: School Health Education (30 credit hours)

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:

HS 105 Basic Nutrition	3 credits
HS 202 Anatomy and Physiology	4 credits
HS 222 Introduction to Public Health	3 credits
NUR 220 Self-Health and Wellness	2 credits
BIO 103 Biology of People	4 credits
BIO 325 Human Sexuality	3 credits
or PSY 316 Psychology of Human Intimacy and Sexuality	
SOC 384 Sociology of Drug Use and Abuse	3 credits
PED 102 First Aid	2 credits
PED 301 Methods of Teaching Health Education	3 credits
PEH 299 School Health Education Curriculum and Evaluation	3 credits

## Major Requirements: Athletic Training

Athletic training is an allied health care profession recognized by the American Medical Association (AMA). The certified athletic trainer is a highly educated and skilled professional specializing in the health care of athletes and those engaging in physical activity. In cooperation with physicians and other allied health personnel, the athletic trainer functions as an integral member of the athletic health care team in secondary schools, colleges and universities, sports medicine clinics, professional sports programs and other athletic health care settings including industrial health clinics. Areas of expertise include risk management and injury prevention, acute care of injuries and illness, assessment and evaluation, and rehabilitation of sport injuries.

**Accreditation:** The athletic training program currently holds probationary accreditation status from the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

## Degree Requirements:

Students applying to the Athletic Training program at Grand Valley must follow all general education requirements as defined in this catalog. Transfer students should refer to the Transfer Student Policy at the end of this section.

## Movement Science

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. PED 217\*
2. ATH 210\*
3. MOV 300\*
4. Current First Aid and CPR certification
5. Cumulative GPA of 2.8 or higher
6. One Semester attendance at GVSU

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\*\*
8. Practical test\*\*
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 & Procedures Manual)

### Transfer Student Policy for the Athletic Training Education Program

13. Transfer students seeking to enter the Grand Valley athletic training program must meet with an athletic training curriculum Advisor to discuss possible transfer courses.
14. Transfer students must meet all admission criteria in the Grand Valley catalog.
15. Transfer students must meet all Grand Valley athletic training program prerequisite and admission criteria.
16. 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 National Athletic Trainers' Association Board of Certification (NATABOC) exam upon graduation.

### Coursework:

Athletic Training Majors must complete the following courses in addition to their general education and prerequisite requirements:

- MOV 101 Foundations of Physical Education & Sport 3 credits
- HS 208 Human Anatomy 3 credits
- HS 105 Basic Nutrition 3 credits
- HS 309 Human Anatomy Lab 1 credit
- HS 355 Dissection of Commonly Injured Joints 2 credits

\* Students must receive a B or better in all prerequisite coursework.

\*\* Students must receive a 70percent or higher to qualify for an interview.

## **Movement Science**

ATH 314 Athletic Injury Assessment I 3 credits  
ATH 225 Athletic Training Emergency Care 2 credits  
ATH 220 Athletic Training Clinical I 2 credits  
MOV 304 Exercise Physiology 3 credits  
ATH 315 Athletic Injury Assessment II 3 credits  
ATH 230 Athletic Training Clinical II 2 credits  
MOV 320 Exercise Testing and Prescription 3 credits  
MOV 321 Exercise Testing and Prescription Lab 1 credit  
ATH 316 Therapeutic Exercise 3 credits  
ATH 405 Therapeutic Modalities 3 credits  
ATH 320 Athletic Training Clinical III 2 credits  
ATH 406 Intervention and Referral 3 credits  
ATH 495 Organization and Admin. 3 credits  
MOV 470 Exercise for Special Populations 3 credits  
ATH 330 Athletic Training Clinical IV 2 credits  
ATH 490 Internship in Athletic Training 6–12 credits

### **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 a 2.8 or higher. 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**

CHM 109 Introductory Chemistry 5 credits  
HS 208 Human Anatomy 3 credits  
STA 215 Introductory Applied Statistics 3 credits

## **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**

120 Bowling.  
121 Golf.  
122 Weight Training.  
124 Cycling.  
126 Conditioning and Flexibility—Beginning.  
128 Rock Climbing

### **PED 130–139 Team Sports.**

130 Volleyball.  
131 Basketball.  
132 Lacrosse.  
133 Softball.

### **PED 140–149 Racquet Sports.**

140 Beginning Racquetball.  
141 Intermediate—Advanced Racquetball.  
142 Beginning Tennis.

## Movement Science

143 Intermediate—Advanced Tennis.

144 Badminton.

### **PED 150-159 Aquatics**

150 Beginning Swimming.

151 Intermediate—Advanced Swimming.

### **PED 160-169 Dance**

160 Beginning Jazz.

161 Intermediate—Advanced Jazz.

162 Beginning Tap.

163 Intermediate—Advanced Tap.

164 Beginning Modern Dance.

165 Intermediate—Advanced Modern Dance.

166 Beginning Ballet.

167 Intermediate—Advanced Ballet.

168 Aerobic Dance Exercise.

169 Folk, Square, and Social Dance.

### **PED 170-179 Combatives**

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. Activities will vary year-to-year.

### **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.

**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.

**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.

**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.

**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.

**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.

**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.

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**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.

**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.

**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.

**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.

**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.

**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.

**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. Three credits.

**MOV 180, 280, 380, 480 Selected Topics.** Lecture, discussion, laboratory, or field study on a topic related to Movement Science. One to three credits. Offered on demand.

**MOV 201 Psycho-social Aspects of Physical Education and Sport.** A study of the psychosocial and cultural context of sports and physical education. The role of education and other institutional social and cultural forces that are integral to the sporting milieu, the psychological and behavioral factors that influence the sport setting, and participation will be studied. Prerequisite: 101. Three 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. Prerequisite: Health Sciences 202. (2-1-0). 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. Prerequisite: Health Sciences 202 or equivalent. (2-1-0). 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. Prerequisite: PSY 101. Three credits. Offered fall and winter semesters; summer on demand.

**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. Co-requisite: MOV 321.

**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.

**MOV 399 Independent Readings.** Special studies in movement science upon consultation with faculty advisor and approval of department chair. One to three credits.

**MOV 404 Static Human Performance Lab.** Laboratory investigation of human performance capacities using modern techniques of measurement for static assessment of anthropometric, physiological, pulmonary, cardiovascular, metabolic, and physical parameters. Prerequisite: 304 or HS 365. Two credits.

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**MOV/HS 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. Prerequisites: STA 215, MOV 309, 404, or HS 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 is studied. Special populations include youth, elderly, pregnant, pulmonary disease, vascular disease and musculoskeletal disorders. Prerequisite: MOV 320/321.

**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 180, 280, 480 Selected Topics.** Lecture, discussion, laboratory, or field study on a topic related to Physical Education. One to three credits. Offered on demand.

**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 the handicapped person, recreation for the handicapped. (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. Prerequisite: Swimming proficiency. (2-1-0). 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). 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 sports skills and techniques for teaching those skills in the K—12 physical education curriculum and in the coaching of youth sport and athletics participants. Three credits.

**PED 230 Team Sports.** Technique and procedures for teaching and coaching soccer, speedball, team handball, and other selected team sports. 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 per course.

## Movement Science

- 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 301 Methods of Teaching Health Education.** This course deals with 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 an understanding of the role of movement education and physical education in the elementary school curriculum, plus the skills needed to design and implement learning experiences. (2-1-0). Three credits.

**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. Prerequisite: COM 201. (2-1-0). Three credits.

**PED 307 Teaching Physical Education—Secondary.** Theory and practice of basic teaching methodology for the physical educator. Emphasis on problem solving and traditional approaches to learning. Unit planning, daily lesson plans, teaching aids, and materials for the physical education program. Must be taken before assistant teaching. Prerequisites: PED 306 and COM 201. (2-1-0). Three credits.

**PED 315 Sport: Psychosocial Aspects.** One of six courses in the Sport and Life General Education Theme. 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. (2-0-0). Two credits. Co-requisite: Student selects a Movement Science Department PED 100-level individual sport or team sport activity course.

**PED 380 Special Topics in Physical Education.** Study of special problems in physical education upon consultation with advisor and approval of department chair. One to three credits. Offered on demand.

**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 development, scheduling, supervision, public relations, policies and procedures, guidelines, evaluations, time management, safety, and ethics. SWS course. (2-1-0). 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.

## Music (MUS)

Chair: Schuster-Craig. Distinguished Professor: Jenson; Professors: Schuster-Craig, Vanden Wyngaard. Associate Professors: Campbell, Copenhaver, Ellenberger, Feurzeig, Lee, Marlais, Martin, Norris, Pool, Stoelzel Marlais, Reichert, Schriemer; Assistant Professors: Mahave-Veglia, Stieler, Tutt.

In addition to the full-time faculty, 30 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, Bachelor of Music, and Bachelor of Music Education degrees, as well as the B.A. with a major in dance. These degree programs present professional training in music in the context of a broad liberal education. They provide courses of study for gifted students who are interested in performance, composition, music technology, jazz studies, preparing for advanced study in graduate school, and vocal and instrumental music education, for those who seek careers in elementary and secondary school teaching. Additionally, in the tradition of liberal education, the department is committed to providing the experience of music for students in all departments and to serving the university community by providing appropriate musical support for all facets of academic life.

Grand Valley State University is an accredited institutional member of the National Association of Schools of Music.

### Career Opportunities

Music provides many career opportunities—from playing in a symphony orchestra to becoming a recording studio musician, from teaching privately or in a college to being a band leader or an organist and church choir director. For the talented and versatile music educator, there are many opportunities to teach music in public and private schools.

In addition to careers in performance and teaching, there are numerous other challenging opportunities that demand thorough music training. These include being a music therapist, copyist, conductor, performance manager, composer, arranger, librarian, journalist, church musician, instrument repair person, studio musician, or fine arts broadcaster. Persons who combine training in music with one of the other arts, such as theatre, dance, or communications, are prepared for still other career possibilities.

### Admission

In addition to the formal admission to Grand Valley, each applicant wanting to major or minor in music is required to arrange for a personal audition with the Music Department. When considerable geographical distance or extreme hardship prevents a personal audition, the applicant may, with the permission of the department, submit a tape recording of an appropriate performance. Arrangements for auditions may be completed only after the applicant has been admitted to Grand Valley. Audition appointments should be made at least 10 days in advance. Entering freshmen and transfer students will be required to take a theory placement exam and a keyboard placement exam.

In addition to completion of a successful audition prior to admission, a second screening occurs before admission to upper-division courses. This evaluation



## Music

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 below, all music majors must fulfill the department recital and Music Major Seminar attendance requirements, fulfill the keyboard musicianship requirements, and perform one or two faculty-approved recitals, as appropriate to the degree program selected. Music majors and minors should consult the Music Department **Student Handbook** for additional information and helpful suggestions.

Transfer students are required to complete a minimum of 30 hours at Grand Valley, which includes at least eight hours in applied music, three hours in major ensembles, and nine additional hours in music to be determined by the advisor. Any exceptions to these requirements are left to the discretion of the Music Department.

#### Bachelor of Arts

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 50 credit hours in music, planned with the approval of a faculty advisor in the department. Course requirements are as follows:

Music Theory and Ear Training (19 hours): 130, 131, 133, 134, 230, 231, 233, 234, 495

Music Literature and History (8 hours): 119, 120, 306, and one course from 302–305

Keyboard Musicianship\* (0–4 hours): 263, 264, 283; 284 (voice majors only)

Major Ensembles (7 hours) to be selected according to major instrument: 101, 102, 103, 107, 112, 117

Applied Music (14 hours): 141, 142, 241, 242, 341, 342, 441

Half Recital (0 hours)

Conducting (2 hours): Music 320

Foreign Language (12 hours)

Electives (18–22 hours)

#### Bachelor of Music

The B.M. is designed for students who demonstrate exceptional preparation for college-level applied music and for whom graduate school is a realistic goal. Instruction in guitar, organ, piano, voice, and band and orchestral instruments is normally available. 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:

##### ***Bachelor of Music (84–90 hours)***

Music Theory and Ear Training (22 hours): 130, 131, 133, 134, 230, 231, 233, 234, 495, and one course from 330–338.

\*Contingent on placement exam and major instrument.

## Music

Music Literature and History (8 hours): 119, 120, 306, and one course from 302–305  
Keyboard Musicianship\*\* (0–4 hours): 263, 264, 283; 284 (voice majors only)  
Conducting (2 hours): 320  
Music Technology (1 hour): 181  
Major Ensembles (7 hours), to be selected according to major instrument: 101, 102, 103, 107, 112, 117  
Applied Music (32 hours): 144, 145, 244, 245, 344, 345, 444, 445  
Other Applied (2 hours)—may be fulfilled with Keyboard Musicianship courses and recital credits  
Pedagogy and Literature:  
Piano Majors (8 hours)—310, 361, 371  
Voice Majors (6 hours)—313, 358, 359  
All others (4 hours): 499 (independent study with applied or other instructor)  
Music Electives: 6 hours  
Half Recital and Full Senior Recital (0 hours or may be taken for credit under “other applied”)  
Additional requirements:  
Foreign Language for Voice Majors (8 hours): two courses in differing languages  
Bachelor of Music — Jazz Studies.  
Music Theory and Ear Training (25 hours): 130, 131, 230, 231, 133, 134, 233, 234, 337, 339, 495.  
Music Literature and History (9 hours): 119, 120, 219, and one course from 302–306.  
Keyboard Musicianship (0–3 hours): 263, 264, 283.  
Conducting (2 hours): 320  
Music Technology (1 hour): 181  
Major Ensembles (12 hours): 6 chosen from 101, 102, 103, 107, 112, 117; 6 hours chosen from 105, 106  
Applied Music (26 hours): 141/141 Jazz, 142/142 Jazz; 246, 247, 346, 347, 446, 447.  
Pedagogy (2 hours): 374  
Music electives (6 hours): CBR 281, 382, 485 may be substituted for music electives)  
Half Recital and Full Senior Recital

### **Bachelor of Music Education**

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:

#### ***Bachelor of Music Education (68–80 hours)***

Music Theory and Ear Training (22 hours): 130, 131, 133, 134, 230, 231, 233, 234, 495, and one course from 330–338.  
Music Literature and History (8 hours): 119, 120, 306, and one course from 302–305  
Keyboard Musicianship\* (0–4 hours): 263, 264, 283; 284 (voice majors only)  
Music Technology (1 hour): 181

\*\*Piano majors are exempt from this requirement

\*Piano majors are exempt from this requirement

## Music

Major Ensembles (7 hours): to be selected according to major instrument: 101, 102, 103, 107, 112, 117 (Instrumental Emphasis students *must* complete two hours of MUS 107, Marching Band)

Applied Music (14 hours): 141, 142, 241, 242, 341, 342, 441

Half Recital (0 hours)

Conducting and Repertory (6 hours):

Instrumental Emphasis: 221, 320, 321

Vocal/Choral Emphasis: 222, 320, 322

Music Education (6 hours):

Instrumental Emphasis: 456, 461, 362

Vocal/Choral Emphasis: 354, 456, 465

Secondary Instruments (4–12 hours):

Instrumental Emphasis (8 hours)—250, 253, 254, 255, 256, 257, 258, 259

Vocal/Choral Emphasis with voice as major instrument (4 hours): 253, 255, 257, 258

Vocal/Choral Emphasis with piano as major instrument (10–12 hours): 253, 255, 257, 258; 250, 251(Class Voice) and 141, 142 (2 semesters of applied voice) OR 141, 142, 241, 242 (4 semesters of applied voice)

Additional requirements:

Professional Education (39 hours): ED 205, PSY 301, 325; ED 200, 225, 310, 321, 331, 431

Sample curricula for all degree programs can be found in the Music Department Handbook.

## Music Minors

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 selection from the following should be made: Music 465 (for secondary choral emphasis) or Music 456 and 461 (for elementary or secondary instrumental emphasis respectively). 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.

Music requirements in the M.Ed. are:

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 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. Three credits. Offered fall and winter semesters.

**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. Two credits. Offered fall semester.

**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. Prerequisite: 119. Two credits. Offered winter semester.

**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. Co-requisite: 133. Three credits. Offered fall semester.

**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. Prerequisite: 130 or permission of instructor. Co-requisite: 134. Three credits. Offered winter semester.

**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. Co-requisite: 130. One credit. Offered fall semester.

**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. Prerequisite: 133 or permission of instructor. Co-requisite: 131. One credit. Offered winter semester.

**MUS 180 Arts at Noon.** An exploration of theatre, dance, and musical arts through lectures and attendance of professional performances. One credit. Offered fall and winter semesters.

**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. Prerequisite: Music 131. One credit. Offered fall and winter semesters.

**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. Prerequisite: 100 or 120 or permission of instructor. Three credits. Offered fall semester.

**MUS 221 Instrumental Repertory.** Survey of solo and small and large ensemble instrumental music for use in the schools. Required of all B.M.E. instrumental majors in the sophomore year. One credit. Offered winter semester.

**MUS 222 Choral Repertory.** Survey of vocal ensemble literature for use in the secondary schools. Required of all B.M.E. vocal/choral majors during the sophomore year. One credit. Offered winter semester.

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**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. Prerequisite: 131. Three credits. Offered fall semester.

**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. Prerequisite: 230. Three credits. Offered winter semester.

**MUS 233 Aural Perception and Sight-Singing III.** Further development of musicianship using rhythmic and melodic dictation and singing using ties and chromaticism and modulation, harmonic dictation using secondary harmonies, two-part bicinia for sing-and-play exercises. Improvisation using typical jazz progressions. Interval singing, critical listening with four-voice examples. Required of music majors. Prerequisites: 133 and 134 with grade of C or better. One credit. Offered fall semester.

**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. Prerequisite: 233 with grade of C or better. Co-requisite: 231. One credit. Offered winter semester.

**MUS 236 Accompanying and Sight-Reading.** A skill-development course for pianists covering vocal and instrumental accompaniments. Prerequisite: Piano 142 or permission of instructor. Two credits. Offered fall semester.

**MUS 263 Keyboard Musicianship I.** Introductory keyboard skills, scales, chords, easy pieces, transpositions, improvisations, basic theory at the keyboard. Prerequisite or co-requisite: 130. One credit. Offered fall and winter semesters.

**MUS 264 Keyboard Musicianship II.** A continuation of MUS 263. Prerequisite: 263 or permission of instructor. One credit. Offered fall and winter semesters.

**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. Prerequisites: 129 or concurrent enrollment in 130. Three credits. Offered fall semester.

**MUS 282 Introduction to Music Technology II.** A continuation of MUS281. 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. Prerequisite: 281. Three credits. Offered winter semester.

**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. Prerequisite: 264. One credit. Offered fall and winter semesters.

**MUS 284 Keyboard Musicianship IV.** A continuation of MUS 283. Required of all music majors whose primary instrument is voice. Prerequisite: 283 or permission of instructor. One credit. Offered fall and winter semesters.

**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. Prerequisite: 131 or permission of instructor. Interview with the instructor required before registering for this seminar. Any level may be repeated for credit. Three credits. Offered fall and winter semesters.

**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. Offered fall semester. 3 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. Prerequisite: 120. Two credits. Offered fall semester on sufficient demand of odd-numbered years.

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**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. Prerequisite: 120. Two credits. Offered fall semester on sufficient demand of even-numbered years.

**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. Prerequisite: 120. Two credits. Offered winter semester of even-numbered years.

**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. Prerequisite: 120. Two credits. Offered winter semester of odd-numbered years.

**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. Prerequisite: 120. Two credits. Offered fall semester.

**MUS 310 Piano Literature.** A study of music written for the keyboard from the Renaissance to the present time. Prerequisite: 242 Piano. Two credits. Offered on sufficient demand.

**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. Prerequisite: Permission of instructor. Two credits. Offered on sufficient demand.

**MUS 320 Introduction to Conducting.** Fundamentals of baton technique: laboratory experience in conducting, choral and instrumental works, cuing, score reading, and terminology. Prerequisite: Permission of department. Two credits. Offered fall semester.

**MUS 321 Instrumental Conducting.** Continuation of 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. Prerequisites: 221 and 320. Three credits. Offered winter semester.

**MUS 322 Choral Conducting.** Continuation of 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. Prerequisites: 222 and 320. Three credits. Offered winter semester.

**MUS 330 Instrumentation/Orchestration.** A practical course in the arrangement of music for instruments of the orchestra and band as well as vocal scoring. Prerequisite: 231. Three credits. Offered fall semester every other year.

**MUS 335 Modal Counterpoint.** Study and composition based on sixteenth-century contrapuntal practices. Prerequisite: 231. Three credits. Offered fall semester alternate years.

**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. Prerequisite: 231 or permission of instructor. Two credits. Offered once a year.

**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. Prerequisite: MUS 337. Three credits. Offered winter semester alternate years.

**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. Three credits. Offered winter semester.

**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. Prerequisites: 242 or 245. **Required of all B.M.E. vocal/choral students.** Two credits. Offered fall semester.

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**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. Prerequisite: Permission of instructor. One credit. Offered every semester.

**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. Two credits. Offered on sufficient demand.

**MUS 359 Diction for Singers.** Develops a basis for proper pronunciation and understanding of foreign language songs. Prerequisite: FRE 101 and GER 101. Two credits. Offered fall semester.

**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. Prerequisite: Piano 242 or 245. Three credits. Offered fall semester.

**MUS 362 Marching Band Techniques.** Designed to acquaint B.M.E. majors with all aspects of today's marching band. Prerequisites: Keyboard and notation skills helpful. Two credits. Offered every other year.

**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. Does not count as required upper-level theory course. Two credits. Offered every other year.

**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. Prerequisite: 361. Three credits. Offered winter semester.

**MUS 374 Jazz Pedagogy.** A study of strategies for use in teaching jazz. Required of B.M. students in the jazz performance track. Prerequisite: 337. Two credits. Offered fall semester.

**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 381 Composition with Electronic Media I.** A study of formal and design problems in composing for computers and interactive musical systems. Prerequisite: 282. Three credits. Offered fall semester.

**MUS 382 Composition with Electronic Media II.** A continuation of MUS 381. A more advanced, aesthetically pointed study of compositional issues involving computers and electronic media. Prerequisite: 381. Three credits. Offered winter semester.

**MUS 390 Composition Seminar.** Continuation of 290. Interview with instructor required before registering. May be repeated for credit. Three credits. Offered fall and winter semesters.

**MUS 399 Special Readings in Music.** Independent study in problems of music and music education. To be arranged with the instructor. One to four credits. Offered fall and winter semesters.

**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. Two credits. Offered fall semester.

**MUS 460 Composition Seminar.** Continuation of 390. Interview with instructor required before registering. May be repeated for credit. Three credits. Offered fall and winter semesters.

**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. Two credits. Offered winter semester.

**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.

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Restricted to music majors and to vocal minors who want a music teaching minor for secondary certification; open to others by special permission only. Two credits. Offered winter semester.

**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. One to four credits. Offered fall and winter semesters.

### Graduate Courses

**Music 621 Advanced Instrumental Conducting and Literature.** Intensive study of problems and techniques of band conducting; survey of literature for the concert band. Three credits. Offered summer semester of even years.

**Music 622 Advanced Choral Conducting and Literature.** Intensive study of problems and techniques of choral conducting; survey of choral literature. Three credits. Offered summer semester of odd years.

**Music 643 Applied Music.** Private instruction on one's principal performing instrument. Three credits. Offered fall and winter semester.

**Music 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. Three credits. Offered winter semester of even years.

**Music 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. Three credits. Offered summer semester of odd years.

**Music 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. Three credits. Offered summer semester of even years.

**Music 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.

**Music 680 Special Topics in Music.** Specialized topics ranging from specific genres of music to specific pedagogical issues in teaching. Offered on demand.

### Class Instruction in Voice and Instruments

The classes listed below are designed to provide teaching and performance skills in the medium indicated.

**MUS 250, 251 Class Voice.** One credit each. Offered winter semester.

**MUS 253 Single Reeds.** One credit. Offered fall semester.

**MUS 254 Double Reeds and Flute.** One credit. Offered winter semester.

**MUS 255 High Brass.** One credit. Offered fall semester.

**MUS 256 Low Brass.** One credit. Offered winter semester.

**MUS 257 Class Percussion.** One credit. Offered winter semester.

**MUS 258 High Strings.** One credit. Offered fall semester.

**MUS 259 Low Strings.** One credit. Offered winter semester.

**MUS 260, 261 Guitar Class.**



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### Private Instruction in Voice and Instruments

**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. Two non-graduation credits.

The numbers below indicate half-hour lessons and are offered for two hours credit per semester.

141, 142 Freshman  
241, 242 Sophomore  
341, 342 Junior  
441, 442 Senior

The numbers below indicate one-hour lessons and are offered for four hours credit per semester. Hour lessons are restricted to students admitted to the B.M. program or permission of the faculty.

144, 145 Freshman  
244, 245 Sophomore  
344, 345 Junior  
444, 445 Senior

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.

The numbers below indicate one-hour lessons, and are offered for three hours credit semester. Registration in these applied music courses is limited to those students who have been admitted to the B.M. in Jazz Performance.

246, 247 Sophomore  
346, 347 Junior  
446, 447 Senior

There is no special instructional fee for applied music. 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.

Students in applied music are expected to play a jury at the end of each semester of study.

**MUS 343 Half Recital.** Preparation for half recital. Prerequisite: Permission of instructor. One credit.

**MUS 443 Full Recital.** Preparation for full recital. Prerequisite: Permission of instructor. Two credits.

### Recital Requirement

Students pursuing a B.M. degree must give a partial recital in their junior year and a full recital in their senior year. Students pursuing a B.A. or B.M.E. degree are required to give a partial recital during their senior year. Recitals, which must be approved by the music faculty, must be given in the student's major performance medium and may not be scheduled during any term in which a student is doing student teaching.

### Piano Proficiency Requirement

Because functional piano is so important in music, a basic proficiency level is required. All instrumental majors, regardless of degree program (B.A., B.M., B.M.E.), must complete third semester Keyboard Musicianship (MUS 283) to fulfill their piano proficiency requirement. All vocal majors, regardless of degree program (B.A., B.M., B.M.E.), must complete fourth semester Keyboard Musicianship (MUS

## Music

284). All music minors must complete second semester Keyboard Musicianship (MUS 264).

### Music Ensembles

Music ensembles at Grand Valley provide a wide range of experience, from symphony to opera to jazz and include the university bands, choirs and orchestra, chamber music, and various jazz groups.

All music ensembles are open to qualified performers across the campus. Traditionally, students majoring in other disciplines have considered these performance activities important to their college careers.

**MUS 101 Grand Valley Singers.\*** The principal university choir. Prerequisite: Successful audition and permission of instructor. One credit.

**MUS 102 Grand Valley Concert Band.\*** Offered winter semester. One credit.

**MUS 103 Grand Valley Symphony Orchestra.\*** 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. Co-requisite: 101, 102, 103, or 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. Prerequisite: Successful audition at band camp. Offered fall semester only. 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. Prerequisites: Audition and permission of instructor. One credit. Offered winter semester.

**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. 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.

**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.

\*Fulfills degree requirements for major ensemble participation.

## Natural Resources Management

**MUS 117 Grand Valley University Arts Chorale.**\*Forty-voice SATB ensemble performing choral masterpieces from the Renaissance through the twentieth century. 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.

## Natural Resources Management (NRM)

Chair: Menon. Professor: Northup; Associate Professors: Griffin, MacDonald, Menon; Assistant Professors: Rueth, Thomasma.

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 be able to deal with issues related to balancing the use and production of commodities such as soils, water, timber, rangeland, and minerals with the less tangible values of scenery, air and water quality, recreation, wildlife, and social well-being. Graduates will realize the importance of being responsive and alert to the changing needs of a dynamic society, yet sensitive to environmental quality problems.

The Natural Resources Management 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 topics of current concern, ranging from the means of predicting and increasing ecosystem productivity to the utilization of wetlands for wastewater polishing. Select project opportunities are available.

### Requirements for a Major

Natural resources management majors must fulfill the requirements below. Emphases are optional.

1. General university degree requirements as identified in the General Academic Policies section of the catalog.
2. Completion of B.S. degree cognates, including MTH 122, NRM 320, and BIO 460.
3. Completion of 33 additional hours of NRM courses, including NRM 150 and 495 (capstone).

\*Fulfills degree requirements for major ensemble participation.

## Natural Resources Management

4. Completion of natural resources management cognate courses (24 credits):
  - 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. Thirteen additional semester hours of cognates selected from BIO 222 and above, CHM 116 and above, CS 150 and above, GEO 112 and above, MTH 123 and above, GPY 307 or 407, STA 216 and above. Other courses must be selected in consultation with and approved by the student's faculty advisor.

### Sample Curriculum

#### First Year

NRM 150 Introduction to Natural Resources  
MTH 110 Algebra  
MTH 122 College Algebra  
WRT 150 Strategies in Writing  
BIO 120 General Biology I  
BIO 121 General Biology II  
CHM 109 Introductory Chemistry  
or CHM 115\* Principles of Chemistry I  
General education courses

#### Second Year

NRM 250 Resource Measurement  
and Maps  
NRM 281 Principles of Soil Science  
NRM 350 Aerial Photography and Remote  
Sensing of the Environment  
BIO 215 General Ecology  
STA 215 Introductory Applied Statistics  
GEO 111 Physical Geology  
General education courses

#### Third Year

NRM 320 Introduction to Resource Systems  
NRM 451 Resource Management Policy  
NRM 452 Watershed and Wetland  
Management  
BIO 460 Productivity of Ecosystems  
NRM 462 Forest Ecosystem Management  
General education courses  
Cognate courses  
Elective

#### Fourth Year

NRM 494 Senior Seminar  
NRM 495 Trends in Resource  
Management (capstone)  
NRM 481 Soils and Soil  
Classification  
NRM 484 Land Reclamation  
or NRM 486 Soils and Landforms  
Analysis  
Electives  
Cognate courses

#### Emphases (optional):

1. Ecosystem Science and Management:  
This emphasis is designed for students interested in a career in the traditional biological and ecological areas of natural resources management. These courses will prepare students for entry-level professional positions, graduate study, and community involvement in areas such as forestry, fisheries, wildlife, soil conservation, watershed management, and related natural resources fields. The emphasis retains flexibility so students also can build complementary strengths in aquatics, wildlife, soils, or resource policy, or develop additional skills in spatial or quantitative methods. In order to complete the requirements for this optional emphasis, students must select NRM 250, 281, 350, 452, and 462 as part of their hours of NRM electives (see #3 under Requirements for a Major)

\*Only students who plan to take additional chemistry courses as cognates should take CHM 115.

## Natural Resources Management

and BIO 333, 362, and 408 as part of their cognate electives (see #5 under Requirements for a Major). Completion of this emphasis does not require any credits in addition to those required for the general NRM degree program.

### 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 graduate studies and careers in field or laboratory science, 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 115 and 116 (CHM 109 does not count for the emphasis); NRM 250, 281, 330, 451, and 452; and at least eight credits from BIO 338, 357, 440, 450, 470; CHM 221, 222, 231, 232, 321, 322; GPY 307; GEO 112, 320, 430, 440, 445; OSH 414; and PHY 200. 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 BS 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 NRM 250, NRM 350, NRM 395, CS 150 or 160, CS 231, CS 233, and GPY 307. 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 BS 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 NRM 150 and 10 hours of 300 and 400-level courses and no more than three credits of 490 and 499.

## Master of Science in Biology

### Natural Resources Emphasis

Corresponding to the existing undergraduate degree program in Natural Resources Management, the Master of Science in Biology includes an optional

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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.

For a detailed description of the Master of Science in Biology see the biology section.

### 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 Physical Sciences Foundation. (3-0-2). Four credits. Offered fall and winter semesters.

**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). Three credits. Offered fall and winter semesters.

**NRM 180 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 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. Prerequisite: One course in natural science. (3-0-2). 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). Four credits. Offered fall semester.

**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. Prerequisites: High school chemistry or CHM 109 and GEO 111. (3-0-3). Four credits. Offered fall semester.

**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. Prerequisite: BIO 215 and MTH 122. (2-0-3). Three credits. Offered winter semester.

**NRM 330 Environmental Pollution.** Investigation of causes and effects of water, soil and air pollution. Prevention and management of pollution will be discussed and examined from natural and social science perspectives. Design of impact assessment studies, data interpretation and laboratory methods. Topics may include waste disposal, acid deposition, climate change, toxicology, and risk assessment. Prerequisites: CHM 109 or 116; BIO 215 (recommended). (2-0-3). Three credits. Offered winter semester.

**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. Prerequisite: NRM 250, GEO 111, or permission of the instructor. (2-0-4). Four credits. Offered winter semester.

**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

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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. Prerequisites: GPY 307 and NRM 250 or permission of instructor. (2-0-3). Offered winter semesters.

**NRM 399 Readings in Resource Management.** Independent readings on selected topics. Credit and topic must be arranged with the appropriate staff member before registering. One to three credits (no more than three credits can be applied to the major, none to the minor). Offered every semester.

**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. Prerequisites: Junior standing and completion of the General Education Life Science requirement. Three credits. Offered fall semester.

**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. Prerequisite: Junior standing. (4-0-0). Four credits. Offered fall and winter semesters.

**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. Prerequisites: GEO 111, MTH 122 or 125, NRM 281. (3-0-3). Four credits. Offered fall semester.

**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. Prerequisites: BIO 215 and junior or senior standing in biology or natural resources management, or permission of instructor. (3-0-3). Four credits. Offered winter semester.

**NRM 480 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 481 Soilscape and Soil Classification.** Processes of soil formation, the occurrence of soils of the landscape, and soil classification. Prerequisite: NRM 281. (3-0-3). Four credits. Offered fall semester.

**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. Prerequisites: NRM 281 and BIO 215. (3-0-3). Four credits. Offered winter semester.

**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. Prerequisite: Junior or senior status in resource management. Offered each semester. One to five credits (no more than five credits in 490 and 499 can be applied to the major; three to the minor).

**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. Prerequisites: Completion of 20 credits in NRM, STA 215. (0-4-0). Four credits. Offered winter semesters.

**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. Prerequisite: Junior or senior status in resource management. One to three credits. Limits:

## Nursing

Three credits toward major or minor; five credits of NRM 490 plus NRM 499 toward major or three toward minor.

**NRM 540 Weather and Climate.** This course is for certified teachers who wish to investigate the underlying causes of changes in weather and climate. Concepts include composition and physical behavior of the atmosphere, patterns, measurement, the water cycle, severe weather, and changes over time. Tools include direct observation, instruments, maps, graphs, computers, and satellite images. Prerequisites: teacher certification. (2-0-3). Three credits. Offered fall semesters of odd-numbered years.

**NRM 580 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 680 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 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. Prerequisites: BIO 610 and successful completion of qualifying exams. Three, six, or nine credits. Offered each semester.

**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. Prerequisites: BIO 610 and successful completion of qualifying exams. Three, six, or nine credits. Offered each semester.

**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. Prerequisites: BIO 610 and successful completion of qualifying exams. Three, six, or nine credits. Offered each semester.

**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. Prerequisites: Permission of the student's graduate committee chair, instructor, and department chair. One, two, or three credits. Offered each semester.

## The Kirkhof College of Nursing (NUR)

Dean: Gendler. Professors: Grinstead, Kline, Nagelkerk; Associate Professors: Bostrom, Coviak, Droste-Bielak, Leder, Martin, Schafer, Schoofs, Scott; Assistant Professors: Bambini, Bosold, Brintnall, Britton, Earl, Jensen, Jewell, Pearson-Slaikeu, Reick, Ryan, Steele, VanderWerf, Veltman, Wietor; Learning Laboratory Coordinator: Perkins; Student Support Services: Baker-Clark, Cope, 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,



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and RN to BSN entry points. Admission to the undergraduate nursing major is selective and highly competitive.

Degrees offered: Bachelor of Science in Nursing, B.S.N.; B.S.N. completion with an option for a B.S.N./M.S.N. articulated program for Registered Nurses and an M.S.N. option for Registered Nurses with degrees in other disciplines; a B.S.N. with a B.S.N./M.S.N. articulated option for students with degrees in other disciplines; Master of Science in Nursing, M.S.N.; 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 Kirkhof College of Nursing's primary mission is to provide quality nursing education to a diverse population of students. KCON strives to improve the well being of people through leadership in professional practice and research. Core values of the faculty include educational excellence, student-focused learning, global health, interdisciplinary collaboration, and research to support practice.

#### 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 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.

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### 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 this 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, managers 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. [provider 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 Nursing 315.

1. Health and immunization reports.
2. Certification in cardiopulmonary resuscitation for health professionals(CPR).
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 (N-CLEX). 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.

## 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 26. To continue as a nursing major a student must maintain a minimum 2.8 grade point average prior to entry into the first clinical course (NUR 315). See sample curriculum below.

### Freshman Prenursing Majors

Students who are admitted to the university but do not immediately qualify for direct admission to the nursing major enroll as prenursing majors and must complete a secondary application. 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. 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 and winter admission and November 1 for spring /summer admission. The number of students admitted to the nursing curriculum depends on the availability of clinical positions, which vary from semester to semester.

Procedures for admission to the nursing major are available on our Web site at [www.gvsu.edu/kson/index.cfm](http://www.gvsu.edu/kson/index.cfm). Select "application process" from the index.

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 Summer/Spring 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 Nursing 315.

1. Health and immunization reports.
2. Certification in cardiopulmonary resuscitation for health professionals (CPR).
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 co-requisite courses are designed for students to take at a time that complements the nursing clinical courses. All courses listed below must be completed with a minimum of C (2.0). Continued progression through the nursing major requires a minimum of C (2.0) in co-requisite courses.

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### Prerequisite courses:

BIO 120 General Biology II  
CHM 109 Intro. Chemistry  
CHM 231 Intro. Organic Chemistry  
HS 213 Laboratory in Microbiology  
HS 291 Human Physiology Lab  
HS 309 Laboratory in Human Anatomy  
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  
CHM 232 Biological Chemistry  
HS 208 Human Anatomy  
HS 212 Introductory Microbiology  
HS 290 Human Physiology  
PSY 364 Life Span Dev. Psychology

### Co-requisites

HS 305 Clinical Nutrition  
HS 310 Basic Pathophysiology  
HS 311 Pharmacological Aspects of Health Science  
STA 215 Intro. Applied Statistics  
WRT 305 Writing in the Discipline

## 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 pre-nursing 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:

- 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 summer/spring 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 Nursing 315.

1. Health and immunization reports.
2. Certification in cardiopulmonary resuscitation for health professionals (CPR).
3. Health insurance.
4. Students must have their own transportation for clinical experiences.

## Sample curriculum

First Semester	Credits	Second Semester	Credits
*BIO 120 General Biology (FC/Life Sci)	4	*CHM 231 Intro to Organic Chemistry	4
*CHM 109 Introductory Chemistry (FC/Phy Sci)	5	*WRT 150 English (BSK)	4
*MTH 110 Algebra (BSK) (P)	4	**HS 208 Human Anatomy	3
*PSY 101 Introductory Psychology (FC/SS)	3	*NUR 120 Explorations in Nursing	2
	<hr/>		<hr/>
	16		13

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<b>Third Semester</b>		<b>Fourth Semester</b>	
**CHM 232 Biological Chemistry	4	**HS 212 Introductory Microbiology	3
**HS 290 Human Physiology	3	*HS 213 Microbiology Lab	1
*HS 291 Human Physiology Laboratory	1	**BIO 355 Human Genetics	3
**PSY 364 Developmental Psychology (theme)	3	*HS 309 Laboratory in Human Anatomy	1
General Education (FC/Arts)	3	*NUR 220 Self-Health and Wellness	2
General Education (FC/SS)	3	General Education (FC/Philosophy or Lit)	3
	17		13
<b>Fifth Semester</b>		<b>Sixth Semester</b>	
NUR 315 Health Assessment?	3	NUR 320 Theoretical Nursing I	3
*WRT 305 Writing in the Disciplines (BSK) (P)	3	NUR 321 Clinical Lab I	4
*HS 310 Basic Pathophysiology	3	*HS 311 Pharmacology	3
*HS 305 Clinical Nutrition	3	*STA 215 Statistics (FC/Mth)	3
General Education (C/Hst)	3	General Education (US Diversity)	3
	15		16
<b>Seventh Semester</b>		<b>Eighth Semester</b>	
NUR 350 Theoretical Nursing II	4	NUR 420 Theoretical Nursing III (SWS)	4
NUR 351 Clinical Lab II	7	NUR 421 Clinical Lab III	6
NUR 435 Research Applications	2	General Education (Theme)	3
General Education course (World Persp)	3		13
	16		
<b>Ninth Semester</b>			
NUR 450 Theoretical Nursing IV	4		
NUR 451 Clinical Lab IV	7		
General Education (Theme)	3		
	14		
	133		

(P) Placement examination is required.

In order to progress in the nursing program a minimum grade of C (2.0) is required in the \*prerequisite, \*\*decisional, +co-requisite, and all Nursing courses.

†Biomedical sciences requires a B- as a pre-requisite to HS 309.

### 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.

Second degree students must be admitted to Grand Valley State University before they can be considered for admission to the pre-nursing major. Students must be admitted to the nursing major. Admission is selective and highly competitive. Students must earn an overall GPA of at least 2.800, and have a minimum of C (2.0) in the following decision courses (none of which may be repeated more than once):

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BIO 355 Human Genetics	HS 212 Introductory Microbiology
CHM 230 Introduction to Organic and Biochemistry	HS 290 Human Physiology
HS 208 Human Anatomy	PSY 364 Lifespan Dev Psychology

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 summer/spring 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 Nursing 315.

1. Health and immunization reports.
2. Certification in cardiopulmonary resuscitation for health professionals (CPR).
3. Health insurance.
4. Students must have their own transportation for clinical experiences.

In order to progress in the nursing program, a minimum grade of C (2.0) is required in the following \*Prerequisite, +Co-requisite, and Nursing courses:

*NUR 220 Self-Health and Wellness	NUR 421 Clinical Practice III
NUR 315 Nursing Health Assessment	NUR 435 Research Applications in Nursing
NUR 320 Theoretical Nursing I	NUR 450 Theoretical Nursing IV
NUR 321 Clinical Practice I	NUR 451 Clinical Practice IV
NUR 350 Theoretical Nursing II	+HS 305 Clinical Nutrition
NUR 351 Clinical Practice II	+HS 310 Basic Pathophysiology
NUR 420 Theoretical Nursing III (SWS)	+HS 311 Pharmacological Aspects of Health Science
	+STA 215 Statistics I

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 the Graduate Record Exam's (GRE) general test.
3. Submit a 300–500 word essay describing professional and educational goals.

Full admission to the MSN 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.

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NUR 529 Health Care System, Policy, and Finance  
NUR 690 Research Development in Nursing  
HS 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 a GPA of 2.8 overall and have completed the required Prerequisite courses with a minimum grade of C (2.0). Admission is selective and highly competitive.
2. Registered nurses are given advanced standing in the program through the following mechanisms:
  - Direct transfer of credits.
  - University credits for nursing courses.
  - National certification.
3. Evidence of the following are required before the student begins NUR 410:
  - Health and immunization reports.
  - Certification in cardiopulmonary resuscitation for health professionals (CPR).
  - 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	HS 311 Pharm. Aspects of Health Science*
CHM 109 General Chemistry	MTH 110 Algebra
HS 208 Human Anatomy*	PSY 101 Introductory Psychology
HS 212 Introductory Microbiology*	PSY 364 Lifespan Dev. Psychology*
HS 213 Laboratory in Microbiology	STA 215 Introductory Applied Statistics
HS 290 Human Physiology	WRT 150 Strategies in Writing
HS 291 Laboratory in Human Physiology	WRT 305 Writing in the Discipline (or exam)
HS 309 Laboratory in Human Anatomy	HS 305 Clinical Nutrition*
HS 310 Basic Pathophysiology	

\*Upon completion of NUR 410 students may be eligible to receive credits for these courses if they do not have transferable college courses.



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### Required Nursing Courses

NUR 310 Professional Nursing Seminar	NUR 410 Role Transition
NUR 220 Self-Health and Wellness**	NUR 420 Theoretical Nursing III**
NUR 320 Theoretical Nursing I**	NUR 421 Clinical Practice III**
NUR 321 Clinical Practice I**	NUR 425 Care of Clients w/Chronic Conds. (SWS)
NUR 350 Theoretical Nursing II**	NUR 426 Health in Diverse Communities
NUR 351 Clinical Practice II**	NUR 435 Research Application in Nursing Practice
NUR 400 Health Assessment Skills for	NUR 455 Leadership & Nursing Care Mgt. (Capstone)

\*\*Upon completion of NUR 410 students will receive 30 upper division University credits for these courses.

### Sample Curriculum

Summer	Fall	Winter
NUR 400 (1st half)	NUR 425	NUR 426
NUR 410 (2nd half)	NUR 435	NUR 455

### R.N. to M.S.N. Option

RNs 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 coursework.
2. Satisfactorily complete the Graduate Record Exam's (GRE) general test.
3. Submit an essay describing professional and educational goals.

Full admission to the M.S.N. program is contingent on

1. Baccalaureate degree from a nationally accredited program.
2. Maintaining a GPA of 3.0 or higher in upper division coursework.
3. Documentation of current licensure as a R.N. in the State of Michigan.
4. Professional competence as documented by three academic and/or professional references.

Registered nurses who elect the B.S.N./M.S.N. option enroll in a selected number of graduate courses while completing the BSN:

NUR 529 Health Care System, Policy, and Finance  
HS 608 Pathologic Physiology, or  
NUR 622 Advanced Pathophysiology I and NUR 623, Advanced Pathophysiology II

RNs who want the M.S.N. degree should apply to the graduate program by September 15 of the final year of their B.S.N. program.

### 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

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College of Nursing RN/BSN 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

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 MSN GPA Admission Requirements stated below.)

- NUR 400 Health Assessment Skills for Nurses
- NUR 410 Role Transition
- NUR 426 Community Health Nursing Practice
- HS 310 Basic Pathophysiology
- STA 215 Statistics I

Students who plan an M.S.N. must apply to the M.S.N. program and obtain preliminary admission to the program prior to taking graduate level courses and

1. Achieve an undergraduate scholastic GPA of 3.0 or higher in upper-division coursework.
2. Satisfactory performance 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.

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 MSN prerequisites. These courses must be completed with a B (3.0) or better.

NUR 529 Health Care System, Policy and Finance

NUR 690 Research Development in Nursing

HS 608 Pathologic Physiology, or

NUR 622 Advanced Pathophysiology I and NUR 623 Advanced Pathophysiology II

## 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 emphases 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 clinical nurse specialist roles or nurse practitioner roles in acute or primary care. All students must complete a scholarly project (thesis, nursing protocol, research practicum, or comprehensive examination).

## **Nursing**

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 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 Nursing 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 for health professionals(CPR).
4. Health insurance.
5. Documentation of HIPPA 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: (24–28 credits)

NUR 521 Theoretical Perspectives in Nursing I

NUR 522 Theoretical Perspectives in Nursing II

NUR 622 Advanced Pathophysiology I\*

\*HS 608 may be taken in place of NUR 622 and NUR 623

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NUR 623 Advanced Pathophysiology II\*  
NUR 529 Health Care System, Policy, and Finance  
NUR 531 Professional Role Development  
NUR 530 Advanced Nursing Strategies\*\*  
NUR 690 Research Development in Nursing  
STA 610 Applied Statistics for Health Professions

### Scholarly Project Options

NUR 694 Thesis Preparation and NUR 695 Master's Thesis  
NUR 692 Nursing Protocol Exploration and NUR 693 Nursing Protocol Development  
NUR 696 Nursing Research Practicum (four credits or two credits plus related elective)  
NUR 697 Nursing Comprehensive Examination (one credit plus two electives)

**Functional Role Component.** All courses must be completed with a grade of B (3.0) or better.

Advanced Practice Nursing (APN)(21–26 credits)

### Clinical Emphasis:

#### Adult/Elderly

NUR 620 Clinical Pharmacology  
NUR 610 Advanced Assessment  
NUR 654 Clinical Practicum I: Adult/Elderly  
NUR 655 Clinical Practicum II: Adult/Elderly  
NUR 656 Clinical Practicum III: Adult/Elderly

#### Child

NUR 620 Clinical Pharmacology  
NUR 610 Advanced Assessment  
NUR 657 Clinical Practicum I: Child  
NUR 658 Clinical Practicum II: Child  
NUR 659 Clinical Practicum III: Child

#### Family

NUR 620 Clinical Pharmacology  
NUR 610 Advanced Assessment  
NUR 670 Clinical Practicum I: Family  
NUR 671 Clinical Practicum II: Family  
NUR 672 Clinical Practicum III: Family

#### Women

NUR 620 Clinical Pharmacology  
NUR 610 Advanced Assessment  
NUR 673 Clinical Practicum I: Women  
NUR 674 Clinical Practicum II: Women  
NUR 675 Clinical Practicum III: Women

#### Mental Health

NUR 620 Clinical Pharmacology  
NUR 610 Advanced Assessment  
HS 528 Neuropathology  
NUR 628 Nursing Therapeutics: Mental Health  
NUR 676 Health Perspectives: Mental Health  
NUR 677 Clinical Practicum I: Mental Health

\*\*NUR 400, Health Assessment Skills for Nurses, must be completed before NUR 530.

## **Nursing**

NUR 678 Clinical Practicum II: Mental Health  
NUR 679 Clinical Practicum III: Mental Health

Nursing Education (14–15 credits)  
NUR 620 Clinical Pharmacology  
NUR 640 Nursing Education Program Development  
NUR 642 Teaching Health Professionals  
NUR 644 Teaching Practicum  
Educational Cognate

Nursing Administration (14–15 credits)  
NUR 646 Nursing Administration  
NUR 648 Nursing Administration Practicum  
PA 614 Organization Theory  
PA 632 Health Services Financial Management  
Elective

Case Management (14 credits)  
NUR 660 Case Management Foundations I  
NUR 661 Case Management Foundations II  
NUR 662 Case Management Skills  
NUR 663 Resource Management in Health Care  
NUR 664 Case Management Practicum

## **M.S.N./M.B.A. Program**

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 on only the Graduate Record Exam (GRE), rather than the GMAT, is required. Applicants for the M.S.N./M.B.A. 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.

All M.S.N./M.B.A. candidates must complete the M.B.A. background requirements listed in the business section of this catalog. Also required are the following four three-credit courses:

BUS 601 The Business Plan  
BUS 631 Leadership and Organizational Dynamics  
BUS 671 Global Competitiveness  
BUS 681 Strategy

Candidates must complete at least three of the following five three-credit M.B.A. courses:

ACC 611 Managerial Accounting  
FIN 621 Financial Policy for Managers  
ECO 641 Business Economics and Strategy  
MKT 651 Marketing Management  
MGT 667 Service Management

Candidates must complete the following M.S.N. courses:

NUR 521 Theoretical Perspectives in Nursing I  
NUR 522 Theoretical Perspectives in Nursing II  
NUR 622 Advanced Pathophysiology I  
NUR 623 Advanced Pathophysiology II  
NUR 529 Health Care System, Policy and Finance

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NUR 531 Professional Role Development  
NUR 530 Advanced Nursing Strategies  
NUR 690 Research Development in Nursing  
STA 610 Applied Statistics for Health Professions  
NUR 648 Administrative Practicum

### Scholarly Project Options

NUR 694 Thesis Preparation and NUR 695 Master's Thesis  
NUR 692 Nursing Protocol Exploration and NUR 693 Nursing Protocol Development  
NUR 696 Nursing Research Practicum (four credits or two credits plus related elective)  
NUR 697 Nursing Comprehensive Examination (one credit plus two electives)

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.

### Adult/Elderly

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
NUR 654 Clinical Practicum I: Adult/Elderly  
NUR 655 Clinical Practicum II: Adult/Elderly  
NUR 656 Clinical Practicum III: Adult/Elderly

Or

### Child

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
NUR 657 Clinical Practicum I: Child  
NUR 658 Clinical Practicum II: Child  
NUR 659 Clinical Practicum III: Child

Or

### Family

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
NUR 670 Clinical Practicum I: Family  
NUR 671 Clinical Practicum II: Family  
NUR 672 Clinical Practicum III: Family

Or

### Women

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
NUR 673 Clinical Practicum I: Women  
NUR 674 Clinical Practicum II: Women  
NUR 675 Clinical Practicum III: Women

Or

### Mental Health

NUR 610 Advanced Assessment  
NUR 620 Clinical Pharmacology  
HS 528 Neuropathology  
NUR 628 Nursing Therapeutics: Mental Health  
NUR 676 Theoretical Perspectives: Mental Health  
NUR 677 Clinical Practicum I: Mental Health  
NUR 678 Clinical Practicum II: Mental Health  
NUR 679 Clinical Practicum III: Mental Health

Descriptions of the M.B.A. courses are contained in the Business section of the catalog.

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### **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:**

Sixteen credits granted for advanced clinical practice as validated by current specialty nursing certification.

#### **Research-Theory (20–24 credits)**

NUR 521 Theoretical Perspectives in Nursing I  
NUR 522 Theoretical Perspectives in Nursing II  
NUR 529 Health Care System, Policy, and Finance  
NUR 531 Professional Role Development  
NUR 530 Advanced Nursing Strategies  
NUR 690 Research Development in Nursing  
STA 610 Applied Statistics for Health Professions

#### **Scholarly Project Options**

NUR 694 Thesis Preparation and NUR 695 Master's Thesis  
NUR 692 Nursing Protocol Exploration and NUR 693 Nursing Protocol Development  
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's Nurse Practitioner Certificate Program**

Master's prepared nurses can obtain the clinical and didactic experiences necessary to meet the eligibility requirements for nurse practitioner certification. The program will provide the opportunity to prepare for the certification examination for Adult, Gerontological, Family, Pediatrics, or Women's Health Nurse Practitioner.

Evidence of the following items are required before the student begins Nursing 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 for health professionals (CPR).
4. Health insurance.
5. Documentation of HIPPA training.

The program of study includes the following courses: NUR 610 Advanced Assessment, NUR 531 Professional Role Development, NUR 530 Advanced Nursing Strategy, and Clinical Practicum I, II, III in selected clinical emphasis. Consideration will be given to weekend classes and opportunity 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's 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: NUR 620 Clinical Pharmacology, NUR 640 Nursing

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Education Program Development, NUR 642 Teaching Health Professionals, NUR 644 Teaching Practicum, and an educational cognate.

### Post Master's 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: PA 614 Organizational Theory, PA 632 Health Services Financial Management, NUR 646 Nursing Administration, and NUR 648 Nursing Administration Practicum.

### 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 (MSN) program may apply the credits toward the MSN degree functional role of Case Management.

Course requirements for the Certificate in Case Management

NUR 660 Case Management Foundations I  
NUR 661 Case Management Foundations II  
NUR 662 Case Management Skills  
NUR 663 Resource Management in Health Care  
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). Two credits. Offered every semester.

**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). Two credits. Offered every semester.

**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 high education in nursing



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curricula. Students will be provided information about university programs and resources. Prerequisites: R.N. status. Two credits. Offered every semester. Meets for three sessions.

**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 communications skills and beginning therapeutic communication skills. (1-0-6-0) Prerequisite: Permit; GPA 2.7; Grade of C (not C-) in core courses. Three credits. Offered every semester.

**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). Prerequisite: 315. Three credits. Offered every semester.

**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). Prerequisites: 315; 320 co-requisite. Four credits. Offered every semester.

**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). Prerequisites: 321; prerequisite or co-requisite 435. Four credits. Offered every semester.

**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). Prerequisites: 350 (may be co-requisite). Seven credits. Offered every semester.

**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). Prerequisites: None. Part of Death and Dying theme. Three credits. Offered every semester.

**NUR 380 Special Topics in Nursing.** Readings, lecture, discussion, or lab in specific nursing topics. One to three credits.

**NUR 399 Readings in Nursing.** Independent supervised readings on selected topics. Credits and topic must be prearranged with faculty sponsor(s). One to three 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). Prerequisite: R.N. status. Three credits. Offered every semester.

**NUR 410 Professional Role Transition.** Assists RN students in their transition to the professional nurse roles of provider and coordinator of care and member of a profession. Through clinical experiences, students attain cognitive, communication, and teaching skills required for critical thinking in health promotion and disease prevention. (2-2-0-2). Prerequisites: R.N. status and admission to the School of Nursing; NUR 400. Four credits. Offered summer (second six weeks) and winter semester.

**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). Prerequisites: 351, WRT 305. Four credits. Offered every semester.

**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,

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clinics, and community settings. (0-2-1-15). Prerequisites: 420 (can be co-requisite). Six credits. Offered every semester.

**NUR 425 Care of Clients with Chronic Conditions.** Professional nurse roles of provider, coordinator of care, and member of a profession are examined. Emphasizes health maintenance and coping with long-term limitations in functional capacity across the lifespan. Refines skills in critical thinking, nursing interventions, and communication through classroom/clinical experiences with individuals and families dealing with chronic conditions (3-2-0-3). Prerequisites: NUR 410. Pre or co-requisite: NUR 435. Five credits. Offered winter semester.

**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). 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). Prerequisites: STA 215, WRT 305. Two credits. Offered every semester.

**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). Prerequisites: 421. Four credits. Offered every semester.

**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). Prerequisites: 450 (may be co-requisite). Seven credits. Offered every semester.

**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). Prerequisite or co-requisite: 426. Three credits. Offered winter semester.

**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). Prerequisites: RN status or permission of instructor. Three credits. Offered winter semester upon sufficient demand.

**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). Prerequisite: R.N. status or permission of instructor. Three credits. Offered fall semester upon sufficient demand.

**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 three credits.

**NUR 521 Theoretical Perspectives in Nursing I.** Exploration of various frameworks for nursing practice. This course focuses on concept and theory development. Prerequisites: Graduate standing or permission of instructor. (2-0-0-0). Two credits. Offered fall and winter semesters.

**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). Prerequisites: NUR 521; admission to graduate program. Offered fall and winter semesters.

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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. (2-0-0-3). Prerequisites: Graduate standing or permission of instructor. Two credits. Offered fall and winter semesters.

**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). Prerequisites: 400, 521 and 522; 622 and 623 (pathophysiology), or HS 608. Three credits. Offered fall and winter semesters.

**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). Prerequisites: NUR 530. Three credits. Offered winter semester.

**NUR 580 Special Topics in Nursing.** Readings, lecture, discussion, or lab in specific nursing topics. One to 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). Prerequisites: NUR 400; Graduate standing or permission of the instructor. Two credits. Offered winter semester.

**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). Prerequisites: HS 311 or equivalent; NUR 622 and NUR 623 or HS 608. Three credits. Offered summer semester.

**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). Prerequisites: Graduate standing or permission of instructor. Two credits. Offered fall and winter semesters (spring upon demand).

**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). Prerequisites: NUR 622 or permission of instructor. Two credits. Offered fall and winter semesters (spring upon demand).

**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). Prerequisites: HS 528. Three credits. Offered summer semester upon demand.

**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. Prerequisite: Official admission to the graduate program. (3-0-0-0). Three credits. Offered fall semester.

**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). Prerequisite: 640 or permission of instructor. Three credits. Offered fall semester.

**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). Prerequisites: 531, 640, and 642. Three credits. Offered winter semester (even years).

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**NUR 646 Nursing Administration.** 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). Prerequisite: PA 614 and 632 prerequisite or co-requisites or approval of instructor. Three credits. Offered fall semester.

**NUR 648 Administrative Practicum.** 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). Prerequisites: 639, 646. Three credits. Offered winter semester (odd years).

**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). Prerequisites: NUR 610 and NUR 531. Six credits. Offered fall semester every third year. (First time offered: Fall 2005)

**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. (1-0-0-12). Prerequisites: NUR 654. Five credits. Offered winter semester every third year. (First time offered: Winter 2006)

**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. (0-3-0-15). Prerequisites: NUR 655. Five credits. Offered summer semester every third year. (First time offered: Spring/Summer 2006)

**NUR 657 Practicum I: Child.** Application of theories and advanced nursing strategies in managing primary health care for infants, children, and adolescents. 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). Prerequisites: NUR 610 and NUR 531. Six credits. Offered fall semester every third year. (First time offered: Fall 2004)

**NUR 658 Practicum II: Child.** Students gain independence in managing primary health care for infants, children, and adolescents. Focus is on continued enactment of the APN roles across the health care continuum. Clinical conference case presentations focus on the collaborative role of the APN. (1-0-0-12). Prerequisites: NUR 657. Five credits. Offered winter semester every third year. (First time offered: Winter 2005)

**NUR 659 Practicum III: Child.** 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. (0-3-0-15). Prerequisites: NUR 658. Five credits. Offered spring/summer semester every third year. (First time offered: Spring/Summer 2005)

**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). Prerequisites: Official acceptance into the graduate program or permission of the instructor. Three credits. Offered fall semester on demand.

**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). Prerequisites: 660. Three credits. Offered winter semester on demand.

**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). Prerequisites: Official admission to the graduate program or permission of the instructor. Two credits. Offered fall semester on demand.

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**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). Prerequisites: Official admission to the graduate program or permission of the instructor. Three credits. Offered winter semester on demand.

**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). Prerequisites: 660, 661, and 663. Three credits. Offered summer semester on demand.

**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). Prerequisites: NUR 531 and NUR 610. Six credits. Offered fall semester.

**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. (1-0-0-12). Prerequisites: NUR 670. Five credits. Offered winter semester.

**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. (0-3-0-15). Prerequisites: NUR 671. Five credits. Offered spring/summer semester.

**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). Prerequisites: NUR 531 and NUR 610 Six credits. Offered fall semester every third year.

**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). Prerequisites: NUR 673. Five credits. Offered winter semester every third year.

**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). Prerequisites: NUR 674. Five credits. Offered spring/summer semester every third year.

**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). Prerequisites: NUR 520 and official admission to the graduate program. Two credits. Offered winter semester every third year.

**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). Prerequisites: NUR 610, NUR 531, NUR 628 and NUR 676. Four credits. Offered fall semester every third year. (First time offered: Fall 2004)

**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). Prerequisite: NUR 677. Five credits. Offered winter semester every third year. (First time offered: Winter 2005)

**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

## Occupational Safety and Health

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). Prerequisites: NUR 678. Four credits. Offered spring/summer semester every third year. (First time offered: Spring/Summer 2005)

**NUR 680 Special Topics in Nursing.** Lecture, discussion, and/or clinical laboratory course on topics of special interest to graduate nursing students. One to three 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). Prerequisites: 521 and official admission to the graduate program. Two credits. Offered fall and winter semester.

**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. Prerequisite: 690, STA 610 (prerequisite or co-requisite). One to two credits. Offered fall and winter semesters.

**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. Prerequisite: 692; permission of instructor. One credit. Offered fall and winter semesters.

**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. Prerequisite: 690; STA 610 is a prerequisite or co-requisite. One credit. Offered every semester.

**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. Prerequisite: 694 (a minimum of two credits); permission of instructor. Two credits. Offered every semester.

**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. Prerequisites: Completion of the required research sequence and clinical emphasis courses; permission of instructor. Two credits. Offered every semester.

**NUR 697 Nursing Comprehensive Examination.** Mechanism to demonstrate comprehension and synthesis of concepts central to the advanced practice of nursing. Co-requisite: Last semester of the required MSN coursework; permission of instructor. One credit. Offered every semester.

**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: Van Fleet. Intern Coordinator: Green; Adjunct faculty: Cox, Huizen, Krieger, Longman.

Degree offered: B.S. in Occupational Safety and Health Management.

The occupational safety and health curriculum is designed to fulfill the undergraduate educational requirements of safety professionals in the field. Considerable federal and state legislation enacted during the past decade 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 occupational safety and health program is structured to provide students with the proper balance of safety management and scientific training

## Occupational Safety and Health

required in the field. The program prepares graduates for careers in both the private and public sectors.

The program permits students to select their career emphasis area based on the types of industries for which they wish to work. Students who wish to work as safety specialists in manufacturing, insurance, or service industries will be involved in loss control issues and should select the Safety Emphasis. Students who wish to work as safety specialists in chemical industries, petroleum industries, or pharmaceutical industries will be involved in process safety management and industrial hygiene issues and should select the Hygiene Emphasis.

## Career Opportunities

With increased emphasis on workplace safety, career opportunities for occupational safety and health management graduates look very good. 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 must complete the following requirements:

1. General university degree requirements as identified in the General Academic Policies section of the catalog.
2. OSH Core (24 hours):
  - OSH 110 Introduction to Occupational Safety and Health
  - OSH 130 Hazard Control
  - OSH 214 Health and Safety Techniques
  - OSH 224 Principles of Industrial Hygiene
  - OSH 340 Safety Health and Program Development
  - OSH 400 Critical Incident Analysis
  - OSH 410 Ergonomic Safety Engineering
  - OSH 495 Safety and Health Administration
3. Students must select one of the following emphasis areas and meet the science cognate courses associated with that emphasis area.
  - a. **Hygiene Emphasis** (24 hours):
    - OSH 314 Toxicological Hazards
    - OSH 414 Environmental Safety and Health Regulations
    - OSH 424 Fire Science
    - OSH 490 Internship in Occupational Safety and Health Management
    - Industrial Hygiene Elective Pool: Students must select 12 hours of electives with approval of the OSH advisor.
  - Hygiene Science Cognate** (24 credit hours)
    - BIO 120 General Biology I
    - CHM 109 Introductory Chemistry
    - CHM 231 Introductory Organic Chemistry
    - CHM 232 Biological Chemistry
    - HS 208 Human Anatomy
    - PHY 200 Physics for the Health Sciences

## Occupational Safety and Health

### b. Safety Emphasis (27 hours)

OSH 210 Principles of Loss Control  
OSH 320 Behavioral Aspects of Safety  
OSH 490 Internship in Occupational Safety and Health Management  
Safety Emphasis Elective Pool: Students must select 18 hours of electives with approval of the OSH advisor.

### Safety Science Cognate (21 credit hours)

BIO 120 General Biology I  
CHM 109 Introductory Chemistry  
CHM 230 Introduction to Organic and Biochemistry  
HS 208 Human Anatomy  
PHY 200 Physics for the Health Sciences

## Minor Requirements

A minor in occupational safety and health consists of 21 credits chosen with the consent of the director.

## Sample Curriculum—Hygiene Emphasis

### First Year First Semester

ENG 150 Strategies in Writing  
MTH 110 Algebra  
CHM 109 Introductory Chemistry  
Electives

### First Year, Second Semester

BIO 120 General Biology I  
OSH 110 Introduction to Occupational Safety and Health  
PHY 200 Physics for the Life Sciences  
Electives

### Second Year, First Semester

CHM 231 Introductory Organic Chemistry\*  
HS 208 Human Anatomy  
MTH 125 Survey of Calculus\* or  
STA 215 Introductory Applied Statistics\*  
OSH 130 Hazard Control  
OSH 214 Health and Safety Techniques

### Second Year, Second Semester

CHM 232 Biological Chemistry\*  
General education elective  
General electives

### Third Year, First Semester

OSH 224 Principles of Industrial Hygiene  
OSH electives

### Third Year, Second Semester

OSH 314 Toxicological Hazards  
OSH 340 Safety and Health Program Development  
OSH 400 Critical Incident Analysis  
OSH 424 Fire Science  
Electives

### Fourth Year, First Semester

OSH 414 Environmental Safety and Health Regulations  
OSH 410 Ergonomic Safety Engineering  
OSH Electives

### Fourth Year, Second Semester

OSH 490 Internship in OSH Management  
OSH 495 Safety and Health Administration\*\*  
Electives



## Occupational Safety and Health

### Sample Curriculum—Safety Emphasis

#### First Year First Semester

ENG 150 Strategies in Writing  
MTH 110 Algebra  
CHM 109 Introductory Chemistry  
Electives

#### First Year, Second Semester

BIO 120 General Biology I  
OSH 110 Introduction to Occupational  
Safety and Health  
PHY 200 Physics for the Life Sciences  
Electives

#### Second Year, First Semester

CHM 230 Introductory Organic and  
Biochemistry\*\*\*  
HS 208 Human Anatomy  
OSH 130 Hazard Control  
MTH 125 Survey of Calculus\*\*\*  
STA 215 Introductory Applied Statistics\*\*\*

#### Second Year, Second Semester

OSH 214 Health and Safety Techniques  
OSH electives  
General education courses

#### Third Year, First Semester

OSH 210 Principles of Loss and Control  
OSH electives  
Electives

#### Third Year, Second Semester

OSH 224 Principles of Industrial Hygiene  
OSH 340 Safety and Health Program  
Development  
OSH electives

#### Fourth Year, First Semester

OSH 320 Behavior Aspects of Safety  
OSH 410 Ergonomic Safety Engineering  
OSH 414 Environmental Safety and Health  
Regulations  
OSH 499 Independent Study in OSH  
Electives

#### Fourth Year, Second Semester

OSH 400 Critical Incident Analysis  
OSH 490 Internship in OSH Management  
OSH 495 Safety and Health  
Administration\*\*

### Courses of Instruction

**OSH 110 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). Three credits.

**OSH 130 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). Three credits.

**OSH 210 Principles of Loss Control.** A study of methods, tools, and techniques used to administer loss control programs in occupational settings. (3-0-0). Three credits.

**OSH 214 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). Three credits.

**OSH 224 Principles of Industrial Hygiene.** A study of industrial hygiene methods, measurement, and equipment. Prerequisite: CHM 109 and OSH 214 or permission of instructor. (2-0-2). Three credits.

\*Successful completion of MTH 125 or STA 215, CHM 109, and CHM 231 satisfies the B.S. cognate for the hygiene Emphasis.

\*\*capstone course.

\*\*\*Successful completion of MTH 125 or STA 215, CHM 109, and CHM 230 satisfies the B.S. cognate for the Safety Emphasis.

## Occupational Therapy

**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. Prerequisite: CHM 231 and OSH 214 or permission of instructor. (2-0-2). Three credits.

**OSH 320 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. Prerequisites: 110 and 130 or permission of the instructor. (3-0-0). Three credits.

**OSH 340 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: 110 and 130. Three 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. Prerequisites: Successful completion of 110, 130, and 340 or instructor approval. (3-0-0). 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. Prerequisite: HS 208 and successful completion of 12 hours of OSH prefix courses, or approval of instructor. (3-0-0). Three credits.

**OSH 414 Environmental Safety and Health Regulations.** A study of laws addressing environmental pollution and hazardous waste management. Prerequisites: CHM 232 and PHY 200, or instructor approval. (3-0-0). 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. Prerequisites: Successful completion of CHM 109 & 231, OSH 110, 130, & 214, or instructor approval. (3-0-0) Three Credits.

**OSH 480 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 problem, including development of appropriate countermeasures. The study will produce a paper following a modified research format. Prerequisite: Permission of OSH advisor. 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. Variable credit.

**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. Prerequisite: Successful completion of the OSH Core through OSH 320 and senior-level status. (3-0-0). 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. Variable credit.

## Occupational Therapy (OT)

Director: Powell; Associate Professor: Powell; Assistant Professors: Grapczynski, Sisco; Adjunct Faculty: Biese, Kakuri, 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

## **Occupational Therapy**

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.

### **Occupational Therapy**

Occupational therapy uses meaningful and purposeful activity as a therapeutic intervention to help an individual with a disability or injury to reach his or her highest level of independent functioning. These meaningful and purposeful activities are referred to as “occupations.” An activity is meaningful when it taps into the intrinsic motivation of the individual engaged in the activity and is appropriate to that individual’s age and general health. An activity is purposeful if it has a recognizable goal. An occupation may be used as a therapeutic intervention alone, or the intervention may include the use of devices (adapted silverware, computer access enhancers, writing aids with special grips, etc.) to assist the individual to achieve a desired level of independence in any given occupation.

### **Career Opportunities**

Occupational therapy provides excellent employment potential. Numerous job opportunities are available in a variety of settings, including acute care facilities, physical rehabilitation, private practice, psychiatric rehabilitation, developmental disabilities centers, nonprofit organizations, school systems, business and industry, home health care, geriatric settings, and research centers.

### **Occupational Therapy at Grand Valley**

The occupational therapy curriculum is a six-year endeavor that leads to a master of science (M.S.) degree. The curriculum is divided into two parts. For incoming freshmen, the first part consists of three years of preprofessional coursework, including courses in the natural, health, and social sciences as well as Grand Valley State University general education requirements.

Students interested in occupational therapy should begin by selecting an undergraduate major in their first year. Suggested majors include health sciences, biology, biopsychology, psychology, sociology, or behavioral sciences. Once a selection has been made, students should work with advisors from that department to ensure that all major requirements are completed, along with the required preprofessional courses. Students are awarded a B.S. degree in their chosen major upon successful completion of all requirements, usually at the end of the fourth year of the program. Some majors may require summer attendance to complete the program in six years.

Upon completion of the preprofessional part of the curriculum, students begin the professional part of the curriculum in their fourth year, following acceptance into the program (see “Application Procedures”). During the next three years, students take additional courses in the theory and practice of occupational therapy, along with selected courses in education, research, leadership, and professional behavior.

All courses during the professional part of the program must be taken for an earned grade unless otherwise specified by the Occupational Therapy Program.

## Occupational Therapy

These requirements include a final research project and two full-time fieldwork assignments that must total a minimum of 940 hours. These fieldwork assignments may be local or they may be in other areas of the country.

### Professional Conduct

Because the College of Health Professions prepares students to practice in a variety of health professions, we assume the responsibility to assure the public that our students have met high standards of professional behavior and academic achievement and have demonstrated consistent evidence of response to consumer needs. Our statement regarding professional conduct, found in the Health Professions section of this catalog, reflects this philosophy.

### Application Procedures

High school seniors interested in occupational therapy must complete an undergraduate application to Grand Valley State University. They will begin their preprofessional studies and declare an undergraduate major in their freshman year. Transfer students from two- or four-year colleges must also complete an undergraduate application to Grand Valley State University. It is recommended that students transfer by the beginning of their junior year to ensure completion of all undergraduate degree and preprofessional requirements. Transfer students should consult with an advisor from the Occupational Therapy Program before entering Grand Valley or shortly thereafter.

Students who have completed, or are near completion of a B.S. degree, represent one of two situations: (1) those who have not completed all preprofessional courses, but intend to complete them at Grand Valley, or (2) those who have completed all preprofessional work. Those students still needing to complete preprofessional courses *must submit an undergraduate application*; those students who have completed the preprofessional courses *must submit a graduate application*. *Students are encouraged to meet with a representative of the Occupational Therapy Program regarding preprofessional course completion* to ensure a smooth transition into the program.

Admission to the Occupational Therapy Program requires completion of a Grand Valley State University graduate application. Applications may be obtained from the university Admissions Office. Completed applications and all supplementary materials should be submitted by January 15 as a preference of the program. Rolling admissions are in effect. Please call the Occupational Therapy Program to discuss your application and timeline.

### Professional Curriculum Admission Criteria

Admission to the Occupational Therapy Program is competitive. The criteria to be met include:

1. Academic achievement of a minimum 3.0 GPA in preprofessional courses and in the last 60 hours of undergraduate work. All preprofessional courses must be completed with a grade of C or better.
2. Recommendation letters (two), including a registered occupational therapist and a professor who can comment on your academic performance.
3. An interview and an onsite writing sample.
4. Documented volunteer experience for a minimum of 50 hours under the supervision of an occupational therapist.

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5. Completion of form detailing student accomplishments that reflect the core goals of the program.
6. International student applicants should be able to communicate well in English. The following minimal scores are expected: TOEFL 610 or computer-based TOEFL 253.

Maximum class size is 30. Admission decisions will be made in the first and second semesters of the calendar year. Late applications will be considered assuming requirements are met and there is space in the program.

## Degree Requirements

A minimum of 120 credits is required for completion of the bachelor's degree, although that may vary according to the major selected. General university degree requirements are in the Academic Regulations section of the catalog, and the requirements for majors are in the appropriate Academic Programs section.

Sixty-two additional credits are required for completion of the master's degree in occupational therapy. General graduate academic policies and regulations can be found in the Graduate Bulletin.

### Preprofessional Curriculum Course Requirements

- One course in introductory biology (BIO 120)
- One course in human anatomy with laboratory (HS 208/309)
- One course in human physiology with laboratory (HS 290/291)
- One course in neuroanatomy (HS 427) or neuropsychology (PSY 431)
- Two courses in chemistry (CHM 109 and CHM 230)
- One course in kinesiology (MOV 300)
- One course in cultural anthropology (ANT 204)
- One course in introductory psychology (PSY 101)
- One course in life-span developmental psychology (PSY 364)
- One course in abnormal psychology (PSY 303)
- One course in psychology of disability (PSY 368)
- One course in algebra (MTH 110) or college algebra (MTH 122)
- One course in statistics (STA 215)
- One course in physics (PHY 200) with laboratory
- One course in biology of aging (HS 375) *or* middle age and aging (SOC 388)
- One course in social psychology (SOC 360 or PSY 360)
- One course in sociology of work (SOC 255)

The specific sequence of courses taken during the first three years will be determined by the student's undergraduate major. Students should consult their major advisor to determine the specific courses to be taken.

### Professional Curriculum Requirements for M.S. Degree

- OT 400 Occupational Science for Therapy
- OT 401 Role of Occupation in Human Development
- OT 402 Theoretical Foundations of OT
- OT 403 Foundations of Group Occupations
- OT 405 Limitations on Occupations
- OT 410 Professional Competencies—Play/Leisure
- OT 414 Occupational Analysis
- OT 415 Interventions Using Play Occupations
- OT 420 Clinical Reasoning I/Level I Fieldwork
- OT 510 Professional Competencies—Assessment
- OT 515 Interventions Using Self Care Occupations

## Occupational Therapy

OT 520 Clinical Reasoning II/Level I Fieldwork  
 OT 525 Occupational Therapy Curriculum Design  
 OT 610 Professional Competencies-Mechanics  
 OT 615 Interventions Using Work Occupations  
 OT 620 Clinical Reasoning III/Level I Fieldwork  
 OT 630 Level II Fieldwork (Part 1)\*  
 OT 631 Level II Fieldwork (Part 2)\*  
 HPR 408 Professional Roles/Issues in Health Care  
 HPR 419 Neuromuscular Development and Control  
 HPR 510 Introduction to Health Professions Research  
 HPR 610 Research in the Health Professions  
 HPR 621 Management in Rehabilitation  
 HPR 622 Case Studies in Rehabilitation  
 HPR 625 Health Professions Leadership  
 HPR 688 or 690 Health Professions Research I or Master's Thesis Proposal  
 HPR 689 or 695 Health Professions Research II or Master's Thesis  
 HS 428 Neurosciences  
 EDG 648 Adult Learner  
 NUR 642 Teaching Health Professionals

### Sample Preprofessional Curriculum

Note: This is a sample schedule. Each undergraduate major will have slightly different requirements.

#### Bachelor of Science Degree—Any Degree Program

The general education courses listed are prerequisites for the OT curriculum.

#### Freshman Year

<b>Fall</b>		<b>Winter</b>	
MTH 110/122 Algebra	3	BIO 120 General Biology I/Lab	4
CHM 109 Introductory Chemistry	5	PSY 101 Introduction to Psychology	3
FS 100 Freshman Studies	1	CHM 230 Introduction to Organic and Biochemistry	5
WRT 150 Strategies in Writing	4	ANT 204 Introduction to Cultural Anthropology	3
Elective	3		
	16		15

#### Sophomore Year

<b>Fall</b>		<b>Winter</b>	
HS 208 Human Anatomy	3	HS 290/291 Human Physiology/Lab	4
PHY 200 Physics for the Health Sciences	4	STA 215 Introductory Applied Statistics	3
General education courses	6	General education courses	6
Elective or major	3	Elective or major	3
	16		16

\*Level II fieldwork must be completed within 24 months of completion of the academic curriculum.

## Occupational Therapy

### Junior Year

#### Fall

SOC 255 Sociology of Work	3
HS 375 or SOC 388 Course on Aging	3
General education course	3
PSY 303 Abnormal Behavior	3
HS 427 Neuroanatomy	1
Major or general education course	3
	<u>16</u>

#### Winter

PSY 368 Psychology of Disability	3
MOV 300 Kinesiology	3
PSY 364 Lifespan Developmental Psychology	3
SOC 360 Social Psychology	3
HS 309 Anatomy Laboratory	1
Elective or major	3
	<u>16</u>

### Professional Curriculum

#### Senior Year

#### Fall

OT 400 Occupational Science for Therapy	3
OT 401 Role of Occupation in Human Development	3
OT 402 Theoretical Foundations of Occupational Therapy	4
HPR 408 Therapist Roles in Health care	3
OT 414 Occupational Analysis	3
Major or elective	3
	<u>19</u>

#### Winter

OT 410 Professional Competencies—Play/Leisure	3
OT 415 Interventions Using Play Occupations	4
OT 420 Clinical Reasoning I/Level I FW	2
Major or elective	3
Elective	3
	<u>15</u>

#### Spring/Summer

OT 403 Foundations of Group Occupations	4
OT 405 Limitations on Occupations	4
HPR 419 Neuromuscular Development and Control	3
HS 428 Neurosciences	3
HPR 510 Introduction to Health Care Professions Research	1
OT 525 Occupational Therapy Curriculum Design	3
	<u>18</u>

### Fifth Year

#### Fall

OT 510 Professional Competencies—Assessment	3
OT 515 Interventions Using Self-Care Occupations	4
OT 520 Clinical Reasoning II/Level I FW	2
HPR 610 Research in the Health Professions	2
NUR 642 Teaching Health Professionals	3
	<u>14</u>

#### Winter

OT 610 Professional Competencies—Mechanics	3
OT 615 Interventions Using Work Occupations	4
OT 620 Clinical Reasoning III/Level I FW	2
HPR 621 Management in Rehabilitation	2
HPR 688 Health Professions Research I or HPR 690 Master's Thesis Proposal	1
EDG 648 The Adult Learner	3
	<u>15</u>

## Occupational Therapy

### Summer (two six-week sessions)

OT 630 Level II Fieldwork (Part 1)	6
HPR 688 Health Professions Research I	
or	
HPR 690 Master's Thesis Proposal	1
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	7

### Sixth Year

Fall		Winter	
OT 631 Level II Fieldwork (Part 2)	6	HPR 622 Case Studies in Rehabilitation	2
HPR 688 or 690	1	HPR 625 Health Professions Leadership	3
	<hr/>	HPR 689 Health Professions Research II	
	7	or	
		HPR 695 Master's Thesis	3
			<hr/>
			8

Total of fifth and sixth year: 62

### 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). Three credits. Offered summer semester.

**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). Three credits. Offered summer semester.

**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). Four credits. Offered fall semester.

**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). Four credits. Offered summer semester.

**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). Four credits. Offered fall semester.

**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). Three credits. Offered winter semester.

**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). Three credits. Offered summer semester.



## Philosophy

**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). Four credits. Offered winter semester.

**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). Two credits. Offered winter semester.

**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). Three credits. Offered fall semester.

**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). Four credits. Offered fall semester.

**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). Two credits. Offered fall semester.

**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). Three credits. Offered spring/summer semester.

**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). Three credits. Offered winter semester.

**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). Four credits. Offered winter semester.

**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). Two credits. Offered winter semester.

**OT 630 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. Field study. Six credits. Offered spring/summer semester.

**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. Six credits. Offered fall semester.

## Philosophy (PHI)

Chair: Parker. Professors: Kirolschi, Ni, Rowe; Associate Professors: Castelh o-Lawless, Cimitile, Parker, Pestana, Whipps; Assistant Professors: DeWilde, Fitzpatrick, Giovannelli, Loeffler, Moes, Shang, Uglietta, Vandenberg.

## Philosophy

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 in-formative, but trans-formative, 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 and Minor Programs

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 are modest—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, 301, 302, 303, 304, and 495. Students majoring in philosophy are required to complete the B.A. degree program unless they have also completed a second major and the B.S. degree cognate for that major.

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 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.

### Career Opportunities

The vocational value of philosophy (except for teachers of philosophy) depends 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

## Philosophy

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. Three credits. Offered fall and winter semesters.

**PHI 102 Ethics.** What is good? What is evil? Are there objective standards for right and wrong? What are these objective standards? How can they be applied to important contemporary moral problems? This course considers the answers philosophers give to these and related questions. Fulfills Philosophy and Literature Foundation. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**PHI 220 Aesthetics.** An inquiry into the nature, criteria, and significance of the fine arts and/or artistic creation and response. Fulfills Arts Foundation. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall semester, odd-numbered years.

**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. Prerequisite: Prior work in philosophy or permission of instructor. Three credits. Offered fall semester.

**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. Prerequisite: Prior work in philosophy or permission of instructor. Part of Religion Theme. Three credits. Offered winter semester.

**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. Prerequisite: Prior work in philosophy or permission of instructor. Three credits. Offered fall semester.

**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. Prerequisite: Prior work in philosophy or permission of instructor. Three credits. Offered winter semester.

**PHI 306 Eastern Great Philosophers.** A study of one or several Eastern great philosophers, such as Lao Zi, Chuang Zi, Confucius, Mencius, The Buddha, Nagarjuna, Zhu Xi, Wang Yangming. Focus will be on the philosophers' writings, but attention also will be given to context and tradition. Prerequisite: Prior work in philosophy or permission of instructor. Three credits. Offered Winter semester.

**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

## Philosophy

subjective experience? Questions like these will be considered, as well as the answers that have been given to them by some important religious philosophers. Prerequisite: Prior work in philosophy or permission of instructor. Part of Religion Theme. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Prior work in philosophy or political science or permission of instructor. Part of Freedom and Social Control Theme. Three credits. Offered fall and winter semesters.

**PHI 325 Ethics in Professional Life.** Examination of ethical principles and practice in business, medicine, education, law, and government. This course aims at providing students with the intellectual framework for an ethical analysis of situations which arise within various professions. Also seeks to foster mutual understanding across professional lines. Part of Ethics Theme. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Prior work in philosophy, or permission of instructor. Three credits. Offered fall semester, even-numbered years.

**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. Three credits. Offered fall semester, even-numbered years.

**PHI 340 Mind, Brain, and Consciousness.** Introduction to theories about mind, brain and consciousness, their development and interrelation 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. Part of Human Journey Theme. Three credits. Offered fall semester.

**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. Three credits. Offered fall semester.

**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. Prerequisite: Prior work in philosophy, or permission of instructor. Three credits. Offered fall semester, odd-numbered years.

**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. Prerequisite: Prior work in philosophy, or permission of instructor. Three credits. Offered fall semester, even-numbered years.

**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. Prerequisite: PHI 101 or PHI 102. Part of Gender, Society, and Culture Theme. Three credits. Offered fall semester.

**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. Prerequisite: Permission of instructor. Four credits. Offered fall semester.

**PHI 376 Community Working Classics II.** Continuation of PHI 375. Prerequisite: Permission of instructor. Three credits. Offered winter semester.

## Physical Therapy

**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. Prerequisite: Prior work in philosophy or permission of instructor. Three credits. Offered as needed.

**PHI 399 Independent Readings.** Reading on a topic or a philosopher, arranged both as to credit and content with a member of the department. Prerequisite: Prior work in philosophy or permission of instructor. One to four credits. Offered fall and winter semesters.

**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. Prerequisite: Prior work in philosophy or permission of instructor. Three credits. Offered winter semester. Part of Human Journey Theme.

**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. Prerequisite: Prior work in philosophy or permission of instructor. Three credits. Offered fall semester, odd-numbered years.

**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. Prerequisites: Major or minor in philosophy and senior standing. Three credits. Offered fall and winter semesters.

## Physical Therapy (PT)

Director: Peck. Professors: Peck, Toot; Associate Professors: Brooks, Stevenson; Assistant Professors: Alderink, Allaben, Baker, Green, Hoogenboom, Ozga, Vaughn; Affiliate Faculty: Harro; Clinical Faculty: Barna, P.T.; Bothner, Ph.D.; 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.; Hunter, M.S., P.T.; Lesch, P.T.; Lomonaco, M.H.S., P.T.; May, M.S., P.T.; McGee, P.T. Schmitz, M.S., P.T.; Teles, M.H.S., P.T.

Degree offered: M.S. in physical therapy. The M.S. is in the process of being discontinued; the DPT is beginning. Final approval is imminent. Please contact Chris Lewis for full information about the D.P.T. to start in August 2004. Mr. Lewis may be reached at (616) 331-3958 or by email at [lewisch@gvsu.edu](mailto:lewisch@gvsu.edu). The physical therapy office may be reached at (616) 331-3356.

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

## Physical Therapy

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 a pre-physical therapy advisor. Suggested majors include but are not limited to health science, biology, biomedical science, biopsychology, and movement science. All of the physical therapy preprofessional curriculum course requirements must be taken for a letter grade.

### Application Procedures

Physical therapy applicants: Applications to the 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. 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 physical therapy program is competitive. The criteria for acceptance include the following:

1. Completion or written plan for completion of prerequisite coursework:
  - BIO 120.
  - Chemistry from general through introductory biochemistry.
  - HS 208 and HS 309.
  - HS 290 and HS 291.
  - One course in human pathophysiology.\*
  - One course in research design.\*
  - MTH 122 or 123 or 125.
  - STA 215.
  - PHY 220 and PHY 221.
  - PSY 101.
  - PSY 364.
  - SOC 201 or 280, or ANT 204.
  - One course in exercise physiology (HS 365 or MOV 365) is an additional prerequisite for the D.P.T.

\*Pathophysiology and research design will be dropped from prerequisites for admission to the D.P.T.

## Physical Therapy

2. Academic achievement. All applicants must have a minimum average GPA of 3.0 in prerequisite curriculum course requirements. D.P.T. applicants must have an overall 3.0 cumulative GPA.
3. The GRE is required.
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.
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.
8. Technical standards. Individuals must be able to perform all technical standards of the physical therapy program.
9. International 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 within a month of the interview date.

## Degree Requirements

Demonstration of completion of the 101 credits in the professional curriculum is required for completion of the Master of Science in Physical Therapy. The D.P.T. requires 121 credits.

General graduate academic policies and regulations can be found in the Grand Valley catalog or in the graduate bulletin. Specific physical therapy academic policies will be provided upon entry into the program.

### Professional Program Requirements for M.S. Degree

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.

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.

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.

The M.S. curriculum includes:

- PT 418 Physical Therapy Procedures I
- PT 420 Differential Diagnosis in Orthopedic PT
- PT 421 Clinical Education I
- PT 422 Physical Therapy Procedures II
- PT 425 Clinical Medicine I
- PT 428 Clinical Education II
- PT 430 Introduction to Sports Physical Therapy (optional)

## Physical Therapy

PT 481 Clinical Kinesiology  
PT 482 Clinical Biomechanics  
PT 514 Rehabilitation for Chronic Conditions  
PT 518 Rehabilitation Procedures  
PT 519 Spinal Manual Therapy I  
PT 520 Clinical Education III  
PT 524 Neurologic Evaluation and Treatment  
PT 525 Clinical Medicine II  
PT 527 Neurologic Techniques  
PT 565 Geriatric Physical Therapy  
PT 571 Cardiopulmonary Rehabilitation  
PT 620 Clinical Education IV  
PT 670 Pediatric Physical Therapy  
PT 672 Advanced Topics: Advanced Spinal Manual Therapy (optional)  
PT 674 Advanced Topics: Sports Medicine (optional)  
PT 676 Advanced Topics: Rehabilitation (optional)  
PT 699 Independent Study in Physical Therapy (optional)  
HS 365 Applied Human Physiology or equivalent  
HS 427 Neuroanatomy  
HS 428 Neurosciences  
HS 461 Prosected Regional Anatomy  
PSY 368 Psychology of Physical Disabilities  
NUR 642 Teaching Health Professionals  
HPR 408 Professional Roles/Issues in Health Care  
HPR 419 Neuromuscular Development and Control  
HPR 510 Introduction to Health Professions Research  
HPR 610 Research in Health Professions  
HPR 621 Management in Rehabilitation  
HPR 622 Case Studies in Rehabilitation  
HPR 688 and 689 Health Professions Research I and II  
    or HPR 690 Master's Thesis Proposal and HPR 695 Master's Thesis  
HPR 625 Health Professions Leadership (optional)

The D.P.T. curriculum details may be obtained by contacting the physical therapy office at (616) 331-3356.

### 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.

### Curriculum for M.S. Program in Physical Therapy.

The D.P.T. curriculum details may be obtained by contacting the physical therapy office at (616) 331-3356.



**Physical Therapy**

**Senior Year**

<b>Fall</b>		<b>Winter</b>	
PT 481 Clinical Kinesiology	2	HS 365 Applied Human Physiology	
HS 427 Neuroanatomy	1	PT 420 Differential Diagnosis in Orthopedic PT	4
HS 461 Prosected Regional Anatomy	4	PT 421 Clinical Education I	2
HPR 408 Professional Roles/Issues in Health Care	3	PT 422 Physical Therapy Procedures II	3
PT 418 Physical Therapy Procedures I	4	PT 425 Clinical Medicine I	2
PSY 368 Psychology of Physical Disabilities	3	PT 482 Clinical Biomechanics	3
	<u>17</u>		<u>17</u>

**Spring/Summer**

First four weeks:	
PT 428 Clinical Education II	3
Last ten weeks:	
HS 428 Neurosciences	3
HPR 419 Neuromuscular Development and Control	3
HPR 510 Introduction to Health Professions Research	1
PT 430 Introduction to Sports Physical Therapy (optional)	—
	<u>10</u>
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**Fifth Year**

<b>Fall</b>		<b>Winter</b>	
HPR 610 Research in the Health Professions	2	First four weeks:	
PT 524 Neurologic Evaluation and Treatment	4	PT 520 Clinical Education III	3
PT 525 Clinical Medicine II	2	Last ten weeks:	
PT 527 Neurologic Techniques	4	NUR 642 Teaching Health Professionals	3
	<u>12</u>	PT 518 Rehabilitation Procedures	3
		PT 565 Geriatric Physical Therapy	3
		PT 571 Cardiopulmonary Rehabilitation	3
		HPR 688 Health Professions Research I or HPR 690 Master's Thesis Proposal Proposal	1
<b>Summer (eight weeks)</b>			<u>16</u>
PT 514 Rehabilitation for Chronic Conditions	3		
PT 519 Spinal Manual Therapy I	2		
PT 670 Pediatric Physical Therapy	3		
HPR 688 Health Professions Research I or HPR 690 Master's Thesis Proposal Proposal	1		
	<u>9</u>		

Physical Therapy

Sixth Year

Fall		Winter	
PT 620 Clinical Education IV	12	HPR 621 Management in Rehabilitation	2
HPR 688 Health Professions Research I		HPR 622 Case Studies in Rehabilitation	2
or HPR 690 Master's Thesis Proposal	1	HPR 689 Health Professions Research II	
	<hr/>	or HPR 695 Master's Thesis	3
	13		<hr/>
			7
Fifth and Sixth Year Graduate Credits	57		

Advanced Topics (optional):

PT 672 Advanced Spinal Manual Therapy	(3)	PT 674 Sports Medicine	(3)
		PT 676 Rehabilitation	(3)
		PT 699 Independent Study in PT	(variable)
		HPR 625 Health Professions Leadership	(3)
		HPR 680 Work Injury Reduction	(3)

**M.S. Courses of Instruction The D.P.T. course descriptions may be obtained by contacting the physical therapy office at (616) 331-3356.**

Note: To ensure adequate foundational (prerequisite) knowledge and skill, the professional courses must be completed in sequential order as indicated in the preceding professional curriculum outline unless special permission is given by faculty. Numbers in parentheses at the end of the course descriptions indicate the number of lecture, discussion, and laboratory hours per week.

**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. Prerequisite: Admission to physical therapy program. (3-0-3). Four credits. Offered fall semester.

**PT 420 Differential Diagnosis in Orthopedic PT.** Orthopedic evaluation procedures, including patient interviewing, posture analysis, palpation, manual testing, and physiologic and accessory range of motion strategies related to evaluation of orthopedic dysfunction, are stressed using a problem-oriented case history format. Prerequisite: Admission to physical therapy program. (3-0-4). Four credits. Offered winter semester.

**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. Prerequisite: Admission to physical therapy program. (1-0-3). Two credits. Offered winter semester. Graded credit/no credit.

**PT 422 Physical Therapy Procedures II.** The principles of orthopedic treatment. Describes the appropriate use and application of therapeutic exercise, extremity manual therapy, and spinal traction. Prerequisite: Admission to physical therapy program. (2-0-4). Three credits. Offered winter semester.

**PT 425 Clinical Medicine I.** Lectures by medical specialists on disease processes and injuries commonly treated by physical therapists. The role of physical therapists in managing these problems. Specialties include: family practice, orthopedic surgery, rheumatology, and radiology. Prerequisite: Admission to physical therapy program. (2-1-0). Two credits. Offered winter semester.

## Physical Therapy

**PT 428 Clinical Education II.** One four-week full-time clinical affiliation in physical therapy practice settings. Focus is on managing clients with orthopedic disabilities. Clinical experience. Prerequisites: 421 and satisfactory completion of physical therapy curriculum to date. (0-0-40). Three credits. Offered spring/summer session. Graded credit/no credit.

**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. Prerequisite: Admission to the physical therapy program. (1.5-0-3). Two credits. Offered summer semester.

**PT 481 Clinical Kinesiology.** Investigation of the osteo and arthrokinematics of normal and pathological human motion will be the primary focus. The in-situ nature of muscles as torque generators will also be studied. Students will use cadaveric specimens and living subject models to study surface anatomy and functional movement patterns. Prerequisite: Admission to the physical therapy program. (1-0-2). Two credits. Offered fall semester.

**PT 482 Clinical Biomechanics.** Focus on normal and pathological human motion. Static and dynamic forces that affect the human organism as they relate to prevention of movement dysfunction, patient evaluation, and treatment. Methods of clinical and scientific investigation. Prerequisite: Admission to physical therapy program. (3-0-0). Three credits. Offered winter semester.

**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. Prerequisite: Admission to the physical therapy program. (3-0-0). Three credits. Offered summer session.

**PT 518 Rehabilitation Procedures.** Evaluation and treatment of clients with amputation and clients with spinal cord injury. Information about adaptive equipment, wheelchairs, architectural barriers, orthotics, and prosthetics as related to the rehabilitation patient. Prerequisite: Admission to physical therapy program. (4-0-0). Three credits. Offered winter semester.

**PT 519 Spinal Manual Therapy I.** Differential evaluation, manual examination, and treatment of the spine, rib cage, and pelvis incorporating manual therapy techniques and basic exercise principles. Prerequisite: Admission to physical therapy program. (2-0-3). Three credits. Offered summer session.

**PT 520 Clinical Education III.** A four-week full-time clinical affiliation in physical therapy practice settings followed by four one-hour seminars when the student returns to campus. Management of clients with neuromuscular and musculoskeletal disabilities. Clinical experience. Prerequisites: 428 and satisfactory completion of physical therapy curriculum to date. (0-0-40). Three credits. Offered winter semester. Graded credit/no credit.

**PT 524 Neurologic Evaluation and Treatment.** Evaluation procedures used by physical therapists in managing neuromuscular dysfunction resulting from injury to the nervous system. Evaluation and management of commonly seen central nervous system pathologies. Prerequisite: Admission to physical therapy program. (2-0-2). Four credits. Offered fall semester.

**PT 525 Clinical Medicine II.** Lectures by medical specialists on disease processes and injuries commonly treated by physical therapists. The role of the physical therapist in managing these problems. Medical specialties include neurology, neurosurgery, pediatrics, and psychiatry. Prerequisite: Admission to physical therapy program. (2-1-0). Two credits. Offered fall semester.

**PT 527 Neurological Techniques.** Information about various sensory motor techniques for patients with neuromuscular dysfunctions. Application of techniques emphasized. Prerequisite: Admission to physical therapy program. (3-0-3). Four credits. Offered fall semester.

**PT 565 Geriatric Physical Therapy.** In-depth study of adult physical therapy development, particularly neurological and musculoskeletal from adulthood through senescence and its interrelationship with therapeutic intervention used in physical therapy. Particular attention will be given to changes in functional abilities as they are seen through the adult years.

## Physician Assistant Studies

Prerequisite: Admission to physical therapy program or degree in physical therapy. (3-0-0). Three credits. Offered winter semester.

**PT 571 Cardiopulmonary Rehabilitation.** Focus on differential evaluation, treatment, and referral strategies related to the cardiopulmonary system. Influence of internal and external stressors on anatomical, physiological, psychological, sociocultural, developmental, and spiritual variables will be discussed. Prerequisite: Admission to the physical therapy program. (2-0-3). Three credits. Offered winter semester.

**PT 620 Clinical Education IV.** Eighteen weeks of full-time clinical internships in a variety of settings in Michigan and the United States. Clinical experience. Prerequisites: Completion of 520 and satisfactory completion of physical therapy curriculum through summer of fifth year. (0-0-40). Twelve credits. Offered fall semester. Graded credit/no credit.

**PT 670 Pediatric Physical Therapy.** In-depth study of theory, practice, and research in pediatric physical therapy. Prerequisite: Admission to physical therapy program or degree in physical therapy. (2-0-3). Three credits. Offered spring/summer session.

**PT 671 Advanced Topics: Cardiac Rehabilitation.** In-depth study of theory, practice, and research in cardiac rehabilitation and prevention. Prerequisite: Admission to physical therapy program or degree in physical therapy. (2-0-3). Three credits. Offered winter and summer semesters.

**PT 672 Advanced Topics: Advanced Spinal Manual Therapy.** Techniques of evaluation and treatment of extremities and spine. Prerequisite: Admission to physical therapy program or degree in physical therapy. (2-0-3). Three credits. Offered winter semester.

**PT 674 Advanced Topics: Sports Medicine.** In-depth study of theory, practice, and research in sports medicine. Prerequisite: Admission to physical therapy program or degree in physical therapy. (2-0-3). Three credits. Offered winter semester.

**PT 676 Advanced Topics: Rehabilitation.** In-depth study of theory, practice, and research in rehabilitation. Prerequisite: Admission to physical therapy program or degree in physical therapy. (2-0-3). Three credits. Offered winter semester.

**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. Prerequisite: Completion of first four semesters of professional program and permission of program. One to three credits. Offered fall, winter, and spring/summer semesters.

## Physician Assistant Studies (PAS)

Director: Combs. Associate Medical Director: Bottles, Associate Professors: Bacon-Baguley; Combs; Assistant Professors: Boeve, Crone; Adjunct Faculty: Cimbalik, Daugavitis, Dernocoeur, Gonzalez, McLaughlin, Piper, Rios, Robinson, Tanis, VanRyn

Degree offered: M.P.A.S. (Master's in Physician Assistant Studies).

Physician assistants (PAs) are valued members of the health care team. PAs are currently licensed in all 50 of the United States by delegation or regulatory authority. Working with the supervision of doctors of medicine and/or osteopathy, 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 studies. In 48 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

## Physician Assistant Studies

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 the setting in which the PAs 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 a 54 percent increase in physician assistant employment from 2000 to 2010 and lists the physician assistant as one of the thirty fastest growing occupations over that time period. 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 PA Studies 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" 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 PAS study.

An equal number of applicants to the program are derived from those who already possess a baccalaureate degree from an 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 next three years they take additional courses in human anatomy and physiology, 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 Michigan. As part of the master's curriculum, students must 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.

**APAP.** The Grand Valley State University Physician Assistant Studies Program is a member of the Association of Physician Assistant 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/pas](http://www.gvsu.edu/pas). 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 before entering Grand Valley or very soon thereafter.

**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 chair of PA Studies program director. Students who have not completed all prerequisites are encouraged to apply provided they have a definite plan to complete the preprofessional courses prior to their enrollment in PAS program studies. Application information may be obtained by calling the College of Health Professions office at (616) 331-3356. The application deadline is **January 15** of the calendar year the student wishes to begin the professional curriculum. All application forms and supplementary materials must be **received** 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 January preceding the applicants

## Physician Assistant Studies

anticipated matriculation into the program in August. Positions in the program will be offered to applicants the committee deems exceptional candidates beginning in late February. The new PA class should be filled after March 30 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 over all post secondary 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 recommendations from health professionals. Those submitted on university forms will be viewed most favorably. Recommendations from practicing PAs would be most appropriate.
3. 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. Preference will be given to hands on patient care activities.
6. International student applicants should be able to communicate well in English. The following minimal scores are expected: TOEFL 610 or computer-based TOEFL 253

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 **March 30**. 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 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 program of PA Studies or from the PAS Web site .

### 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 this catalog or in the Grand Valley State University graduate bulletin.

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

## Physician Assistant Studies

proficiency level of 80 percent on all evaluations as described in course syllabi is required.

### 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.

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 may be required during the application process. . The cost of this evaluation may be the responsibility of the student.

### 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\*.  
One course in introductory pharmacology\*.  
One course in sociology.  
One course in introductory health care research.  
One course in medical terminology.

Additional recommended courses include: Health Care Delivery, Health Care Sociology, Introduction to Public Health, and Medical Data Management.

### Professional Curriculum Course Requirements for the M.P.A.S. degree

HS 412 Medical Bacteriology  
HS 427 Neuroanatomy  
HS 461 Regional Human Anatomy  
HS 475 The Pathology of Aging  
HS 510 Immunology  
HS 523 Epidemiology  
HS 528 Neuropathology  
PAS 451 Physician Assistant Seminar I  
PAS 452 Physician Assistant Seminar II

\*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.



## Physician Assistant Studies

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  
 HPR 340 Health Care Management  
 HPR 510 Introduction to Health Professions Research  
 HPR 610 Experimental Design  
 HPR 688 Health Professions Research I  
 HPR 689 Health Professions Research II  
 NUR 620 Clinical Pharmacology

Certain students may also be required to complete:  
 STA 610 Applied Statistics for Health Professions

## Professional Level Curriculum

### First Professional Year

#### Fall—Semester One

HS 410 Immunology	3
HS 427 Neuroanatomy	1
HS 461 Regional Human Anatomy	4
PAS 451 Physician Assistant Seminar	1
PAS 501 Patient Evaluation I	2
HPR 340 Health Care Management	2
HPR 510 Introduction to Health Professions Research	1
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#### Winter—Semester Two

HS 412 Medical Bacteriology	3
HS 475 The Pathology of Aging	3
HS 528 Neuropathology	3
PAS 452 Physician Assistant Seminar II	1
PAS 500 Clinical Medicine I	3
PAS 501 Patient Evaluation II	2
HPR 610 Research in Health Professions	2
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#### Spring/Summer—Semester Three

NUR 620 Clinical Pharmacology	3
PAS 453 Physician Assistant Seminar III	1
PAS 505 Clinical Medicine II	6
HPR 688 Health Professions Research I*	3
or	
STA 610 Applied Statistics for Health Professions*	3
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## Physician Assistant Studies

### Second Professional Year

Fall—Semester Four		Winter—Semester Five	
HS 523 Epidemiology	2	PAS 610 Clinical Rotations I	12
PAS 454 Physician Assistant Seminar IV	1		12
PAS 510 Clinical Pathophysiology	3		
PAS 511 Clinical Laboratory Medicine	1	Spring/Summer—Semester Six	
PAS 514 Clinical Modality Skills	2	PAS 620 Clinical Rotations II	12
PAS 515 Clinical Medicine III	4		12
HPR 688 Health Professions Research I	1		12
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### Third Professional Year

Fall—Semester Seven		Winter—Semester Eight	
PAS 630 Clinical Rotations III	12	PAS 640 Clinical Practicum	12
	12	HPR 689 Health Professions Research II	3
			15

Total professional curriculum credits= 109 credits.

### Courses of Instruction

Numbers in parentheses at the end of the course descriptions indicate the number of lecture, discussion, and laboratory hours per week

**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. Prerequisite: Admission into the PAS Program. (1-0-0). One credit. Offered fall semester.

**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. Prerequisite: PAS 451. (1-0-0). One credit. Offered winter semester.

**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. Prerequisite: PAS 452. (1-0-0). Offered spring/summer semester.

**PAS 454 Physician Assistant Seminar IV.** Designed for first 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. Prerequisite: PAS 453. (1-0-0). Offered fall semester.

**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.) Prerequisite: 420. (3-0-3). Three credits. Offered winter semester.

**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

## Physician Assistant Studies

experience with actual or simulated patients is utilized. Prerequisite: Admission to the Physician Assistant Studies program. (1-0-3). Two credits. Offered fall semester.

**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. Prerequisites: 501; PAS 500 must be taken concurrently (1-0-3). Two credits. Offered winter semester.

**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 emergency medicine, surgery, pediatrics, neurology, radiology, and mental-health.) A component of the clinical medicine series will include Problem Based Learning (PBL) using small group instruction techniques Prerequisites: 500/501. (6-0-6). Six credits. Offered spring/summer session.

**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. Prerequisites: Admission into PAS program; HS 310; HS 410; PAS 500/505; Permission of instructor. (3-0-0). Three credits. Offered fall semester.

**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. Prerequisite: PAS 500/505. (1-0-1). One credit. Offered fall semester.

**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. Prerequisite: 420. (1-0-2). Two credits. Offered fall semester.

**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 ophthalmology, obstetrics/gynecology, and subspecialty areas [ENT, dermatology, etc.].) Prerequisites: 500/505. (4-0-4). Four credits. Offered fall semester.

**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. Prerequisite: Successful completion of all professional didactic coursework. (4-3-45). Twelve credits. Offered winter semester.

**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. Prerequisite: Successful completion of all professional didactic coursework. (4-3-45). Twelve credits. Offered spring/summer semester.

**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. Prerequisite: Successful completion of all professional didactic coursework. (4-3-45). Twelve credits. Offered winter semester.

## Physics

**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. Prerequisite: Completion of all didactic coursework and required clinical rotations. (4-3-45). Twelve credits. Offered every semester. End of Edit gec

## Physics (PHY)

Chair: Reynolds. Professor: Reynolds; Associate Professors: Eligon, Estrada, Furton; Assistant Professors: Ambrose, Gipson, Lenters, Oliver, Rakovic; Instructor: Brower; Laboratory Coordinator: Beyer.

Degrees offered: B.S. in physics; minor in physics; major or minor for physics secondary teacher certification. Physics Emphasis 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, a well-defined program of observation, experimentation, and theoretical study of the various phenomena of nature. Extensive use is made of computers to develop and support the analytical skills required of physicists. Students seeking secondary teaching certification should note several added requirements.

The physics curriculum requires a student to plan his or her program carefully. Most courses in chemistry, mathematics, and physics can be taken only in sequence. Because many of these courses are offered only once a year and some only once every other year, it is important to plan ahead. Students who expect to major or minor in physics should see 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.

Students who expect to complete the program in four years should have had four years of high school mathematics, including geometry, trigonometry, and two years of algebra; three years of laboratory science, including a year each of physics and chemistry; a half-year of computer programming; and four years of English. Students who do not have these courses should plan to take appropriate mathematics, programming, and English courses during their freshman year.

### Career Opportunities

Physicists are usually employed in research and development laboratories in industry, private institutions, and government. As we begin this new century, the physicist will normally be working as part of a team of scientists and engineers in such research fields as energy, superconductivity, low temperature, optics, atomic and nuclear phenomena, radiation, and computers. Problem-solving skills mastered by the physics major make physics an excellent background for many professions not normally associated with the field. Employment opportunities exist for well-qualified graduates. There is a continuing need for properly prepared secondary school physics teachers.

## Physics

With an advanced degree more responsible positions in research are available, as well as teaching positions in colleges or universities. A physics degree is also an excellent background for positions or further education in such fields as medicine, law, business administration, and engineering. Medical and law schools are enthusiastic about well-prepared applicants with a degree in physics.

### 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. 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 Thermodynamics  
PHY 485 Senior Physics Project I\*\*  
PHY 486 Senior Physics Project II\*\*

3. 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  
MTH 300 Applied Analysis I  
MTH 304 Analysis of Differential Equations or MTH 302 Linear Algebra and Differential Equations

Note: Physics majors intending to go to graduate school should take MTH227 and MTH304 rather than the MTH302 option.

### 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. The major requirements for a physics degree as noted above. A minimum GPA of 2.8 in the major is required to be recommended for teacher certification.
2. 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.

\*Completion of MTH 201, MTH 202, and PHY 230 satisfies the B.S. degree cognate for the physics major.

\*\*capstone sequence.

3. Four additional courses.

A History of Science course: choose from HSC 201, 202, 203, 204, or 206.

PHY 105 Descriptive Astronomy.

A course in ethics in science (e.g., BIO 328 Biomedical Ethics, BIO 338 Environmental Ethics).

BIO 120 General Biology I.

4. Experience.

All students seeking teacher certification are required to assist for at least 30 clock hours in the department's tutoring program and at least 30 clock hours 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: Physics

A minimum of 24 credit hours in physics and a GPA of 2.0 in physics are required for a minor.

The required courses are:

PHY 230 Principles of Physics I

PHY 231 Principles of Physics II

The remaining 14 hours in physics must be approved by the department upon written application by the student to the chairman.

Note that 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 2.8 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

MTH 201 Calculus I (F)

MTH 202 Calculus II (W)

PHY 230 Principles of Physics I (W)

CHM 115 Principles of Chemistry I (NS/A) (F)

CHM 116 Principles of Chemistry II (W)

WRT 150 Strategies in Writing

General Education course (recommended life science)

#### Second Year

MTH 203 Calculus III (F)

MTH 227 Linear Algebra I (F)

MTH 304 Analysis of Differential Equations (W) or

MTH 302 Linear Algebra and Differential Equations (W)

PHY 231 Principles of Physics II (F)

PHY 302 Introduction to Modern Physics (W)

CS 162 Computer Science I

Two general education courses

#### Third Year

MTH 300 Applied Analysis I (F)

## Physics

PHY 309 Experimental Methods in Physics (F)  
PHY 311 Advanced Laboratory II (W)  
PHY 330 Intermediate Mechanics and Dynamics (F)  
PHY 340 Intermediate Electricity and Magnetism (W)  
Four general education courses (Begin Theme)  
Electives

### Fourth Year

PHY 350 Intermediate Modern Physics (W)  
PHY 360 Thermodynamics (F)  
PHY 485 Senior Project I (F)  
PHY 486 Senior Project II (W)  
Two general education courses (Finish Theme)  
Electives

## 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 between the scientific disciplines, their relationship with technology, and their relevance to society. In order to be certified students must complete this major with at least a 2.8 GPA and the elementary teaching minor. See the Science section for details.

## 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

## Physics

PHY 605 General Astronomy  
PHY 610 Measurement and Instrumentation  
PHY 620 Methods and Materials for Demonstrating Physical Phenomena  
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

### 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). Three credits. Normally offered spring and fall semesters.

**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 110 Cosmology.** Interdisciplinary study of science exploring the relationships between the earth, its inhabitants, and the universe. Emphasis on scientific theories of the origin, structure, processes, and ultimate state of the universe as a whole. Three credits.

**PHY 125 Introduction to the Physics of Music and Sound.** Physical, musical, architectural, psychological, and anatomical aspects of sound. Particular emphasis will be placed on the physical basis of music and the acoustical properties of auditoriums. (3-0-0). Three credits.

**PHY 130 Applied Physics.** A one-semester introduction to basic applied physics. Newtonian mechanics, fluids, heat, properties of solids, basic electricity, light and sound. Prerequisite: Mathematics 110 or equivalent. (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. Prerequisite: Mathematics 110. (2-2-2). Four credits. Offered fall and winter semesters.

**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. Four credits. Offered fall semester.

**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. Four credits. Offered winter semester.



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**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. Two credits. Offered fall and winter semesters.

**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. Prerequisite: 220 and MTH 201 (MTH 202 recommended as a co-requisite). (1-0-0). One credit. Offered fall semester.

**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. Prerequisites: 221, 230 or equivalent and MTH 202. (1-0-0). One credit. Offered winter semester.

**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. Prerequisites: algebra, geometry, trigonometry. (2-2-3). Five credits. Offered fall and winter semesters.

**PHY 221 General Physics II.** The second half of a standard one-year non-calculus sequence with a laboratory; recommended for life science majors. Electricity and magnetism, fields, simple electrical circuits, light and optics, introduction to quantum and nuclear phenomena. Prerequisite: 220. (2-2-3). Five credits. Offered fall and winter semesters.

**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. Prerequisite: Mathematics 110. (2-0-3). 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. Prerequisite: 226. (1-0-3). 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. Prerequisite: 226. (1-0-3). 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. Prerequisite: Mathematics 201 (MTH 202 is recommended as a co-requisite). (3-2-3). Five credits. Offered fall and winter semesters.

**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. Prerequisites: 230 and Mathematics 202. (3-2-3). Five credits. Offered fall and winter semesters.

**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. Prerequisites: PHY230 and MTH 202. (3-0-2). Four credits. Offered fall semester.

**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

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are stressed. Open to physics majors and minors only. Prerequisites: 230, 231 as a co-requisite.(0-0-2). One credit. Offered fall semester.

**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. Prerequisites: 231 and MTH 302 or 304 as a co-requisite. (3-0-3). Four credits. Offered winter semester.

**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. Prerequisites: Junior standing. (3-0-0) Three credits. Offered fall and winter semesters.

**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. Prerequisites: Completion of Science Gen. Ed. Foundation course requirements. (3-0-0) Three credits. Offered fall and winter semesters.

**PHY 307 Wave Physics: Light, Sound, and Matter.** 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. Prerequisites: Completion of Science Gen. Ed. Foundation course requirements. (3-0-0) Three credits. Offered fall and winter semesters.

**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. Prerequisites: 302, MTH 302 or 304, and a supplemental writing skills course. (2-0-4). Four credits. Offered fall semester.

**PHY 310 Advanced Laboratory I.** Theory and practice in the design and execution of experiments; use and understanding of standard laboratory instruments; statistical and computer analysis of data. Prerequisites: 302, MTH 302 or 304, and a supplemental writing skills course. (0-0-6). Two 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. Prerequisite: 309 or 310 and a supplemental writing skills course. Both written and oral reports. (0-0-6). Two credits. Offered winter semester.

**PHY 320 Optics.** Geometrical and physical optics, interference and diffraction. Propagation of light in material media. Prerequisite: 231. (4-0-0). Four credits. Offered winter semesters of even-numbered years.

**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. Prerequisites: 230 or Engineering 212, or permission of instructor and Mathematics 302 or 304. (4-0-0). Four credits. Offered fall semester.

**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. Prerequisites: 231 and Mathematics 302 or 304. (4-0-0). Four credits. Offered winter semester.

**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. Prerequisites: 302 and MTH 302 or 304 (MTH 300 recommended). (4-0-0). Four credits. Offered winter semester.

**PHY 360 Statistical Thermodynamics.** Basic concepts of heat, thermodynamics and statistical physics for students of applied and theoretical physics. Temperature, equations of state, laws

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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. Prerequisite: 231. (4-0-0). Four credits. Offered fall semesters.

**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. Prerequisites: 302 and MTH 302 or 304. Four credits. Offered winter semester of odd-numbered years.

**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. Prerequisite: Permission of instructor. One to four credits. Offered fall and winter semesters.

**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. Prerequisites: 330 and Mathematics 400. (3-0-0). 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. Prerequisites: 340 and Mathematics 400. (3-0-0). Three credits.

**PHY 450 Quantum Mechanics.** Addition of angular momenta, scattering, approximation methods. Pauli principle, applications to transitions, molecular and solids. Prerequisites: 350 and Mathematics 400. (3-0-0). 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). One credit. Offered fall semester.

**PHY 486 Senior Physics Project (capstone).** Continuation of student's work in Physics 485. Both an oral report and a final written technical report are required. Prerequisite: 485. (1-0-8). Two credits. Offered winter semester.

**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. Prerequisite: 25 credits in physics and permission of the department chairman. One to four credits. Offered fall and winter semesters.

**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. Prerequisites: 230 and 231 or equivalent and department permission. (3-0-0). Three credits. Offered fall and winter semesters.

**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. Prerequisites: Permission of instructor. (2-0-2). Three credits. Offered summer semester of even-numbered years.

**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

## Political Science

observations of the sky. Prerequisites: 220 and 221 or equivalent. (2-0-3). Three credits. Offered summer semester of even-numbered years.

**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. Prerequisites: 220 and 221 or equivalent. (2-0-3). Three credits. Offered summer semester of odd-numbered years.

**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. Prerequisites: 220 and 221 or equivalent. (3-0-0). Three credits. Offered summer semester of odd-numbered years.

**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. Prerequisites: 220 and 221 or equivalent. (3-0-0). Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisites: 220 and 221 or equivalent and basic computing skills. (2-0-3). Three credits. Offered winter semester of even-numbered years.

**PHY 660 Readings in Physics Education Research.** An introduction to physics education research. Students read about and discuss developments in physics education. Prerequisites: 220 and 221 or equivalent. (3-0-0). Three credits. Offered fall semester of even-numbered years.

**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. Prerequisites: 220 and 221 or equivalent. (2-0-2). Three credits. Offered fall semester of odd-numbered years.

**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: Constantelos. Professors: Kieh, King; Associate Professors: Constantelos, Diven; Assistant Professors: Bardwell, Blofield, Cornish, den Dulk, Richards, Walhof; Instructors: Corbetta, Kucsova, Moiles, Tafel.

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

## Political Science

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 also be at the 300 level. A total of no more than nine credits of internship and independent study may count toward the major, with no more than six credits in either category. Public Administration (PA) 307 may count as an American politics elective.

Students seeking a B.A. degree must demonstrate third-semester proficiency in a foreign language. Students seeking a B.S. degree must complete the following degree cognate sequence: STA 215, PLS 300, and PLS 315 or 341. When taken as part of the B.S. cognate, PLS 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. Public Administration (PA) 307 may count as an American politics elective.

### Sample Curriculum

#### First Year

Political Science 102 and 103  
A writing skills course  
One or two humanities/arts general education courses  
One or two science general education courses  
Electives (or foreign language)

#### Second Year

Three political science courses at 200–300 level  
STA 215 and PLS 300 (B.S. majors)  
One or two general education courses  
Electives (or foreign language)  
Additional writing skills if needed

#### Third Year

Three political science courses at 200–300 level  
PLS 315 or 341 (B.S. majors)  
Completion of general education courses  
Electives  
Political science internship

#### 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.

### 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

## Political Science

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. Many pre-law students major in political science because this discipline is most directly related to law and it develops communication and analytic skills. 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. For more information, refer to [www4.gvsu.edu/richardm/prelaw.htm](http://www4.gvsu.edu/richardm/prelaw.htm).

### 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 subfield of American Government and Politics. Examines American political values, governmental functions, political processes, policy issues, and decision-making processes. Fulfills Social Sciences Foundation. Three credits. Offered every semester.

**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. Three credits. Offered every semester.

#### 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. Prerequisite: 102. Three credits. Offered fall semester of even-numbered years.

**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,

## Political Science

and Michigan politics and policy. Prerequisite: 102 or junior standing. Three credits. Offered fall semester.

**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. Prerequisite: 102 or junior standing. Offered winter semester.

**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. Three credits. Offered every semester.

**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. Prerequisite: 102 or junior standing. Three credits. Offered winter semester.

**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. Prerequisite: 102 or junior standing. Three credits. Offered fall semester.

**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. Prerequisite: 102 or junior standing. Part of Democracy Theme. Three credits. Offered fall semester.

**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. Prerequisite: 102 or junior standing. Part of Civil Rights Theme. Three credits. Offered winter semester.

**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. Prerequisite: 102 or junior standing. Three credits. Offered winter semester.

**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. Prerequisite: 102 or junior standing. Offered fall semester.

**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. Prerequisite: 102 or junior standing. Part of Religion Theme. Three Credits. Offered fall and winter semesters.

**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. Prerequisite: 102 or junior standing. Part of the Society and the Media theme. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 102, STA 215, and PLS 300. Three credits. Offered winter semester.

### 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, 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. Three credits. Offered every semester.

**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. Three credits. Offered winter semester.

**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. Prerequisites: 103 or 211 or junior standing. Part of Making War and Peace theme. Three credits. Offered fall and winter semesters.

**PLS 312 U.S. Foreign Policy.** Survey of factors and forces that shape the making and implementation of U.S. foreign and defense policy. Emphasis on the perceptions of decision-makers, the impact of the policy-making process on decisions, and actual policies made since World War II. Prerequisite: 102 or 103 or junior standing. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 103 or 211 or junior standing. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisite: 103 or 211 or junior standing. Three credits. Offered winter semester of odd-numbered years.

**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. Prerequisite: 103 or 211 or ECO 210 or 211. Students taking the course as part of the B.S. cognate must also have completed STA 215 and SS 300. Part of Global Change Theme. Three credits. Offered fall semester.

**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. Prerequisite: 221 (or concurrent enrollment). Three credits. Offered winter semester of odd-numbered years.

### 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. Three credits. Offered fall semester.

**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. Three credits. Offered winter semester.

**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. Three credits. Offered fall semester of even-numbered years.

**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



## Political Science

system in the United States with Russia and Eastern Europe. Fulfills World Perspectives requirement. Three credits. Offered winter semester.

**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. Three credits. Offered fall semester.

**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. Three credits. Offered fall semester.

**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. Prerequisite: 103 or 211 or junior standing. Three credits. Offered winter semester.

**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. Prerequisite: PLS 103, any comparative politics course or junior standing. Part of Democracy Theme. Three credits. Offered fall semester.

### 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. Three credits. Offered winter semester.

**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. Three credits. Offered fall semester.

**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. Prerequisite: Junior standing or permission of instructor. Three credits. Offered fall semester.

**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. Prerequisite: Junior standing or consent of instructor. Three credits. Offered fall and winter semesters.

### 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. Prerequisite: STA 215. Three credits. Offered every term, beginning fall 2005.

**PLS 380 Special Topics in Politics.** The study of special and interesting problems, domestic and/or international, will be scheduled from time to time. Three credits. Offered on sufficient demand.

**PLS 399 Readings in Political Science.** Independent advanced readings on selected topics. Prerequisites: Previous coursework in the area of interest and permission of the instructor supervising the reading. A maximum of six credits in 399 and 499 and no more than nine credits in 399, 499, and 490 may be taken. One to three credits. Offered on a credit/no credit basis. Offered fall and winter semester

**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

## Premedical, Predental, and Prepharmacy Studies

to a work experience. Prerequisites: junior status and permission of sponsoring instructor. Two to six credits. A maximum of six credits in 490 and no more than nine credits in 399, 499, and 490 may be taken. Offered on a credit/no credit basis. Offered every semester.

**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. Prerequisite: Senior standing in political science. Three credits. Offered fall and winter semesters.

**PLS 499 Independent Research.** Supervised individual research in an area of interest to the student which culminates in a research paper and oral report. Prerequisites: junior status and permission of the instructor supervising the research. A maximum of six credits in 399 and 499 and no more than nine credits in 399, 499, and 490 may be taken. Offered on a credit/no credit basis. Offered fall and winter semester.

## 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 health sciences, one year each of inorganic and organic chemistry, biochemistry, and one year of physics). Because these courses are part of the requirements for a number of majors at Grand Valley, no one specific major is recommended for premedical, predental, and prepharmacy students. Most premedical students at Grand Valley since 1980 have been biomedical sciences, biology, or chemistry majors. However, any major is possible as long as the student meets the science core requirements. Students should consult individual school bulletins for specific additional requirements.

Students are encouraged to decide on a major as soon as possible in their undergraduate career and to contact the Preprofessional Program Advisor or the S.M.A.R.T. Center at (616) 331-8585 to ensure that all necessary information is available to them. Premedical, prepharmacy, and predental students are encouraged to enroll in HS 480, Preprofessional Seminar, in the winter of their junior year. This course reviews testing and application procedures for medical, dental, optometry, podiatry and pharmacy schools.

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.

An interdisciplinary Preprofessional Committee, composed of faculty members in the departments of biology, chemistry, biomedical sciences, and the Office of Career Services, assists students in their preparation for professional school application.

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

### 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 sciences, 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 SMART Center (377 Padnos Hall). A program of first-year study will be configured for each student to support optimal progression and potential mobility between the programs of study.

### Psychology (PSY)

Chair: Hendersen. Professors: Adamopoulos, Bernstein, Hendersen, Herzog, C. O'Connor, Portko, Schaughency; Associate Professors: Bower Russa, Burns, D. Henderson-King, E. Henderson-King, McGhee, R. O'Connor, Jr., Paszek, Rodriguez-Charbonier, Shupe, Smith, Xu; Assistant Professors: Chen, Dueker, Galen, Gross, Lou, Matthews, Morris, Owen-DeSchryver, Rogers, Rotzien, Tarou, Tolman, Williams, Wolfe, Yarlans.

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 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

The department offers the B.A. and B.S. degrees. The B.A. requires third-semester proficiency in a foreign language. The B.S. degree cognate sequence requirement is STA 215, PSY 300, and PSY 400.

No more than six credit hours in PSY 399 and 499 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.

Requirements include a minimum of 12 courses in psychology totaling 36 hours of credit, including PSY 101, 300, 400, and 492. In addition, one course must be taken from each of the six following categories:

1. Biological: 375, 430, 431, 432.
2. Developmental: 301, 305, 331, 332, 364.
3. Personality/Clinical: 303, 324, 420, 452.
4. Social Context: 355, 360, 381, 445.

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5. Cognitive: 357, 361, 363, 365.
6. General: 311, 362, 405, 410.

Six hours of psychology courses may be of the student's choosing. (One of the following may be counted toward the major: SS 260, SS 261, SS 381, and SS 382).

### **Interdepartmental Majors**

The following programs are majors that combine psychology with other disciplines. Students should note that for each of these programs, no more than six credit hours of 399 and 499 may be counted toward the major.

#### **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. (See Behavioral Science, listed separately in the catalog, for details.)

#### **Biopsychology Major**

Students may earn either a B.A. or B.S. degree in biopsychology. The B.A. degree requires third-semester proficiency in a foreign language. For the B.S. degree, students must complete the degree cognate sequence from either the Psychology or Biology Departments: either STA 215, PSY 300, and PSY 430 or 431; or BIO 120, 375, and 376, and STA 215 or MTH 125 or MTH 201.

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

In addition, the related courses are required:

BIO 120 General Biology I  
BIO 355 Human Genetics, or  
    Biology 375/376 Genetics and Genetics Lab  
BIO 302 Comparative Vertebrate Anatomy  
BIO 352 Animal Behavior  
BIO 432 Comparative Animal Physiology  
CS 150 Introduction to Computing  
MTH 201 Calculus I  
STA 215 Introductory Applied Statistics  
CHM 109 Introductory Chemistry  
CHM 231 Introductory Organic Chemistry  
CHM 232 Biological Chemistry  
PHY 220 General Physics I  
PHY 221 General Physics II

In addition, students must take the capstone course from either the Biology (495) or Psychology (492) Departments.

#### **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

## Psychology

of the program, students are advised to declare their major early and consult with their advisors regularly. The required 36 hours of courses for the major are:

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

Choice of one:

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

ED 332 Methods and Strategies of Special Education Teaching or  
ED 362 Preteaching Hearing Impaired.\*  
ED 361 Principles, Processes, and Methods in Special Education or  
ED 352 Language and Communication (take for HI\* only)  
ED 495 Diagnostic and Interpretive Procedures

Choice of: ED 496 Educational Intervention: HI\*, or ED 497 Educational Intervention: CI, or  
ED 498 Educational Intervention: EI (depending on desired endorsement). \* See a College of Education advisor regarding status of the Hearing Impaired endorsement.

See the College of Education regarding available endorsement options.

Students must complete all of the required courses in General Education, the required courses in the Elementary Education minor (except Education 320 and 360) and all the required psychology courses (including PSY 310 and 326, which are required for endorsement but are not part of the major) by the time they enter the College of Education. Students should apply to the College of Education by February 1st for fall admission.

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 requirement is STA 215, PSY 300, and ED 495.

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).

### Requirements for Psychology Minors

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. Minors must take one course from three of the six categories listed above for the psychology major. No more than three credit hours in PSY 399 and 499 may be counted toward the minor. Psychology minors must take at least one-third of the credits constituting their minor from the psychology department.

#### Minor in Aging and Adult Life

The Psychology Department participates in the multidisciplinary minor in aging and adult life. See the "Aging and Adult Life" section for further information.

### 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.

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 retarded, 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. Three credits. Offered every semester.

**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. Prerequisite: 101 and STA 215. Three credits. Offered every semester.

**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. Only one of 301 or 364 may be counted toward a major or minor. Prerequisite: 101. Three credits. Offered every semester.

**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. Prerequisite: 101. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 101. Three credits. Offered every semester.

**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. Prerequisites: 101 and 301. Three credits. Offered every semester.

**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. Prerequisite: 101. Three credits. Offered on sufficient demand.

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**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. Prerequisites: 301 or 305 or 364. Three credits. Offered on sufficient demand.

**PSY 307 Application of Developmental Needs of Young Children.** An applied course that provides a survey of young children's abilities to understand, think, express, and interact, and the implementation of activities that support and enhance the development of those abilities. Prerequisite: 301 or 305 or 364. Three credits. Offered on sufficient demand.

**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. Prerequisite: 101. Three credits. Offered every semester.

**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?" Three credits. Offered once a year.

**PSY 315 The 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. Three credits. Offered winter semester.

**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. Prerequisite: 101. Three credits. Offered once a year.

**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. Prerequisite: PSY 101 and PSY 301. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 101 and 301. Three credits. Offered every semester.

**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. Prerequisites: 101 and 301. Three credits. Offered every semester.

**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. Prerequisite: 101. Three credits. Offered every semester.

**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. Prerequisite: 101. Three credits. Offered once a year.

**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. Three credits. Offered on sufficient demand.

**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,

## Psychology

interpersonal and intergroup behavior, and psychopathology. Part of World Perspectives theme. Prerequisite: 101. Three credits. Offered fall semester.

**PSY 357 Psychology of Language.** Psychology of Language is a discipline that focuses on psychology's insights into human language. Topics include biological bases of language; human language and other communication systems; lexical, sentence, and discourse processing; speech production and perception; acquisition of spoken and written language; bilingualism; and the relationship between language and thought. Three credits. Offered on sufficient demand.

**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. Prerequisite: PSY 101. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 101. Laboratory. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered once a year.

**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. Prerequisites: 101, and 300 or SS 300. Three credits. Offered once a year.

**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. Prerequisite: 101. One to three credits. Offered every semester.

**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. Prerequisite: 101. Offered summer and winter semesters.

**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. Prerequisite: 101. Three credits. Offered fall semester.

**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. Prerequisite: 101. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 101. Three credits. Offered on sufficient demand.

**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. Prerequisite: Junior standing. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Variable. One to four credits. Offered on sufficient demand.



## Psychology

**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. Prerequisite: PSY 101 or SOC 201. Three credits. Offered once a year.

**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. Prerequisite: PSY 101. Three credits. Offered winter semester.

**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. Prerequisite: Approval of instructor before registration. Students may not apply more than six credits (singly or combined) of 399 and 499 toward a major in psychology. Prerequisites: 101 and permission of instructor. One to three credits. Offered every semester.

**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. Prerequisites: 101, 300, and course in relevant content area, or permission of instructor. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 101, and 300 or SS 300. Three credits. Offered once a year.

**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. Prerequisite: PSY 101 and STA 215. Three credits. Offered fall and winter semester.

**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. Prerequisite: 101. Three credits. Offered every semester.

**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. Prerequisites: 101, and 300 or SS 300. Three credits. Offered fall and winter semesters.

**PSY 431 Introduction to Neuropsychology.** The physiology, organization, and functions of the human brain will be examined. Current problems and findings in sleep and dreaming, memory, consciousness, learning, and perception will be explored. Prerequisites: 101, and 300 or SS 300. Three credits. Offered summer and fall semesters.

**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. Prerequisite: PSY 101 and 300 or permission of instructor. Three credits. Offered fall semester.

**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. Prerequisite: 101. Three credits. Offered once a year.

**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. Prerequisites: 101 and 303. Three credits. Offered fall and winter semesters.

## Public and Nonprofit Administration

**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. Prerequisites: 101, permission of instructor. Six credits (three credits under special circumstances). Credit/no credit. Offered every semester.

**PSY 492 Advanced General: The capstone.** Survey of major viewpoints on research findings in contemporary scientific psychology. Emphasis on integration of those viewpoints and their relations to other disciplines, such as biology, medicine, social sciences, philosophy. Prerequisite: Senior standing. Three credits. Offered every semester.

**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. Prerequisites: 101 and permission of instructor. One to four credits. Offered every semester.

**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. Prerequisite: Permit only. Three credits. Offered on sufficient demand.

**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. Prerequisite: Permit only. Three credits. Offered winter semester.

**PSY 547 Working with Young Children with Autism.** This course will address the unique aspects of working with young children with autism spectrum disorder and their families. Students will learn about diagnosis, assessment, empirically supported interventions, curriculum development, working with a multidisciplinary team, and supported inclusion. Prerequisite: Permit only. Three credits. Offered on sufficient demand.

## The School of Public and Nonprofit Administration (PA)

Director: Balfour. Professors: Balfour, Mast, Orosz, Payne; Associate Professors: Jelier, Robbins, VanIwaarden; Assistant Professors: Borders, Grimm, Hoffman, Immergluck, Kimoto, Mavima, Sponholz.

Grand Valley State University offers both baccalaureate and master's programs in public administration. The programs are housed in the Social Sciences Division.

The mission of the School of Public and Nonprofit Administration is to educate students for lives of active citizenship 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 members of their local, national, and global communities.

### 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

## Public and Nonprofit Administration

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 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 organizations. The curriculum emphasizes general public 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 administration should seek the advice of faculty in the program, especially when choosing courses to fit various needs and interests.

The prerequisite for the public administration major is PLS 102. The public administration major consists of 36 credit hours, which includes three credit hours of required internship (PA 490). Students must complete 24 credit hours of courses by taking PA 307; and PA 270, 360, 375, 376, 420, and 495. Students must also complete three credit hours of elective by taking one of the following: PA 311, PA 330, PA 335, or PA 372. Majors seeking a B.A. degree must demonstrate third-semester proficiency in a foreign language. Majors seeking a B.S. degree must complete the cognate sequence STA 215, SS 300, and PA 439.

Students must also select one specialty consisting of at least nine credit hours for 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.

## Public and Nonprofit Administration

GPY 307 Introduction to Computer Mapping/Geographic Information Systems  
GPY 309 Introduction to City and Regional Planning (Required)  
HST 327 Urban History of the United States  
PLS 338 Citizenship  
SOC 382 Race and Ethnicity  
PA 390 Leadership Dynamics  
(The B.S. cognate course PA 439, Community Analysis, is also required.)

### Public Personnel Management.

PHI 325 Ethics in Professional Life  
LIB 331 Person and Profession  
MGT 334 Labor and Employment Law  
MGT 355 The Diversified Workforce  
PA 390 Leadership Dynamics  
MGT 432 Grievance Administration, Arbitration, and Collective Bargaining

### Information Technology

CS 231 Problem Solving Using Spreadsheets  
CS 233 Microcomputer Database Management  
CS 238 Desktop Media  
CS 237 Microcomputer Communications  
GPY 307 Introduction to Computer Mapping/Geographic Information Systems  
MGT 368 Management Information Systems  
GPY 407 Advanced GIS  
(The elective PA 311, Public Sector Information Technology, is also required)

### Local Economic Development

HTM 101 Fundamentals  
ECO 200 Business Economics  
BUS 201 Legal Environment for Business  
CAP 220 Fundamentals of Public Relations  
MGT 339 Business and Society  
ECO 435 Urban Economics  
ECO 436 Real Estate Economics

### Public and Nonprofit Budgeting and Finance

ECO 210 Introductory Macroeconomics  
ECO 211 Introductory Microeconomics  
ACC 212 Principles of Financial Accounting  
ACC 213 Principles of Managerial Accounting  
CS 231 Problem Solving Using Spreadsheets  
FIN 331 Risk and Insurance  
PA 335 Grant Writing

### Community Health

OSH 110 Introduction to Occupational Safety and Health  
REC 110 Foundations of Recreation and Leisure  
COM 209 Health Communication Systems  
HS 220 Health Care Delivery  
HS 222 Introduction to Public Health  
PLS 310 Politics and Health Policy  
HS 340 Health Care Management  
MKT 350 Marketing Management  
(The elective PA 330, Health Care Financing, is also required)

## Public and Nonprofit Administration

### Minor in Public Administration

To earn a minor in public administration, students are required to complete the following 21 credits: PA 307 Local Politics and Administration or PLS 203 State Politics; PA 270 Public 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.

### 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.

The minor in nonprofit administration consists of 21 credits. The required courses are: PA 270 Public Administration, PA 335 Grant Writing, PA 360 Voluntarism and the Nonprofit Sector, PA 420 Organization Theory and Dynamics, and PA 490 Internship I. Two courses are to be selected from the following: PA 311 Public Sector Information Technology, PA 376 Public Personnel Policy and Administration, PA 491 Internship II, PA 439 Community Analysis, MGT 355 The Diversified Workforce, MKT 350 Marketing Management, PA 390 Leadership Dynamics, and SW 453 Case Management.

### Undergraduate Courses of Instruction

**PA 270 Public 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. Three credits. Offered every semester.

**PA 307 Local Politics and Administration.** Comparative study of government systems, rural and urban. Students specialize in their own governments. Part of Cities Theme. Three credits. Offered every semester.

**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. Three Credits. Offered winter semester.

**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. Three credits. Offered winter semester.

**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. Three credits. Offered fall semester.

**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

## Public and Nonprofit Administration

sector's interdependence with government and business and its basis in philanthropy and democracy are interwoven throughout the topics. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered on sufficient demand.

**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. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Permission of instructor. Three credits. Offered on sufficient demand.

**PA 390 Leadership Dynamics.** Examines and applies leadership issues, concepts, and situations that are evident in various community and public or nonprofit organizational contexts. Prerequisites: Sophomore standing. Three credits. Offered once a year.

**PA 399 Independent Readings in Public Administration.** Independent, supervised readings on selected topics that are not dealt with in depth in another course. Prerequisite: Junior or senior status and permission of instructor. One to three credits. Offered on a credit/no credit basis. Offered every semester.

**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. Prerequisites: 270 and senior standing. Three credits. Offered fall and winter semesters.

**PA 439 Community Analysis.** Basic analytical concepts, including group dynamic skills, housing and land use surveys, historic district analysis, and neighborhood identification. Three credits. Offered every semester.

**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. Prerequisite: Junior or senior status, permission of instructor, and completion of an application form obtained during the semester before the internship. Three credits. Offered on a credit/no credit basis. Offered every semester.

**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. Prerequisites: Senior status, permission of instructor, and completion of an application form obtained during the semester before the internship. Three credits. Offered on a credit/no credit basis. Offered every semester.

**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. Prerequisite: Senior standing. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Senior status and permission of instructor. Three credits. Offered on a credit/no credit basis. Offered every semester.

## Master of Public Administration

M.P.A. graduates are leaders. They lead their communities and organizations on the basis of advanced administrative skills with a dedication to democratic values

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and public service. In today's global society, such leadership takes many forms and occurs in a variety of settings. The mission of the graduate programs in public and nonprofit administration is to develop both the general knowledge and specific abilities needed for leadership in a fast changing world. The M.P.A. curriculum is designed to prepare students to act ethically and effectively in public management/urban and regional affairs, nonprofit management, criminal justice, and health care administration, and to transcend traditional boundaries in the pursuit of prosperous, safe, and healthy communities.

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 M.P.A. degree.

### **Admission**

The minimum requirements are listed in the Admissions section of the 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 M.P.A. program offers workshops on a credit or no-credit basis. The format and scheduling of the workshops as well as other coursework are flexible and may include weekend meetings. Students are admitted to the workshops with advisor approval. No more than three credits of workshops may be applied to fulfill degree requirements.

## Public and Nonprofit Administration

### 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.

### M.P.A. Degree Requirements

The M.P.A. degree consists of a minimum of 39 credit hours of coursework. Pre-career students must take 3 credit hours of internship (PA 690/691) 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

Students must also select one concentration specialization of 15 credit hours.

### Concentrations (15 credit hours)

#### Public Management

PA 615 Public Financial Management  
PA 620 Metro 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 Public Service

#### Urban and Regional Policy and Planning

PA 615 Public Financial Management  
PA 616 Public Policy Analysis  
PA 620 Metropolitan Politics and Administration  
PA 641 Economic and Community Development  
PA 644 GIS in 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 Organization and Public Policy  
PA 665 Nonprofit Boards, Trustees, and Governance OR  
PA 641 Economic and Community Development



## Public and Nonprofit Administration

### Criminal Justice

CJ 601 Criminal Justice Leadership  
CJ 604 Criminal Justice Policy  
PA 615 Public Financial Management

#### AND SELECT TWO OF THE FOLLOWING:

CJ 602 Legal and Ethical Issues  
CJ 603 Community and Media Relationships  
CJ 605 Program Evaluation *or*  
CJ 606 Information Systems  
CJ 680 Special Topics Workshop\*  
PA 680 Special Topics Seminar\*  
Electives (at least 9 credits)

### Electives

PA 531 Accounting for Public Managers  
PA 535 Grant Writing  
PA 610 Economic Analysis for Public Administration  
PA 635 Hospital Organization and Management  
PA 637 Ambulatory Care Organization and Management  
PA 638 Long-Term Care Organization and Management  
PA 639 Issues in Occupational Health  
PA 649 Marketing Health and Human Services  
PA 680 Special Topics Seminar

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 550–559 Public Administration Workshops  
PA 560–569 Special Topics Workshops

Students may take up to three hours of the following:

PA 699 Directed Readings

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

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 Proposal  
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

\*One to three credits. May be used as elective hours.

## Masters Of Health Administration

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.
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 Introductory Workshop  
PA 551 Mid-point Workshop  
PA 552 Capstone Workshop  
PA 661 Nonprofit Management Practices  
PA 662 Nonprofit Resource and Financial Management  
PA 663 Nonprofit Organization and Public Policy  
PA 665 Nonprofit Boards, Trustees, and Governance

## Masters Of Health Administration (MHA)

The mission of the MHA program at Grand Valley is to educate and prepare individuals for managerial and leadership roles and to enhance the practice of health care administration. The program centers on inter-disciplinary learning experiences that integrate classroom study, applied research, professional development, and field experience. 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.

### MHA 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 cover 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

## Masters Of Health Administration

field experience with other members of the health professions and health care managers. The program consists of a total of 45 credit hours.

### Core Level I (12 credits)

PA 630: Health Administration and Service

PA 611: Research Methods

PA 612: Human Resources in Organizations OR MGT 633: Management of Human Resources

PA 614: Organization Theory OR BUS 631: Leadership and Organizational Dynamics

### Core Level II (12 credits, 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 (12 credits)

1. *Health Services Management* (Prerequisites: PA 630 — may be concurrent)  
**Required:** PA 643: Strategic Management and Planning OR MGT 635: Planned Change and Organizational Development  
**Select 3:** NUR 646: Nursing Administration, PA 635: Hospital Administration, PA 637: Ambulatory Care Organization and Management, PA 638: Long Term Care Organization and Management, PA 640: Marketing Health and Human Services  
**OR**
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 Management OR PA 662: Nonprofit Resource and Financial Management  
**OR**
3. *Health Policy Analysis* (Prerequisites: PA 630 and PA 631 — may be concurrent)  
**Required:** PA 616: Policy Analysis  
**Select three:** PA 644: GIS in Public Service, SW 610: Social Welfare Policy and Services, SW 676: Community and Social Planning, CJ 605: Program Evaluation

### Level IV: Capstone (Prerequisites: Levels I and II and one course in specialization (9 credits))

Select 3:

PA 690: Internship

NUR 648: Administrative Practicum

HPR 625: Health Professions Leadership

PA 619: Management Seminar

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.

## Graduate Courses of Instruction

**PA 520 Foundations of Public Management.** An exploration of administrative management functions, structures, and methods and their intersection with organizational behavior. 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.

## Masters Of Health Administration

Primary focus will be on agencies and issues in the public sector. Three credits. Offered fall and winter semesters.

**PA 535 Grant Writing.** Instruction in finding grant sources, writing grants, developing grant budgets and evaluating grant proposals. As part of this course, students will be expected to write and submit at least one actual grant proposal. Three credits. Offered once a year.

**PA 550-555 Public Administration Workshops.** 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. One to three credits. Offered on sufficient demand.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered on sufficient demand.

**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. Prerequisites: Admission to the M.P.A. program or permit. Appropriate background in statistics, computer science, and research methods. Three credits. Offered every semester.

**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. Three credits. Offered summer and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 520 or equivalent. Three credits. Offered fall semester.

**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. Prerequisite: 520, 611, 614, 615, and at least nine credits in a concentration. Three credits. Offered winter semester.

**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. Prerequisite: Completion of other required courses. Three credits. Offered fall and winter semesters.

**PA 620 Metropolitan Politics and Administration.** Examines theories and practice of metropolitan politics and administration, including studies of intergovernmental relations, suburbia and the multi-centered metropolis, economic development, and managing metropolitan services. Structures of politics and power both formal and informal are investigated. Prerequisite: 520 or permission. Three credits. Offered summer and fall semesters.

**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 officials and liability of public managers are covered. Prerequisite: 520 or permission. Three credits. Offered fall semester.

**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 makes the course particularly relevant for those in leadership positions. Three credits. Offered on sufficient demand.

## Masters Of Health Administration

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered every other year.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered fall semester.

**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. Prerequisite: PA 611 and 615, and admission to the M.P.A. program or permit. Three credits. Offered winter semester.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered winter semester.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered winter semester.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered on sufficient demand.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered fall semester.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered winter semester.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered on sufficient demand.

**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

## Masters Of Health Administration

federal enabling legislation and regulations; local ordinance and public—private partnership alternatives. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered winter semester.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered on sufficient demand.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall semester.

**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. Prerequisite: Admission to the M.P.A. program or permit. Three credits. Offered fall semester.

**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. Prerequisites: 520, 660, and admission to the M.P.A. program or permit. Three credits. Offered winter semester.

**PA 662 Nonprofit Resource and Financial Management.** After a brief review of nonprofit finance and accounting, course examines resource development and fundraising. Presents a philanthropic view that fundraising should be “mission driven and volunteer-centered.” Topics include direct mail fundraising, planned giving, grant seeking, and philosophies and ethics of fundraising. Prerequisites: 520, 660, and admission to the M.P.A. program or permit. Three credits. Offered winter semester.

**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. Prerequisites: 520, 660, and admission to the M.P.A. program or permission. Three credits. Offered fall semester.

**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. Prerequisites: 520, 660, and admissions to the M.P.A. program or permit. Three credits. Offered every other year.

**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. One to three credits. Offered on sufficient demand.

**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. Prerequisites: Admission to M.P.A. program and completion of applicable course requirements. Permission of instructor. Three credits. Offered on a credit/no credit basis. Offered every semester.

**PA 691 Public Administration Internship II.** A second internship. May be taken concurrently with 690 when field experience warrants it, or may be taken after 690 by those taking an additional fieldwork experience. Prerequisites: 690. Permission of instructor. Three credits. Offered on a credit/no credit basis. Offered every semester.

## Russian Studies

**PA 693 Research Project.** Course requires preparation of an extensive research and writing assignment under faculty supervision. Prerequisite: Faculty approval of research proposal. Three credits or six credits. Offered on sufficient demand.

**PA 695 Master's Thesis.** Preparation of an extensive research and writing assignment under faculty supervision. Prerequisite: Faculty approval of research proposal. Requires thesis committee. Three or six credits. Offered fall and winter semesters.

**PA 699 Directed Readings.** A research or reading project, program proposal, or other approved activity that builds in the student's area of specialization. Prerequisite: Permission of advisor. Three credits. Offered on a credit/no credit basis. Offered fall and winter semesters.

## 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 (Russian 101, 102, 201, 202, 301, 302) and a total of 36 hours, which must include the following courses: Russian 301, 302; History 389, 390, 391; Russian Studies 331, 332, 333; Russian Studies 495; and three courses to be chosen from among Economics 365, Geography 350, Political Science 282, or Russian Studies 225, 380, and 499. These three may not all be Russian Studies courses but must include at least one from among geography, political science, or economics. Students must also complete

## Science

a senior thesis and pass a comprehensive oral examination, both of which are components of RST 495, the capstone course.

### Requirements for a Minor

Requirements for a minor in Russian studies include two years of Russian (Russian 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 History 389, 390, and 391; Russian Studies 331, 332, 333, or 380 (when the topic deals with Russian literature); Political Science 282; Geography 350; or Economics 365; and three hours of Russian Studies 380 or Russian Studies 225; and three hours of Russian Studies 399 (to be in the area of the student's major interest).

### Courses of Instruction

**RST 225 Introduction to Russian Culture.** Concentrates on Russian culture as the Russian way of life and as the contribution Russia has made to civilization in general. Students should gain an understanding of Russia through an investigation of its past, its present, and its contrasts with the United States and the West. Fulfills World Perspectives requirement. Three credits. Offered winter semester of even-numbered years and summers.

**RST 331 Russian Literature in Translation, 1800–1880.** Survey of major writers of the period, including Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, and Tolstoy. A supplemental writing skills course. Prerequisite: Fulfillment of the composition requirement for SWS credit. Fulfills Philosophy and Literature foundation. Three credits. Offered fall semester of odd-numbered years.

**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. Prerequisite: Fulfillment of the composition requirement for SWS credit. Three credits. Offered winter semester of even-numbered years.

**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. Prerequisite: Fulfillment of the composition requirement for SWS credit. Fulfills Philosophy and Literature foundation. Three credits. Offered fall semester of even-numbered years.

**RST 380 Special Topics in Russian Studies.** Offered on sufficient demand.

**RST 399 Independent Reading.** One to four credits. Offered fall and winter semesters.

**RST 495 Russia in Context (capstone).** Interdisciplinary exploration of the so-called “accursed questions” that arise in any study of Russian cultural and intellectual history, literature, and the arts. Senior thesis and oral comprehensive examination required. Prerequisite: Senior standing with a major in Russian studies (others only with permission of coordinator). Three credits. Offered winter semester in odd-numbered years.

**RST 499 Independent Study and Research.** One to four credits. Offered fall and winter semesters.

## Science

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 Major for Elementary Teacher Certification

Coordinator: Joseph; Program Faculty: Ambrose, Burton, Golden, Goossen, Henderleiter-Aldrich, Hessler, Huizenga, Mattox, Oliver, Soman, Tanis, Vail, Vigna.



## Social Science

The integrated science major is designed for students seeking certification to teach at the elementary school level. It provides the pre-service teacher broad exposure in all the sciences and emphasizes the connections between 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 2.8 GPA in each. The following requirements must be completed for the major

### Major Requirements

1. SCI 319.
2. Earth and Space Sciences: GEO 201, GEO 202, GEO 203, and PHY 205.
3. Life Science: BIO 120, BIO 121, BIO 205, and BIO 206.
4. Physical and Chemical Sciences: CHM 109\* or CHM 201\*, PHY 200, and PHY 201.
5. Capstone: SCI 495.

### Elementary Teaching Minor

1. ENG 308, MTH 221\* and 222,\* or 223.
2. ART 230 or MUS 350.
3. One course chosen from WRT219, ENG 309, ENG 307, or any foreign language course.
4. PED 305 or CTH 366.
5. One course chosen from ECO 210, ECO 211, HST 203, HST 204, HST 205, HST 206, PLS 102, SOC 280, or GPY 235.

Students must earn at least a 2.8 GPA in the major and minor requirements listed above in order to teacher assist, student teach, and receive approval for teacher certification.

### Courses of Instruction

The following are interdisciplinary science and/or mathematics courses. They may be approved for various degree requirements. Consult your advisor for further information and approval.

**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 standards and the Michigan Curriculum Framework for Science. Fulfills Life Sciences Foundation (3-0-2). Four 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.

**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.

**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.

## Social Science (SS)

The following are interdisciplinary social science courses. Some count for general education and/or for various social science majors. Consult with your advisor for further information.

\* Satisfies B.S. degree cognate requirement for the major.

## Social Studies

**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. Prerequisite: STA 215. Three credits. Offered every semester.

**SS 313 The Africans.** An intensive study of the three traditions (Native, Christian, and Islamic) that have shaped Africa's past and that will have an impact on its future. It is a fundamental assumption of this course that contemporary Africa can only be understood and appreciated in the total context of the triple heritage. Three credits. Offered on sufficient demand.

**SS 324 Urbanization.** An examination of the process of urbanization and the impact it has on various cultures. Considers the dynamic growth of urbanization in third world countries and the significant increase in global urbanization, emphasizing the evolution of cities over time, space, and vastly different social, political, and cultural environments. Fulfills World Perspectives requirement. Part of Cities Theme. Three credits. Offered summer semester.

**SS/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. Prerequisite: completion of the social sciences foundation category of general education. Part of The New Third World theme. Offered winter semester.

**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 the Death and Dying Theme. Prerequisite: Junior standing. Three credits. Offered summer and winter semesters.

## Social Studies (SST)

Coordinator: Smither.

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 2.8 as well as a GPA of 2.8 in the major and minor. Students may earn the B.A. or the B.S. degree. Students seeking the B.A. must demonstrate third-semester proficiency in a foreign language; students seeking the B.S. complete STA 215, SS 300, and ED 205. Students who decide not to seek teacher certification may complete the Social Studies major and receive a bachelor's degree without completing the professional program in education; such students may graduate with a GPA lower than 2.8 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

## Social Work

a record substantially equivalent to that required of Grand Valley 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:

HST 203 World History to 1500  
HST 204 World History since 1500  
HST 205 American History to 1877  
HST 206 American History since 1877  
GPY 100 Physical Geography  
GPY 235 World Regional Geography  
PLS 206 American Constitutional Foundations  
PLS 211 International Relations  
ECO 210 Macroeconomics  
ECO 211 Microeconomics  
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 or 304 or 305; PLS 221 or 327 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 ECO 312 and 313 and two economics courses.

### 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. Prerequisite: Junior standing or consent of the instructor. Three credits. Offered every term.

**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. Prerequisite: Senior standing in the major; one semester fieldwork in school (may be concurrent). Three credits. Offered every term.

## The School of Social Work (SW)

Dean: Mulder. Professors: Chung, Guevara, Haynes, McFadden, Mulder, Schott, Swanson; Associate Professors: Bolea, Golensky, Grant, Jr., Johnson; Assistant Pro-

## Social Work

fessors: Borst, Green-Smith, Shands-Baab, Smith; Affiliate Professors: Gabrielse, Gough, List, McNitt; Visiting Professor: Lopez-Arias and Schuurman, Directors: Lehker, Edwards, Owens.

The mission of the School of Social Work is to prepare 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.

### **The Bachelor of Social Work Program**

Director: Grant, Jr.

The Bachelor of Social Work Program is accredited by the Council on Social Work Education.

#### **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 be prepared for entry into the profession as generalist social work practitioners.
2. To demonstrate basic understanding of the common human needs of people, especially populations at risk, and the communities in which they live and/or work.
3. To identify social problems affecting persons and their environments and how they influence individuals, families, small groups, organizations, and communities.
4. To demonstrate increasing progress in the development of self-assessment, the professional self, and in competent practice sensitive to cultural and human diversity.
5. To be committed to social change in pursuit of economic and social justice.
6. To use their social work knowledge, skills, and values to enhance the quality and delivery of social services to the individual, small group, family, organization, and community.
7. To learn to utilize state of the art technology effectively to enhance their own knowledge and on behalf of the client population.
8. To be prepared to enter the second professional level of social work through graduate education.

Bachelor of Social Work graduates have been employed in a wide range of social service agencies serving all kinds 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 316, 317,

## Social Work

319, and 340. Application procedures are explicated in the first class session 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. Earned a minimum grade of B- (2.7) in the International relations course.
5. 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 “Declaration of Major” form and seek advisement from the coordinator 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 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 SW 150, 316, 317, 318, 319, 340, 341, 348, 430, 490, 491, 492, 493, 495, and six credits from the list of Social Work Electives. The student must earn an overall G.P.A. of 3.0 in Social Work courses and not have repeated a course more than once. Also required are three credits from the list of International Program Courses. Cognate requirements include: BIO 103, ECO 210 or 211 or SOC 385, PLS 102, PSY 101 and 303, PSY/SOC 360, SOC 201, 280 or 384, 382 or SW 300, and STA 215.

SW 430 is designed specifically for students who are candidates for the B.S.W. degree and is taught by School of Social Work faculty. This course examines basic methods employed primarily in social work research.

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

WRT 150 Strategies in Writing—Basic Skills	4
MTH 110 Algebra—Basic Skills	4

**Social Work**

Physical Science (non lab)	3
SW 150 Human Needs in Complex Societies—Gen. Ed.—Soc. Sci.	3
Arts Foundation	3
	17 credits

**Second Semester—Winter**

Philosophy and Literature Foundation	3
BIO 103 Biology of People—Life Sciences (lab)	4
Historical Perspectives Foundation	3
PSY 101 Introduction to Psychology—Social Sciences	3
SOC 201 Introduction to Sociology—Social Sciences	3
	16 credits

**Second Year**

**Third Semester—Fall**

U.S. Diversity Course	3
PLS 102 American Government—Social Sciences	3
World Perspectives Course	3
PSY/SOC 360 Social Psychology	3
Free elective (see Recommended List)	3
	15 credits

**Fourth Semester—Winter**

ECO 210 or ECO 211 Macro- or Microeconomics or SOC 385 Social Inequalities	3
PSY 303 Psychopathology	3
International Relations Program course (see Recommended List)	3
SOC 382 Minority and Ethnic Relations or SW 300 Pluralism in American Society	3
SOC 280 Social Problems or SOC 384 Sociology of Drug Use and Abuse	3
	15 credits

**Third Year**

**Fifth Semester—Fall**

WRT 305 Writing in the Disciplines	3
SW 316 Interviewing, Recording, and Reporting	3
SW 317 Generalist Practice I	3
SW 319 Social Welfare Policy and Services	3
SW 340 Human Behavior and Social Environment I	3
	15 credits

Students must have candidacy for B.S.W. degree to take the social work courses listed below.

**Sixth Semester—Winter**

STA 215 Statistics I- Gen. Ed. Math Sci. Foundation	3
Free electives (see Recommended List)	1
SW 318 Generalist Practice II	3
SW 341 Human Behavior and the Social Environment II	3

**Social Work**

SW 348 Field Practicum Laboratory	2
General education theme course-1	3
	<hr/>
	15 credits

**Fourth Year****Seventh Semester—Fall**

SW 430 Social Work Research	4
SW 490 Field Practicum in Social Work I	3
SW 492 Field Practicum in Social Work Seminar I	1
Social Work elective (see list)	3
General education theme course-2	3
	<hr/>
	14 credits

**Eighth Semester—Winter**

SW 491 Field Practicum in Social Work II	3
SW 493 Field Practicum in Social Work Seminar II	1
SW 495 Senior Seminar in Social Work (capstone)	3
Social Work elective (see list)	3
General education theme course-3	3
	<hr/>
	13 credits

**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
- SW 439 The Family and Social Work Practice
- SW 450 Law and Social Work
- SW 453 Case Management
- SW 460 Special Topics in Social Work
- SW 461 Multicultural Issues in Social Work
- SW 499 Independent Study in Social work (one to four credits)

**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
- SW 354 Social Work: International Service (one time only)
- SS 313 The Africans
- SS 351 Gender and Family in the Third World
- PLS 211 International Relations
- PLS 313 International Organization
- PLS 327 Politics of Developing Countries

**Recommended Free Electives**

Note: Students are not restricted to this list.

- ANT 204 Introduction to Cultural Anthropology
- PA 270 Public Administration
- PA 439 Community Analysis

## Social Work

PHI 102 Ethics  
PHI 325 Ethics in the Professional Life  
PSY 310 Behavior Modification  
PSY 316 The Psychology of Human Intimacy and Sexuality  
SS 381 Death and Dying  
SOC 379 Love, Sex, and Gender  
SOC 383 Sociology of Women  
SOC 390 Advanced Seminar in Social Issues  
WGS 200 Introduction to Gender Studies  
WGS 360 Contemporary Feminist Theory  
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. Practicum instruction is undertaken in sequence during the senior year. At the end of the junior year, students are required to complete and submit to the Office of Field Education an Application for Field Practicum in Social Work. The minimum requirements for entering practicum are

1. An overall 2.5 GPA.
2. A minimum B- grade in International Relations and specified cognate courses.
3. A 2.7 GPA in specified cognate and an overall 3.0 GPA in social work courses.
4. Maintenance of official "candidacy status."
5. 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.

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. Three credits. Offered fall, winter, and spring/summer semesters.

**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. Three credits. Offered Fall and Winter Semesters. Prerequisite: Jr. Standing. General Education Theme Course; SW elective or Cognate Course Requirement.

**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



## Social Work

participants. Recording and reporting skills specifically related to social work practice are taught and case materials from different fields of practice are employed. Prerequisite: SOC 382. Three credits. Offered fall semester.

**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. Prerequisites: 150 and concurrent with 316, 319, 340. Three credits. Offered fall semester.

**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. Prerequisites: Candidacy and 316, 317, 319, and 340. Concurrent second semester social work curriculum. Three credits. Offered winter semester.

**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. Prerequisite: PLS 102 and ECO 210 or 211 or SOC 385. Three credits. Offered fall semester.

**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. Prerequisites: 319. Three credits. Offered fall semester.

**SW 322 Health Care and Social Services.** Part of Health, Illness and Healing theme. 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. Prerequisite: Jr. Standing. Three credits. Offered fall and winter semester. General Education Theme Course.

**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. Prerequisites: BIO 103, SOC 382, or SW 300, PSY/SOC 360, PSY 303, SOC 280 or 384, and concurrent with 316, 317, 319. Three credits. Offered fall semester.

**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. Prerequisite: Candidacy for B.S.W. degree, SW 340, and concurrent with 318, 348. Three credits. Offered winter semester.

**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. Prerequisite: Concurrent with 318. Two credits. Offered winter semester.

**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. Prerequisite: Candidacy or permission of instructor. Three and four credits. Offered spring/summer semester.

**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. Prerequisite: 319, 340, and 317. One to four credits. Offered every other fall semester.

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**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 491/493. Prerequisites: STA 215 and concurrent with SW 490/492. Four credits. Offered fall semester.

**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. Prerequisite: 317, Concurrent with 318, 341. Three credits. Offered winter semester.

**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. Prerequisite: 318, 319, and 341. Three credits. Offered every other fall semester.

**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. Prerequisite: 317, 318, 341. Three credits. Offered fall semester.

**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. Prerequisite: 319, 319, 340. Three credits. Offered winter semester.

**SW 470 Contemporary Social Policy Issues.** The development of a conceptual framework for understanding and analyzing social policy issues. Contemporary problems such as poverty, unemployment, low-income, homelessness, inadequate health care, malnutrition, and changes in family structure are covered. Strategies for policy change examined. Prerequisite: 319. Senior standing. Three credits. Offered every other fall semester.

**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. Prerequisites: Candidacy, 348, and concurrent with 492 and social work research. Three credits. Offered on a credit/no credit basis. Offered fall semester.

**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. Prerequisites: 490, 492, social work research, and taken concurrently with 493 and 495. Three credits. Offered on a credit/no credit basis. Offered winter semester.

**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. Prerequisite: Taken concurrently with 490. One credit. Credit/no credit. Offered fall semester.

**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. Prerequisite: Taken concurrently with 491. One credit. Credit/no credit. Offered winter semester.

**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. Prerequisites: 490; taken concurrently with 491 and 493. Three credits. Offered winter semester.

**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

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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-level professional practice and leadership roles in the development and implementation of social welfare policies, programs, and services.

The program is built on a humanistic and democratic philosophy that promotes the values of social justice and responsibility, respect for human rights, dignity, and diversity, and a commitment to an egalitarian and humane social order.

The curriculum is predicated upon the assumption that social workers should operate from a common base of knowledge, values, skills, and philosophy. These components are transmitted through a solid core of foundation and advanced-level courses.

The first year introduces students to the characteristics of social work practice (values, ethics, processes, etc.). The second year develops students' competence in multi-level assessment, intervention, and evaluation modalities with diverse client systems.

The framework for the M.S.W. curriculum is an Advanced Generalist perspective. This perspective, anchored in an "ecological systems" model of practice, is based on the premise that human problems derive from a complex interplay of psychological, social, economic, political, and physical forces. This framework recognizes the reciprocal effects of environmental conditions on the human condition. The curriculum is therefore designed to produce professional practitioners who are knowledgeable about problems and needs at various systemic levels and who are capable of using a range of interventive theories, roles, methods, and skills for competent clinical and macro-social work practice.

#### **Program Goals**

The School's Advanced Generalist curriculum is designed to foster an integration of theory and practice and to inculcate in students practice-relevant knowledge and skills. This is derived from carefully devised and systematically structured courses in Methods of Social Work Practice, Human Behavior and the Social Environment, Social Welfare Policy and Services, Social Research and Field Education. The School of Social Work seeks to produce knowledgeable and competent professionals who can meet these specific goals:

1. To provide social work education at both Bachelor and Master levels.
2. To award the degree to graduates who are competent social work practitioners and capable to fulfill leadership and scholarly roles in our local, state, regional, national, and global communities.
3. To contribute to the on-going development of professional social work knowledge and practice through research and scholarly inquiry which employ state of the art technology.

4. To respond to opportunities to provide services to the social welfare and human services communities.

### Admission and Academic Requirements

For general requirements, see the Admission section of the 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 multicultural 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.

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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 program. Admissions decisions are promptly communicated in writing to each applicant. Because of limited class size the Admissions Committee is not able to accept all qualified applicants.

### **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 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 school practicum placement must take SW 650 Field Education I/SW 651 Field Education Seminar I during the winter 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. A minimum GPA of 3.5 in social work courses from a CSWE accredited baccalaureate program may

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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, 601, 603, 610, and 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 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 non-degree seeking status. A maximum of six semester credits earned at Grand Valley State University as a non-degree seeking student may be considered for transfer to degree seeking status. Enrollment as a non-degree seeking student does *not* guarantee formal admission to the M.S.W. program. Non-degree status students are limited to SW 600, 601, 610, and 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 started. 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

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Students must also take the following courses in human behavior, policy, and research (12 hours):

SW 622 Psychopathology and Social Deviance  
SW 612 or 613 or 614 or 616, or 618, or 619 Social Policy: Families and Children, Human Rights and Social Work, Mental Health, Law, Ethics and Social Welfare, Contemporary Social Policy for Elders, or Comparative Social Welfare Policy  
SW 693 Social Research II  
SW 640 Seminar in Advanced Generalist Practice (Capstone)

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 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/Children

### **Group B (micro-elective)**

SW 662 Substance Abuse and Social Work Practice  
SW 665 Aging In Contemporary Society  
SW 667 Holistic Practice in Social Work  
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 Service Administration

### **Group D (macro-elective)**

SW 630 Social Work: Global Service-Learning  
SW 660 Grant Writing and Resource Development  
SW 679 Program Planning, Monitoring, and 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, B, C, D.  
One course from Group A, B, C, 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

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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. All students seeking certification for school social work are required to take SW 664, Social Work Practice in Schools, in addition to the 60 credit hours required for the M.S.W. degree. In addition to taking required courses, the advanced practice courses must include two of SW 672, SW 673, and/or SW 674; one of SW 660 or SW 662; SW 677, SW 678; and a SW elective; and the Advanced Policy course SW 612. Students must consult with the school social work advisor.

### Graduate Courses of Instruction

**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 Social Work Foundations.** 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. Three credits. Offered fall and winter semester.

**SW 603 Integrated Methods.** Prerequisite for advanced practice course enrollment. Examines theories, goals, and processes relevant to Advanced Generalist social work practice. Focus is on social systems theory, social work roles, theories, and skills necessary to implement processes for achieving desired outcomes in practice with individuals, families, groups, organizations, and communities. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 610. Three credits. Offered spring/summer semester.

**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



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and protecting mental and physical health, community well being and family functioning and promoting and protecting human rights.

**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. Prerequisite: 610. Three credits. Offered spring/summer semester.

**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. Prerequisite: 610. Three credits. Offered every other year.

**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. Three credits. Offered winter semester

**SW 619 Comparative Social Welfare Policy.** Analysis of U.S. and Host Country's Welfare Policy/Practice. Prerequisite: SW 610. Three credits. Offered summer semester.

**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. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 600 and 620. Three credits. Offered winter and spring/summer semesters.

**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. Prerequisite: 600, 603, 610, and 620. Three or four credits. Offered spring/summer semester.

**SW 640 Seminar in Advanced Generalist Practice.** A broadening of student knowledge of the professional foundation for practice across populations-at-risk. Students will identify and develop individual topics. (May be taken only once.) Must be taken concurrently with 654/655. Three credits. Offered winter semester.

**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. Prerequisites: 600, 601, 603, and 620. Offered on a credit/no credit basis. Three credits. Offered spring/summer and winter semesters.

**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. Concurrent with 650. Offered on a credit/no credit basis. One credit. 15 clock hours. Offered spring/summer and winter semesters.

**SW 652 Field Education II.** A continuation of 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. Prerequisites: 650 and 651. Three credits. Offered on a credit/no credit basis. Offered fall semester.

**SW 653 Field Education Seminar II.** Continuation of 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. Prerequisites: 650 and 651 and concurrent with 652. Offered on a credit/no credit basis. One credit. 15 clock hours. Offered fall semester.

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**SW 654 Field Education III.** A continuation of 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. Prerequisites: 650, 651, 652, and 653 and concurrent with 654, 640. Three credits. Offered on a credit/no credit basis. Offered winter semester.

**SW 655 Field Education Seminar III.** A continuation of 653 with emphasis on evaluation skills and demonstration of knowledge, values, and skills required of Advanced Generalist practitioners in field education placements. Prerequisites: 652 and 653 and concurrent with 650, 651, 652, 653, 654, and 640. Offered on a credit/no credit basis. One credit. 15 clock hours. Offered winter semester.

**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. Three credits. Offered winter semester.

**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. Three credits. Offered winter semester.

**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. Prerequisite: 600, 601, 603, 610, and 620. Four credits. Offered spring/summer and winter semesters.

**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 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, biofeedback, massage, qigong, and yoga, among others, as social holistic practice. Focuses on stress management, energy, and capacity development through mind, body, and spirit dynamic application for holistic health and self-actualization. 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. Prerequisite: 603 Three credits. Offered fall and winter semesters.

**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. Prerequisite: 603 Three credits. Offered fall semester.

**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. Prerequisites: 603. Three credits. Offered fall semester.

**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. Prerequisite: 603. Three credits. Offered fall and winter semesters.

**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. Prerequisites: 603. Three Credits. Offered winter semester.

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**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. Prerequisites: 603. Three credits. Offered fall semester.

**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. Prerequisite: 603. Three credits. Offered winter and summer semester.

**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. Prerequisite: 603. Three credits. Offered fall semester.

**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. Prerequisites: 603 or permission of the instructor. Three credits. Offered winter semester.

**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. Prerequisites: Second year standing and prior approval of faculty advisor. One to four credits. Offered fall semester.

**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. Three credits. Offered winter and spring/summer semesters.

**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. Prerequisite: 690. Three credits. Offered spring/summer and fall semesters.

**SW 694 Master's Thesis.** Faculty-supervised study and research on a subject approved by the student's advisor and committee. Prerequisites: 690 and 693 and consent of thesis advisor. Three credits. Offered fall, winter, and spring/summer semesters.

**SW 695 Master's Thesis.** Continuation of faculty-supervised research and writing on a subject approved by the student's advisor and committee. Prerequisites: Successful completion of 694 and consent of thesis committee. Three credits. Offered fall, winter, and spring/summer semesters.

**SW 699 Independent Study.** Independent study of an issue related to social welfare or social work theory or practice. Prerequisite: Approval of advisor and faculty member directing the study. Three credits.

## Sociology (SOC)

Chair: Kennedy. Professors: deYoung, Kennedy, McCrea, Williams, Yu; Associate Professors: Joannisse, Stephens, Malaret, Rynbrandt, Whit; 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.

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 or Minor in Sociology

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. The B.A. degree requires third-semester proficiency in a foreign language. The B.S. degree cognate sequence requirement is STA 215, SOC 304, and SOC 360.

#### Core Courses (27 hours)

SOC 201 Introduction to Sociology  
SOC 304 Analysis of Sociological Data  
SOC 360 Social Psychology: Sociology's View  
SOC 382 Race and Ethnicity  
SOC 285 Social Class Inequality  
SOC 400 Classic Social Theory  
or 401 Contemporary Sociological Theory  
SOC 490 Practicum: Career Service  
SOC 495 Senior Seminar in Sociology Capstone  
Three (3) hours in Anthropology

## Sociology

### Electives (9 Hours)

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.

### 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, 280, 304, 360, 382, 385, 400 or 401.

### 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.

### Sample Curriculum—Sociology

#### First Year

WRT 150 Strategies in Writing  
MTH 110 Algebra  
SOC 201 Introduction to Sociology  
ANT elective  
General education courses  
Electives (or foreign language)

#### Second Year

SOC 304 Analysis of Sociological Data  
SOC 360 Social Psychology: Sociology's  
View  
SOC 382 Race and Ethnicity  
STA 215 Introductory Applied Statistics  
General education courses  
Electives (or foreign language)

## Sociology

### Third Year

WRT 305 Writing in the Disciplines  
SOC 360 Social Psychology  
SOC 382 Race and Ethnicity  
SOC 490 Practicum: Career Service  
General Education Theme Courses  
Electives

### Fourth Year

SOC 400 Classic Social Theory  
or SOC 401 Contemporary Sociological  
Theory  
SOC 495 Senior Seminar in Sociology  
Capstone  
General Education Theme Courses  
Electives

### Sample Curriculum—Behavioral Science

#### First Year

ANT 204 Introduction to Cultural  
Anthropology  
WRT 150 Strategies in Writing  
MTH 110 Algebra  
PSY 101 Introductory Psychology  
SOC 201 Introduction to Sociology  
General Education Course  
Electives (or Foreign Language)

#### Second Year

STA 215 Introductory Applied Statistics  
PSY Elective  
SOC 382 Race and Ethnicity  
General Education Course  
SS 300 Research Methods in the Social  
Sciences  
Electives (or Foreign Language)

#### Third Year

WRT 305 Writing in the Disciplines  
SOC 360 Social Psychology: Sociology's  
View  
Elective  
SOC electives  
PSY elective  
General Education Theme Course

#### Fourth Year

SOC 495 Senior Seminar in Sociology  
Capstone  
Electives  
SOC electives  
PSY elective  
General Education Theme Course

### Courses of Instruction

**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. Three credits. Offered every semester.

**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. Three credits. Offered fall semester.

**SOC 251 Criminology.** An analysis of crime, criminal behavior, and punishment through a variety of historical and contemporary theoretical perspectives. Sociology 251 is equivalent to Criminal Justice 301. Students may receive credit for only one of these classes. Three credits. Offered on sufficient demand.

**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. Three credits. Offered fall semester.

**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. Three credits. Offered every semester.

## Sociology

**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. Three credits. Offered on sufficient demand.

**SOC 304 Analysis of Sociological Data.** Examination of the basic methods of empirical research in sociology. Focus on collection, analysis, and interpretation of data. Prerequisite: Six hours in sociology or consent of instructor. Three credits. Offered winter semester.

**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. Three credits. Offered every semester.

**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. Three credits. Offered fall semester.

**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. Prerequisites: 201 or ANT 204 or permission from the instructor. Three credits. Offered odd-numbered years.

**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. Three credits. Offered winter semester.

**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. Prerequisite: 201. Three credits. Offered winter semester.

**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. Three credits. Offered fall and winter semesters.

**SOC/WGS 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. Three credits. Offered winter semester.

**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. Prerequisite: Sociology 201. Sociology 360 is not equivalent to Psychology 360. Students may receive credit for both courses. Three credits. Offered every semester.

**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. Three credits. Offered fall semester.

**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. Part of Gender and Identity theme. Three credits. Offered winter semester.

**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. Prerequisite: Junior standing. Three credits. Offered fall and winter semesters.

## Sociology

**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. One to three credits. Offered On sufficient demand.

**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 American Mosaic theme. Prerequisite: 201 or 280. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 201. Three credits. Offered every semester.

**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. Three credits. Offered on sufficient demand.

**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. Three credits. Offered every semester.

**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. Prerequisite: Junior standing. Three credits. Offered fall and winter semesters.

**SOC 386 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. Offered fall semester.

**SOC 387 Sociology of Adolescence.** Focuses on adolescence through various sociological paradigms. Identifies conceptual differences in adolescence, including social, cross-cultural, and historical constructions. Examines textual and narrative materials on the agency of adolescence. Also, challenges many assumptions about the adolescent experience. Prerequisite: SOC 201. Three credits. Offered winter semester.

**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. Three credits. Offered winter semester of even-numbered years.

**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. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered on sufficient demand.

**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. Three credits. Offered winter semester.

**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 399 and 499 combined may count toward a major or three hours of 399 and 499 combined toward the minor. Prerequisites: 201 and the written consent of the instructor before registration. Offered every semester.

**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. Prerequisite: Six hours in sociology. Three credits. Offered fall semester.



## Statistics

**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. Prerequisite: Six hours in sociology. Three credits. Offered winter semester.

**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. Prerequisites: SOC 201 or GPY 220; STA 215. Three credits. Offered fall semester.

**SOC 490 Practicum: Career-Service.** Agency experience in the community relating practical training and independent study in a specialized area. Limited to 10 credits maximum. Prerequisites: 15 hours of course preparation and permission of instructor. One to nine credits. Offered on a credit/no credit basis. Offered every semester.

**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. Prerequisites: Senior standing in the department and written permission of instructor before registering. Three credits. Offered fall and winter semesters.

**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 399 and 499 combined may count toward a major or three hours of 399 and 499 combined toward the minor. Prerequisites: Nine hours in the department and written permission of instructor before registration. Offered on a credit/no credit basis. Offered every semester.

## Social Science Courses

The following are interdisciplinary social science courses that may be used for a sociology major or minor. Consult your advisor for further information.

**SS 300 Research Methods in the Social Sciences.** Examination of basic investigatory 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. Prerequisite: STA 215. Three credits. Offered every semester.

**SS/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 New Third World theme. Three credits. Offered winter semester.

**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. Prerequisite: Junior standing. Three credits. Offered summer and winter semesters.

## Statistics (STA)

Chair: Stephenson. Professor: Hong, Jinn; Associate Professors: Rogness, Stephenson; Assistant Professors: Anderson, Curtiss, Gabrosek, Otieno, Reischman, Richardson, Zeitler; Affiliate Faculty: Siehling; Visiting Instructor: Salinas.

Degrees Offered: B.S., B.A. in statistics; minors in applied statistics and statistics. The statistics major and minors are offered by the Department of Statistics within the College of Liberal Arts and Sciences. The major and both minors lead to

exciting opportunities in industry or graduate school. All interested students are strongly encouraged to contact the Statistics Office. The mathematics major and minors are described in the mathematics section of this catalog.

### Career Opportunities

Successful college graduates are those who have strong mathematical, statistical, and computer skills and are able to effectively communicate statistical results to nonstatistical audiences. Employers are eagerly seeking men and women who have these types of skills. Grand Valley's statistics major will equip you with the skills needed to meet the increasing demands of business and industry for people who can provide leadership in making management 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 administration, 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. It is necessary to use statistics to evaluate sample surveys that determine public opinions or the extent of social problems in our society.

Another exciting area that requires the use of statistics is that of 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 laws in automobile losses and determine appropriate rate discounts, calculate the price to charge for insuring a satellite launch, and 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 Major in Statistics

Students must complete the following requirements:

1. University degree requirements as identified in the General Academic Regulations section of the catalog.
2. Statistics Requirements (29 credits)

## Statistics

All majors must complete the following statistics core courses (23 credits):

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\*

All majors must complete two of the following statistics elective courses (6 credits):

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

### 3. Cognate Requirements (16 credits)

The following cognates are required of all students majoring in statistics:

MTH 201 Calculus I\*\*  
MTH 202 Calculus II\*\*  
MTH 227 Linear Algebra I  
CS 162 Computer Science I \*\*

### 4. Application Cognates (a minimum of six 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.

### Sample Curriculum 1

#### First Year

##### Fall

MTH 201 Calculus I

##### Winter

MTH 202 Calculus II  
CS 162 Computer Science I

#### Second Year

##### Fall

STA 312 Probability and Statistics  
MTH 227 Linear Algebra I

##### Winter

STA 216 Intermediate Applied Statistics

\*Satisfies capstone course requirement for a statistics major.

\*\*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.

## Statistics

### Third Year

#### Fall

STA 315 Design of Experiments  
One of the statistics electives

#### Winter

STA 311 Introduction to Survey Sampling  
STA 319 Statistics Project

### Fourth Year

#### Fall

STA 412 Mathematical Statistics I  
One of the statistics electives

#### Winter

STA 415 Mathematical Statistics II

## Sample Curriculum 2

### First Year

#### Fall or Winter

STA 215 Introductory Applied Statistics

### Second Year

#### Fall

STA 216 Intermediate Applied Statistics  
MTH 201 Calculus I  
CS 162 Computer Science I

#### Winter

One of the statistics electives  
MTH 202 Calculus II

### Third Year

#### Fall

STA 315 Design of Experiments  
MTH 227 Linear Algebra I

#### Winter

STA 311 Introduction to Survey Sampling  
STA 319 Statistics Project

### Fourth Year

#### Fall

STA 412 Mathematical Statistics I  
One of the statistics electives

#### Winter

STA 415 Mathematical Statistics II

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.

## 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).

All minors must complete the following statistics core courses (six credits):

STA 215 Introductory Applied Statistics or STA 312 Probability and Statistics  
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 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

## Statistics

STA 412 Mathematical Statistics I  
STA 415 Mathematical Statistics II  
STA 416 Multivariate Data Analysis

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.

### 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).

All minors must complete the following core courses:

STA 312 Probability and Statistics  
STA 216 Intermediate Applied Statistics  
STA 412 Mathematical Statistics I  
MTH 201 Calculus I  
MTH 202 Calculus II

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 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  
STA 416 Multivariate Data Analysis

### 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. Prerequisite: MTH 110 or equivalent. Fulfills Mathematical Sciences Foundation. Three credits. Offered every semester.

**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. Prerequisite: 215 or 312. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 216. Three credits. Offered winter semesters on sufficient demand.

**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. Prerequisite: 216. Three credits. Offered winter semesters.

## Statistics

**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. Prerequisite: MTH 201. Three credits. Offered fall and winter semesters.

**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. Prerequisites: MTH 202 and either STA 215 or EGR 103. Co-requisite: MTH 302 or MTH 227. Three credits. Offered winter semester.

**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. Prerequisite: 215 or EGR 103. Three credits. Offered fall and winter semesters.

**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. Prerequisite: 216 or 312 or 314. Three credits. Offered fall semesters.

**STA 316 Advanced Applied Statistics.** Principles of experimental design and multivariate analysis using a statistical package such as SAS or SPSS. Multivariate regression, analysis of variance, general linear model designs, special designs such as factorial model, time-series analysis, cluster analysis, discriminant analysis, and factor analysis. Prerequisite: 216. 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. Prerequisite: 216. Three credits. Offered winter semesters on sufficient demand.

**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. Prerequisite: 215. Three credits. Offered on sufficient demand.

**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. Prerequisite: 216. Three credits. Offered winter semesters.

**STA 321 Applied Regression Analysis.** Multivariate regression analysis with emphasis on application using a statistical software package. Topics include method of least squares, residual analysis, collinearity, data transformation, polynomial regression, general linear model, selecting a best regression model, and logistic regression. Prerequisite: 216. Three credits. Offered fall semesters on sufficient demand.

**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. Prerequisite: STA 215 or STA 312. Three credits. Offered fall and winter semesters.

**STA 380 Special Topics.** Readings, lecture, discussions, or lab (or any combination) in specific statistics topics. Prerequisites depend upon topic selected. Permission of the instructor required. One to three credits. Offered on sufficient demand.

**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. Prerequisite: either 215 or 312, and MTH 202. Four credits. Offered fall semester.

## Therapeutic Recreation

**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. Prerequisites: 412 and MTH 227. Four credits. Offered winter semester.

**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. Prerequisites: 216. Three credits. Offered fall semesters on sufficient demand.

**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. Graded credit/no credit. Prerequisite: Junior status and permission of the instructor. Offered fall and winter semesters. 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. One to three credits. Offered fall and winter semesters.

**STA 513 Probability and Statistics for Engineers.** Application-oriented introduction to topics in probability and statistics commonly encountered in engineering. Descriptive statistics, discrete and continuous probability distributions, sampling distributions, estimation of and hypothesis testing for parameters, and linear regression analysis. Prerequisites: MTH 201 and either STA 215 or EGR 103. Two credits. Offered the second half of fall semesters on sufficient demand.

**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. Prerequisite: 215 or equivalent. Three credits. Offered fall, winter, and summer semesters.

**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. Prerequisites: 513 or 312 or 314. Three credits. Offered winter semesters on even numbered years.

**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. Prerequisites: 215. Three credits. Offered fall semesters.

## Therapeutic Recreation (REC)

Director: Beck. Associate Professor: Beck,

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,

## Therapeutic Recreation

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.

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.



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- 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 catalog.
2. Therapeutic Recreation Core:
  - REC 110 Foundations and Philosophy of Recreation
  - 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 Field Work in Recreation
  - REC 404 Issues in Recreation and Leisure (capstone) (SWS)
  - 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 380 Special Topics
4. Cognates:
  - BIO 120 General Biology I
  - CHM 109 Introductory Chemistry
  - CHM 230 Introduction to Organic and Biochemistry
  - HS 208 Human Anatomy
  - HS 290 Human Physiology
  - HS 291 Human Physiology Laboratory
  - MOV 300 Kinesiology

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MOV 304 Physiology of Activity  
 PSY 101 Introductory Psychology  
 PSY 303 Abnormal Behavior  
 PSY 364 Life-Span Developmental Psychology  
 HPR 111 Medical Terminology  
 HPR 220 Health Care Delivery  
 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 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		Winter	
CHM 109 Introductory Chemistry	5	BIO 120 General Biology I	4
FS 100 Freshman Seminar	1	WRT 150 Strategies in Writing	4
MTH 110 Algebra	4	HPR 220 Health Care Delivery	2
PSY 101 Introductory Psychology	3	General education course	3
General education course	3	General Education	3
	16		16

### Second Year

Fall		Winter	
REC 110 Foundations of Recreation/ Leisure	3	SHP 111 Medical Terminology	2
REC 111 Foundations of Therapeutic Recreation	3	HS 208 Human Anatomy	3
CHM 230 Introduction to Organic & Biochemistry	5	REC 200 Leisure Education	3
General education course	3	REC 253 Diagnostic Groups in Therapeutic Recreation	3
	14	STA 215 Introductory Statistics	3
			14

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### Third Year

Fall		Winter	
HS 290 Human Physiology	3	ENG 305/General education course	3
HS 291 Human Physiology Lab	1	PSY 364 Life Span Development	3
REC 256 Therapeutic Recreation Programming	3	REC 310 Intervention in Therapeutic Recreation	3
REC 308 Recreation Leadership	3	REC 313 Therapeutic Recreation for Physical Disability*	3
General education course	3	Theme Course	3
	<u>13</u>		<u>3</u>
			12/17

### Summer

REC 318 Fieldwork in Therapeutic Recreation (300 hours)  
Eligibility: 80 percent competence in REC-designated courses.

### Fourth Year

Fall		Winter	
MOV 300 Kinesiology	3	MOV 304 Physiology of Activity	3
REC 315 Therapeutic Recreation in Mental Health*	3	REC 317 Therapeutic Recreation for Pediatrics*	3
REC 316 Therapeutic Recreation with the Elderly*	3	REC 404 Issues in Recreation/Leisure	3
REC 407 Assessment and Evaluation in Therapeutic Recreation	3	REC 405 Administration of Therapeutic Recreation	3
PSY 303 Abnormal Psychology	3	Theme Course	3
	<u>3</u>		<u>3</u>
	9/15		12/15

### 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). Three credits. Offered fall semester.

**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). Three credits. Offered fall semester.

**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) Three credits. Offered winter semester.

**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). Prerequisites: 110 and 111. Three credits. Offered winter semester.

**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. Prerequisite: 253. (2-1-0). Three credits. Offered fall semester.

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**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. Co-requisite: 256. (2-1-0). Three credits. Offered fall semester.

**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. Prerequisites: 256 and 308. (2-1-0). Three credits. Offered winter semester.

**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. Prerequisite: 310 or permission of instructor. (2-1-0). Three credits. Offered winter semester.

**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. Prerequisite: 310, PSY 303, or permission of instructor. (2-1-0). Three credits. Offered fall semester.

**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. Prerequisite: 310 or permission of instructor. (2-1-0). Three credits. Offered winter semester.

**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. (2-1-0) Three credits. Offered winter semester.

**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. Graded credit/no credit. Three credits. Offered every semester.

**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. Prerequisite: Permission of instructor. One to four credits. Offered on sufficient demand.

**REC 399 Independent Readings and Special Activities.** Special studies in therapeutic recreation upon consultation with faculty advisor and approval of director of the School of Health Sciences. One to three credits. Offered every semester.

**REC 404 Issues in Recreation and Leisure (capstone).** An overview of current issues in parks, and recreation and therapeutic recreation. (2-1-0). Three credits. Offered winter semester.

**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. Prerequisite: 318. (2-1-0). Three credits. Offered winter semester.

**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. Prerequisite: 310. (2-1-0). Three credits. Offered fall semester.

**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). Prerequisites: Senior standing, last semester of program, and satisfactory completion of the therapeutic recreation core. Twelve credits. Offered every semester.

**REC 499 Independent Study and Research.** Special studies in therapeutic recreation upon consultation with faculty advisor and director of the School of Health Sciences. One to three credits. Offered every semester.

## University Studies

### University Studies (US)

Coordinator: Seeger.

**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.

**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. Three credits. Offered fall and winter semesters.

### Women and Gender Studies Minor (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, and bisexual 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. In addition, some students 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 or with families who have experienced domestic violence.
- A psychology major who plans to do graduate work and then specialize in counseling women, gays, or lesbians.
- An international studies major who will work in a developing country and wants to be aware of women-in-development issues.
- A literature or history or philosophy major who plans to do doctoral work and make gender issues his or her specialty.

#### Requirements for a Women's Studies Minor

All students take three core courses: WGS 200 Introduction to Gender Studies, WGS 360 Contemporary Feminist Theory, and WGS 400 Senior Project, 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

## Women and Gender Studies

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 315 Psychology of Sex Differences  
SOC 379 Love, Sex and Gender  
SOC 381 Class, Race, Gender and Sexuality  
SOC 383 Sociology of Women  
SOC 389 Child Maltreatment  
SOC 323 Families in Society  
WGS 110 Women in Transition  
WGS 236 Introduction to Writing by Women  
WGS/CJ 310 Sexual Orientation and the Law  
WGS/CJ 320 Crimes Against Women  
WGS 324 Introduction to Lesbian and Gay Studies  
WGS/SS 351 Family & Gender in the Developing World  
WGS/AAA 352 Black Women's Culture and Communities  
WGS/LS 370 Women and the Law  
WGS/COM 373 Women and Minorities in Film and Television  
WGS/SOC 375 Perspectives on Masculinity  
WGS 380 Special Topics in Women and Gender Studies  
WGS 399 Independent Readings in Women and Gender Studies  
WGS/SPA 460 Spanish Women Authors

In addition to the courses listed above, other courses that have a significant amount of the course devoted to the study of 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

**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 future of African American males. Three credits. Offered winter semester.

**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. Part of Gender, Society, and Culture theme. Fulfills World Perspectives requirement. Prerequisite: AAA 204 or 206. Three credits. Offered winter semester.

**BIO 325 Human Sexuality.** Introduction to the biological dimensions of human sexuality from physiological, ecological, and evolutionary perspectives. Three credits. Offered winter semester.

**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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered winter semester.

**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,

## Women and Gender Studies

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.

**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. Prerequisites: Completion of foundation courses and one 300-level literature course. Offered in winter semester of even-numbered years.

**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. Prerequisites: HST 205, 206 or junior standing. Three credits. Offered winter semester, even-numbered years.

**HST 371 History of Gender, Family, and Sexuality.** Explores the history of gender, family, and sexuality in selected modern European and North American countries. Examine how men's and women's roles, the demographics of and ideas about family life, and understandings of sexuality have changed over time. Prerequisite: HST 204 or junior standing. Three credits. Offered winter semester of odd-numbered years.

**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. Prerequisite: Prior work in philosophy, or permission of instructor. Three credits. Offered winter semester, odd-numbered years.

**PSY 315 Psychology of Sex Differences.** An investigation of the extent, origin, and consequences of sex differences. First reviews the research on sex differences, then considers the etiology of differences via psychological, biological, primate behavior, cross-cultural and social conditioning perspectives. Three credits. Offered winter semester.

**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 theme. Three credits. Offered every semester.

**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. Prerequisite: Junior standing. Three credits. Offered fall and winter semesters.

**SOC 381 Class, Race, Gender and Sexuality.** Focus is on the social, historical, and cultural meanings of class, race, and gender. Gives students a better understanding of the interrelationship of class, race, and gender within the context of family life, schooling, and work. Prerequisite: SOC 201 or 280. Fulfills U.S. Diversity theme. Part of American Mosaic theme. Three credits. Offered fall and winter semesters.

**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. Prerequisite: SOC 201 or permission of instructor. Three credits. Offered every semester.

**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. Three credits. Offered fall and winter semesters.

**WGS 110 Women in Transition.** Designed for women who are coming to college after having been away from school for several years. Focus on career and life planning, including a self-assessment of interests, strengths, and values. Three credits. Offered on a credit/no credit basis. Offered once a year.

**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. Three credits. Offered fall and winter semesters.

**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

## Women and Gender Studies

significant attention to minority women writers. Three credits. Offered fall semester of odd-numbered years.

**WGS/CJ 310 Sexual Orientation and the Law.** An examination of legal and policy issues relating to sexual orientation including constitutional law, criminal law, family law, and employment law. A multidisciplinary approach, including substantive and procedural legal issues, legal thought, women's and gender studies, and philanthropy. Part of Gender and Identity theme. A dual listing of CJ 310. Offered winter semester.

**WGS/CJ 320 Crimes Against Women.** An in-depth study of crimes committed almost exclusively against women, including sexual harassment, rape, and certain types of murder. Taught within the framework of feminist theory and research. Part of Gender and Identity theme. Three credits. A dual listing of CJ 320. Offered fall and winter semesters.

**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. Three credits. Offered winter semester.

**WGS/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. Prerequisite: completion of the social sciences foundation category of general education. Part of New Third World theme. Three credits. A dual-listing of SS 351. Offered winter semester.

**WGS/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. Part of Gender and Identity theme. Fulfills U.S. Diversity requirement. Three credits. Offered fall semester.

**WGS 360 Contemporary Feminist Theory.** Focuses on the development of contemporary feminist thought. Feminist theory acknowledges no single orthodoxy. Rather it includes an interdisciplinary examination of liberal, radical, cultural, and socialist feminism. As the world economic systems become increasingly integrated, it becomes important for feminists to think and act globally and locally. Three credits. Offered winter semester of even-numbered years.

**WGS/LS 370 Women and the Law.** This course is an overview of the American 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. Three credits. A dual listing of LS 370. Offered winter semester.

**WGS/COM 373 Women and Minorities in Film and Television.** An examination of American film and television from the perspective of those social groups whose participation in the industry has been restricted both in front of and behind the camera. Three credits. A dual listing of COM 373. Offered every other year.

**WGS/SOC 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 Gender and Identity theme. Three credits. Offered winter semester.

**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. Three credits. Offered on sufficient demand.

**WGS 399 Independent Readings.** Independent supervised readings in selected topics. Prerequisite: Permission of program coordinator. One to three credits. Offered on a credit/no credit basis. Offered every semester.

**WGS 400 Senior Project.** A service or career oriented supervised practicum or project designed by student and participating faculty member. Prerequisites: Junior standing or higher, declared WGS minor, and permission of instructor. One to six credits. Offered every semester.



## Writing

**WGS/SPA 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. Prerequisite: SPA 330. Three credits. A dual listing of SPA 460. Offered fall semester in odd-numbered years.

## 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 this 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

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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 (12 credits):

WRT 200 Introduction to Professional Writing  
WRT 210 Writing with Style  
WRT 219 Introduction to Creative Writing  
ENG 226 American Literature II

#### Creative Writing Track Requirements (27 credits):

Literature (9 cr.):  
Any three 200-level literature (ENG) courses

Genre Studies (18 cr.):

Take all three courses in two of the following three genre groups:

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### Poetry

WRT 320 Intermediate Poetry Workshop  
ENG 320 Studies in Poetry  
WRT 420 Advanced Poetry Workshop

### Fiction

WRT 330 Intermediate Fiction Workshop  
ENG 330 Studies in Fiction  
WRT 430 Advanced Fiction Workshop

### Drama

WRT 340 Intermediate Drama Workshop  
ENG 340 Studies in Drama  
WRT 440 Advanced Drama Workshop

### Professional Writing Track Requirements (27 credits):

#### *Rhetoric and Design* (six credits):

COM 203 Argument and Analysis  
WRT 251 Document Production and Design

#### *Creative Writing Elective* (three credits):

WRT 320 or 330 or 340

#### *Professional Writing* (nine credits):

WRT 350 Business Communication  
WRT 351 Writing for the World Wide Web  
WRT 360 Intermediate Nonfiction Workshop

#### *Professional Emphasis* (nine credits):

English (ENG 225, ENG 261, ENG 313)  
or Journalism (CJR 236, CJR 256, CJR 270)  
or Public Relations (CAP 220 and 321, CJR 256)

### Capstone Requirement for All Majors (three credits):

WRT 495 Genre and Writing

## 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 (nine credits):

WRT 200 Introduction to Professional Writing  
WRT 219 Creative Writing Workshop  
ENG 320 Studies in Poetry  
or ENG 330 Studies in Fiction  
or ENG 340 Studies in Drama  
or ENG 360 Studies in Nonfiction

### Writing Electives (nine credits—choose any three courses):

WRT 350 Business Communication  
WRT 351 Writing for the World Wide Web  
WRT 360 Intermediate Nonfiction Workshop  
WRT 320 Intermediate Poetry Workshop

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WRT 330 Intermediate Fiction Workshop  
WRT 340 Intermediate Drama 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.

***Fisbladder: 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.

**Just Desserts.** 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 writing, playwriting, and memoir writing. Workshops are conducted by Grand Valley faculty and local writers, with assistance by current writing students.

### Courses of Instruction

**WRT 098 Writing with a Purpose.** Students draft essays to develop fluency, voice, purpose, and structure. They also learn revision and editing skills. Students work one hour per week with a peer consultant from the Writing Center. Four (non-graduation) credits. Offered fall and winter semesters.

**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. WRT 150 is a prerequisite for any SWS course. Four credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall semester.

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**WRT 219 Introduction to Creative Writing.** Introduction to the theory and practice of various forms of creative writing. Students write poetry, fiction, and drama and also read literature in each genre. Prerequisite: Fulfillment of the Freshman Writing Requirement and completion of at least one literature course. Three credits. Offered fall and winter semesters.

**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. Three credits. Offered winter semester.

**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. Prerequisite: Fulfillment of the Freshman Writing Requirement and current employment by the Writing Center. One credit. May be repeated one time for credit. Offered each semester.

**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. Prerequisite: WRT 219. Three credits. Offered fall semester.

**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. Prerequisite: WRT 219. Three credits. Offered fall and winter semesters.

**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. Prerequisite: WRT 219. Three credits. Offered fall semester.

**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. Prerequisite: Completion of the Freshman Writing Requirement. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Completion of the Freshman Writing Requirement. Three credits. Offered fall semester.

**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. Prerequisites: Fulfillment of First-Year Writing Requirement and one 200-level WRT course. Three credits. Offered fall and winter semesters.

**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. Prerequisite: Fulfillment of the Freshman Writing Requirement. Three credits. Offered fall semester.

**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

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the major or minor. Prerequisite: Fulfillment of the Freshman Writing Requirement. One to four credits. Offered fall and winter semesters.

**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. Prerequisite: WRT 320. Three credits. Offered winter semester.

**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. Prerequisite: WRT 330. Three credits. Offered fall and winter semesters.

**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. Prerequisite: WRT 340. Three credits. Offered winter semester.

**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. One to three credits. Offered every semester.

**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. Prerequisites: Writing core courses and senior standing. Three credits. Offered winter semester.

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## 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 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 full-time 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).

**Co-requisite:** 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.

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**Drop and add:** The process of making certain changes (dropping and adding classes) in a student's schedule of courses during the first five class days of the semester. Adding courses is possible only in this five-day period. See the class schedule for deadlines to drop courses.

**Dual credit:** An option applying to courses that may be taken for either graduate or undergraduate credit provided the student obtains special permission.

**Elective:** A course that will count as 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.

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**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.

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**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.

**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.

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Frederick Antczak, B.A., University of Notre Dame; M.A., Ph.D., University of Chicago.

### **Dean of the Kirkhof College of Nursing**

Phyllis E. Gendler, B.S.N., University of Michigan; M.N., Ph.D., Michigan State University.

### **Dean of College of University-wide Interdisciplinary Initiatives**

Wendy Wenner, B.A., Carleton College; M.A.T., Northwestern University; Ph.D., Marquette University.

### **Dean of Academic Resources and Special Programs**

Mary A. Seeger, B.A., University of Minnesota; Ph.D., University of Wisconsin.

### **Dean of Continuing Education**

Patricia Lipetzky, B.S., College of St. Francis; M.S., Ph.D., University of Minnesota.

### **Dean of Graduate Studies and Grants Administration**

Priscilla Kimboko, B.A., Ph.D., Portland State University.

### **Dean of Multicultural Affairs**

Oliver Wilson, B.S., M.P.A., University of Wyoming.

### **Interim Dean of University Libraries**

Robert Beasecker, A.B., Hillsdale College; A.M.L.S., University of Michigan.

### **Director of Institutional Analysis**

Philip Batty, B.A., University of Illinois; M.A., Tulane University.

## Directory

### Faculty

**Aboufadel, Edward F** (1995), Associate Professor of Mathematics. B.S., Michigan State University; Ph.D., Rutgers University.

**Abramson, Marty** (1987), Associate Professor of Education. B.A., University of Wisconsin-Green Bay; Ph.D., University of Wisconsin-Madison.

**Adamczyk, Bogdan** (1999), Assistant Professor of Engineering. B.S., M.S., University of Nevada-Reno; Ph.D., Oakland University.

**Adamopoulos, John** (1992), Professor of Psychology. B.A., Yale University; A.M., Ph.D., University of Illinois.

**Adams, Allison R.** (1998), Assistant Professor of Hospitality and Tourism Management. B.S., M.B.A., Central Michigan University.

**Adams, D. Robert** (1998), Associate Professor of Computing and Information Systems. B.S., Northern Kentucky University; M.S., Ph.D., University of Kentucky.

**Akbulut, Asli Yagmur** (2003), Assistant Professor of Management. B.S., M.B.A., Ankara University, Turkey; M.S., A.B.D., Louisiana State University.

**Albrecht, Richard** (2000), Associate Professor of Movement Science. B.S., M.A., Ph.D., Michigan State University.

**Alderink, Gordon** (1984), Assistant Professor of Physical Therapy. B.A., Hope College; M.S., University of Michigan, Ph.D., Michigan State University.

**Alexander, Nancy** (1994), Instructor of Mathematics. B.S., M.Ed., Grand Valley State University.

**Allaben, Susan** (1994), Assistant Professor of Physical Therapy. B.S., University of Wisconsin; M.S., Central Michigan University.

**Al-Mallah, Majd** (2002), Assistant Professor of Modern Languages. B.A., University of Jordan; M.A., Ph.D., Indiana University.

**Alsabbagh, Jamal** (2000), Associate Professor of Computing and Information Systems. B.Sc., M.Sc., University of Wales; M.S., Ph.D., University of Southwestern Louisiana.

**Alston, Brenda Lorraine** (1998), Assistant Professor of Education. B.S., M.A., Hampton University; Ph.D., Bowling Green University.

**Alvarez, David** (1997), Assistant Professor of English. B.A., Polytechnic of Central London; M.A., Ph.D., University of Texas.

**Ambrose, Bradley S.** (1999), Assistant Professor of Physics. B.S., Yale University; M.S., Ph.D., University of Washington.

**Anderson, Kirk** (2003), Assistant Professor of Statistics. B.S., M.S., Ph.D., Western Michigan University.

**Anderson, Peter J.** (2004), Assistant Professor of Classics. B.A., M.A., University of Ottawa; Ph.D., University of Cincinnati.

**Anderson, Rachel S.** (2004), Assistant Professor of English. B.A., University of Iowa; M.A., Ph.D., Indiana University.

**Anton, Corey** (1998), Associate Professor of Communications. B.A., University of Wisconsin; M.S., Illinois State University; Ph.D., Purdue University.

**Anyalebechi, Princewill N.** (2001), Assistant Professor of Engineering. T.E.C. Higher Diploma, West Bromwich College of Commerce and Technology; M.Sc., Ph.D., Brunel University.

## Directory

- Arendsen, Carl** (1973), Professor of Mathematics. B.A., M.A., Western Michigan University; Ph.D., Michigan State University.
- Armstrong, Dorothy** (1983), Professor of Education. B.A., Wheaton College, Massachusetts; M.E.A.S., University of Wisconsin-Green Bay; Ph.D., Union Graduate School.
- Austin David M.** (1999), Associate Professor of Mathematics. B.A., M.A., Rice University; Ph.D., University of Utah.
- Bacon-Baguley, Theresa** (1991), Associate Professor, Physician Assistant Studies. B.S.N., Michigan State University; Ph.D., Wayne State University.
- Bailey, Kathleen** (1995), Associate Professor of Criminal Justice. B.S., Central Michigan University; M.A., Ed.D., Western Michigan University.
- Bair, David E.** (1997), Assistant Professor of Education. B.A., The College of Wooster; Ed.D., University of Michigan.
- Bajema, Carl J.** (1964), Professor of Biology. B.S., M.A., Western Michigan University; Ph.D., Michigan State University.
- Baker, Barbara J.** (1990), Assistant Professor of Physical Therapy. B.S., Furman University; M.S., Emory University.
- Baker-Clark, Charles** (2002), Assistant Professor of Hospitality and Tourism Management. B.A., Quincy University; A.A.S., Grand Rapids Community College; M.S., Western Illinois University; M.S., Ph.D., Michigan State University.
- Balfour, Danny L.** (1996), Associate Professor of Public and Nonprofit Administration. B.A., Michigan State University; Ph.D., Florida State University.
- Balkema, K. Laurel** (1978). Associate Librarian. B.A., Wheaton College, Illinois; A.M.L.S., University of Michigan.
- Bambini, Deborah R.** (2000), Assistant Professor of Nursing. B.S.N., University of Evansville; M.S.N., Grand Valley State University.
- Barber, Mary Ellen** (1985), Assistant Professor of Mathematics. A.B., Albion College; M.A., Central Michigan University.
- Bardwell, Kedron** (2003), Assistant Professor of Political Science. B.A., Augustana College; M.A., Ph.D., University of Iowa.
- Barnes, Karen L.** (1999), Assistant Professor of Education. B.A., Michigan State University; M.Ed., Wright State University; Ph.D., Michigan State University.
- Bartz, Shari D.** (1999), Assistant Professor of Movement Science. B.S., Grand Valley State University; M.A., University of Alabama-Birmingham; Ph.D., University of Alabama at Birmingham.
- Battani, Marshall** (2000), Assistant Professor of Sociology. B.A., San Francisco State University; M.F.A., University of Arizona, M.A., Ph.D., University of California, Davis.
- Baum, Edward** (1983), Professor of Chemistry. B.Sc., Ph.D., University of California.
- Baum, Jefferson** (2000), Associate Professor of Dance.
- Baum, William C.** (1965), Professor of Liberal Studies. B.A., M.A., Kalamazoo College; Ph.D., University of Iowa.
- Beasecker, Robert**, Senior Librarian. A.B., Hillsdale College; A.M.L.S., University of Michigan.



## Directory

- Beck, Teresa** (1995), Associate Professor of Therapeutic Recreation. B.S., Indiana University; M.S., Florida State University; Ph.D., University of North Texas.
- Beckmann, Charlene E.** (1988), Professor of Mathematics. B.S., Marquette University; M.A., Ph.D., Western Michigan University.
- Beery, Lawrence** (2000), Assistant Professor of Communications, B.A., M.A., Michigan State University.
- Bell, Alan** (1998), Associate Professor of Communications. M.A., B.A., San Francisco State University.
- Bender, John** (1998), Assistant Professor of Chemistry. B.S., Baldwin-Wallace College; Ph.D., Brown University.
- Benet, Suzeanne B.** (1992), Associate Professor of Marketing. B.S., Jacksonville State University; Ph.D., University of North Carolina.
- Benjamin, Craig**, (2003), Assistant Professor of history, B.A. and Ph.d., Macquarie University.
- Bernstein, David A.** (1973), Professor of Psychology. B.A., Memphis State University; M.A., Ph.D., University of Virginia.
- Bhagwat, Yatin, N.** (1992), Associate Professor of Finance. B.Sc., M.M.S., University of Bombay; M.Sc., University of Baroda; M.B.A., University of Akron; Ph.D., University of Tennessee at Knoxville.
- Bickersteth, Bertrand** (2003), Assistant Professor of English. B.A., University of British Columbia; M.A., Ph.D., University of London.
- Billings, Esther M.** (1998), Assistant Professor of Mathematics. B.S., Wheaton College; M.S., Ph.D., Northern Illinois University.
- Biddanda, Bopi** (2002), Assistant Professor of Water Resources. B.Sc., St. Joseph's College; M.S., Karnatak University; Ph.D., University of Georgia.
- Blackman, Sheila A.** (1998), Assistant Professor of Biology and Natural Resources Management. B.Sc., University of Calgary; Ph.D., Queen's University.
- Blauch, Andrew** (2000), Assistant Professor of Engineering. B.S., Messiah College; M.S., Carnegie Mellon University; Ph.D., Pennsylvania State University.
- Blekhman, David** (2002), Assistant Professor of Engineering. M.S., St. Petersburg State Technical University; Ph.D., The State University of New York at Buffalo.
- Bloem, Patricia** (2000), Assistant Professor of English. B.A., Calvin College; M.Ed., Harvard University; Ph.D., Kent State University.
- Blofield, Merike** (2003), Assistant Professor of Political Science. B.A., M.A., York University; Ph.D., University of North Carolina at Chapel Hill.
- Blose, Laurence** (1997), Associate Professor of Finance. B.S., M.B.A., Gannon University; Ph.D., University of Texas at Austin.
- Blumreich, Kathleen** (1988), Professor of English. B.A., M.A., Ph.D., Michigan State University.
- Boelkins, Matthew R.** (1998), Assistant Professor of Mathematics. B.S., Geneva College; M.S., Western Washington University; Ph.D., Syracuse University.
- Boeve, Wallace** (2000), Assistant Professor of Physician Assistant Studies. B.S., Grand Valley State University; M.S., Baylor College of Medicine.
- Bolea, Patricia Stow** (1997), Assistant Professor of Social Work. B.S., Ball State University; M.S.W., Indiana University; Ph.D., Michigan State University.

## Directory

- Borst, Joan** (2003), Assistant Professor of Social Work. B.A., Calvin College; M.S.W., Grand Valley State University
- Borders, Stephen B.** (2003), Assistant Professor of Public and Nonprofit Administration. B.A., University of North Carolina at Chapel Hill; M.S.H.P., Southwest Texas State University; Ph.D., Texas A&M University.
- Bosold, Susan** (2001), Assistant Professor of Nursing. B.S., University of Wisconsin, Madison; M.S., University of Illinois, Chicago; M.A., Michigan State University.
- Bostrom, Andrea C.** (1989), Associate Professor of Nursing. B.S., University of Michigan; M.A., Western Michigan University; Ph.D., University of Illinois at Chicago.
- Bottles, Kent** (2002), Professor of College of Health Professions. B.A., University of California, Berkeley; M.D., Case Western Reserve.
- Boudreaux, Cheryl** (2001), Assistant Professor of Sociology. B.A., University of California; M.A., Boston Couzoz; Ph.D., Brandeis University
- Bower Russa, Mary E.** (1997), Assistant Professor of Psychology. B.S., Michigan State University; M.A., Ph.D., University of Iowa.
- Bowers, Michelle** (1998), Associate Professor of Art and Design. B.F.A., Grand Valley State University; M.F.A., University of Arizona.
- Brashler, Janet G.** (1990), Professor of Anthropology. B.A., Northwestern University; M.A., Ph.D., Michigan State University.
- Brehm, Victoria** (1992), Associate Professor of English. A.B., A.M., University of Michigan; Ph.D., University of Iowa.
- Brice, Colleen** (2003), Assistant Professor of English. B.S., Bowling Green University, M.A., Ph.D., Purdue University.
- Brintnall, Ruth Ann** (1992), Assistant Professor of Nursing. B.A., Aquinas College; M.S.N., Grand Valley State University.
- Britton, Agnes** (1992), Assistant Professor of Nursing. B.S.N., Wayne State University; M.S., University of Michigan.
- Brooks, Gary** (2001), Associate Professor of Physical Therapy. B.S., Hobart College; M.S., Boston University; Dr. P.H., State University of New York-Albany.
- Brower, Jerry** (2000), Instructor of Physics. B.S., Grand Valley State University; M.S., Western Michigan University.
- Buckridge, Steeve** (1998), Associate Professor of History. B.A., Barry College; M.A., University of Miami; Ph.D., Ohio State University.
- Bullock, Kurt** (2003), Assistant Professor of English. B.A., B.S., Taylor University; M.A., Ph.D., Ball State University
- Burg, Debra L.** (1999), Assistant Professor of Biomedical and Health Sciences. B.A., Hope College; Ph.D., University of Iowa.
- Burg, Martin G.** (2001), Assistant Professor of Biomedical and Health Sciences. B.A., Hope College; Ph.D., University of Iowa.
- Burns, Francis M.** (1999), Assistant Professor of Chemistry. B.S., M.A., Ohio State University; Ph.D., University of Toledo.
- Burns, Lawrence R.** (1996), Associate Professor of Psychology. B.S., California Maritime Academy; M.A., Ph.D., State University of New York at Stony Brook.

## Directory

- Burton, Stephen** (2001), Assistant Professor of Biology. B.S., M.S., Northeastern State University.
- Busman, Douglas** (2003), Assistant Professor of Education. B.S., Eastern Michigan University; M.A., University of Michigan; Ph.D., Michigan State University.
- Caillaud, Anne** (1990), Associate Professor of French. M.A., Ph.D., Michigan State University.
- Campbell, Arthur** (1997), Associate Professor of Music. B.M., Mount Allison; M.M., D.M., Northwestern University.
- Cannon, David** (2000), Assistant Professor of Accounting. B.S., The University of the State of New York; M.S., State University of New York at Albany; Ph.D., Kent State University. C.P.A. (Ohio and Illinois).
- Capodilupo, John G.** (1996), Associate Professor of Biomedical and Health Sciences. B.S., Mercy College of Detroit; M.S., Ph.D., Wayne State University.
- Carlson, Todd A.** (1986), Associate Professor of Chemistry. B.S., Valparaiso University; Ph.D., Michigan State University.
- Carlton, Rick** (2003), Associate Professor of Medical Imaging. B.S., The Finch University of Health Science/The Chicago Medical School, M.S., National Louis University.
- Carson, Susan** (2001), Assistant Professor of Education. B.A., Antioch West; M.A., Antioch University; Ph.D., Union Institute.
- Castelao-Lawless, Teresa** (1993), Associate Professor of Philosophy. B.A., M.A., Classic University of Lisboa, Portugal Sciences of Education, Superior College of Education, Lisboa; Science and Technology Studies, M.S., Ph.D., Virginia Polytechnic Institute and State University.
- Castro, Barry** (1973), Professor of Management. B.A., Hunter College; M.B.A., Ph.D., New York University.
- Cata, Isabelle M.** (1993), Associate Professor of French. B.A., Université de Paris III; M.A., Ph.D., University of Southern California.
- Cerullo, James** (2004), Assistant Professor of Movement Science. B.S., Westfield State College; M.S., Illinois State University; Ph.D., University of Pittsburgh.
- Chapalkar, Pramod** (2004), Assistant Professor of Engineering. B.S., University of Poona; M.S., Indian Institute of Technology; Ph.D., NC A&T State University.
- Choudhuri, Shabbir** (2004), Assistant Professor of Engineering. B.S., Bangladesh University of Engineering and Technology; M.S., Ph.D., Pennsylvania State University.
- Chattulani, Doulatram** (1972), Associate Professor of Education. B.A., M.S., City University of New York; Ph.D., Michigan State University.
- Chen, Chin-Chin** (1999), Assistant Professor of Music. B.A., Fu-Jen Catholic University; M.M., University of Illinois (Urbana); D.M.A., University of Illinois.
- Chen, Jing** (1999), Assistant Professor of Psychology. B.A., Beijing Normal University; M.A., Ph.D., Washington University.
- Chlebo, Julie A.** (1997), Assistant Professor of Education. B.S., Taylor University; M.Ed., Grand Valley State University; Ph.D., Indiana University.
- Choi, Jung-ah** (2003), Assistant Professor of Education. B.A., Seoul National University; M.A., Ph.D., University of Illinois.

## Directory

- Chown, Linda** (1989), Associate Professor of English. B.A., University of California; M.A., San Francisco State University; Ph.D., University of Washington.
- Chren, William A. Jr.** (1990), Associate Professor of Engineering. B.S.E.E., Lehigh University; M.S.E.E., Pennsylvania State University; Ph.D., Ohio State University.
- Chu, Xuefeng (Michael)** (2002), Assistant Professor of Water Resources. B.S., Inner Mongolia Agricultural University; M.S., China University of Geosciences; Ph.D., University of California.
- Chung, Douglas K.** (1989), Professor of Social Work. B.A., Soochow University; M.S.W., West Virginia University; M.P.A., Ph.D., Ohio State University.
- Cimitile, Maria C.** (1999), Associate Professor of Philosophy. B.A., College of the Holy Cross; M.A., Villanova University; Ph.D., University of Memphis.
- Clark, Diane** (2001), Assistant Professor of Education. B.A., M.A., Eastern Michigan University; Ph.D. University of Michigan.
- Clark, Patricia** (1989), Professor of Writing. B.A., University of Washington; M.F.A., University of Montana; Ph.D., University of Houston.
- Coffey, David** (2000), Assistant Professor of Mathematics. B.S., Pepperdine University; M.S., University of Michigan; Ph.D., Western Michigan University.
- Coe, Dawn** (2003), Assistant Professor of Movement Science. B.S., The University of Michigan; M.A., Central Michigan University; Ph.D., Michigan State University.
- Cole, Edward Alan** (1971), Professor of History. B.A., M.A., University of Nebraska; Ph.D., University of California at Berkeley.
- Cole, Kevin C.** (1989), Associate Professor of Geology. B.S., M.S., University of Washington; Ph.D., University of Arizona.
- Cole, Roy** (1992), Associate Professor of Geography. B.A., Northern Michigan University; M.S., Ph.D., Michigan State University.
- Colgan, Patrick** (2003), Assistant Professor of Geology. B.S. University of Missouri — Kansas City; M.S., University of Kansas; Ph.D., University of Wisconsin — Madison.
- Colley, Brett** (2004), Assistant Professor of Art and Design. B.F.A., Grand Valley State University; M.A., M.F.A., University of Iowa.
- Collins, Sherry D.** (1998), Assistant Professor of Education. B.A., Andrews University; M.A., Ed.D., Western Michigan University.
- Combs, Glen** (2003), Associate Professor of Physician Assistant Studies. B.S., Alderson -Broadus College of Medical Science; M.A., Michigan State University.
- Constantelos, John** (1996), Associate Professor of Political Science. B.A., Tufts University; M.A., The Johns Hopkins University; M.S., Tufts University; Ph.D., Duke University.
- Cooley, Richard** (2001), Assistant Professor of History. B.A., State University at Cortland, NY, M.A., Wichita State University, Ed.D., Kansas State University.
- Coolidge, Grace** (2001), Assistant Professor of History. B.A., Saint Olaf College; M.A., Ph.D., Indiana University.
- Cooper, Jay** (1988), Assistant Professor of Education. B.S., Oakland University; M.S., Southern Illinois University; Ed.D., Western Michigan University.
- Copenhaver, Lee** (1985), Associate Professor of Music. B.S., Mansfield State University; B.M., Ithaca College; M.A., Ph.D., University of Iowa.

## Directory

- Corbetta, Renato** (2003), Instructor of Political Science. B.S., M.S., Portland State University.
- Cornish, Paul J.** (2003), Assistant Professor of Political Science, B.A., Geneseo State College; M.A., Ph.D., The State University of New York at Buffalo.
- Corr, Judith** (2004), Assistant Professor of Anthropology. B.A., Michigan State University; M.A., Ph.D., The Ohio State University.
- Cotter, Michael J.** (1990), Associate Professor of Marketing. B.S., M.B.A., Central Michigan University; D.B.A., Mississippi State University.
- Coviak, Cynthia** (1995), Associate Professor of Nursing. B.S.N., Michigan State University; M.S.N., Grand Valley State University; Ph.D., University of Michigan.
- Crampton, Suzanne** (1994), Associate Professor of Management. B.B.A., M.B.A., Grand Valley State University; Ph.D., Michigan State University.
- Crawley, William C.** (2002), Assistant Professor of Criminal Justice. B.S., Iowa State University; B.A. University of Iowa; M.A., GCERT, University of South Carolina.
- Crone, Linda Jo** (2004), Assistant Professor of Physician Assistant Studies. B.S., Des Moines University; M.S., Alderson-Broaddus College.
- Cross, Robert** (1980), Professor of Education. B.A., M.A., Ph.D., Michigan State University.
- Crouthamel, Jason** (2002), Professor of History. B.A., University of California Santa Cruz; M.A., Ph.D., Indiana University.
- Curtiss, Phyllis J.** (1998), Assistant Professor of Statistics. B.S., M.S., Western Michigan University; Ph.D., Bowling Green State University.
- Daley, Matthew** (2004), Assistant Professor of History. B.A., University of Detroit Mercy; M.A., Wayne State University; Ph.D., Bowling Green State University.
- Dalmia, Sonia** (1999), Assistant Professor of Economics. B.A., M.A., B.Ed., University of Delhi; M.A., University of Oklahoma; Ph.D., University of Iowa.
- Danielson, Sigrid** (2004), Assistant Professor of Art and Design. B.A., Macalaster College; M.A., Ph.D., Indiana University.
- DeBruine, Marinus** (1991), Associate Professor of Accounting. B.B.A., Grand Valley State University; Ph.D., The Ohio State University.
- de laRosa, Denise** (2003), Associate Professor of Accounting. B.A., Wayne State University; M.A., University of Southern California; M.A., Ferris State University; Ph.D., University of North Texas.
- Den Dulk, Kevin** (2001), Assistant Professor of Political Science. B.A., Calvin College; M.A., University of Georgia; Ph.D., University of Wisconsin.
- Devlin, Dennis** (1985), Professor of History. B.A., University of Texas; Ph.D., University of Chicago.
- DeWilde, Michael** (2000), Assistant Professor of Philosophy. B.A., William James College; M.T.S., Harvard University.
- deYoung, Mary** (1985), Professor of Sociology. B.S., Grand Valley State University; M.A., University of Chicago; Ph.D., Western Michigan University.
- Dickinson, William** (2000), Assistant Professor of Mathematics. B.A., Cornell University; M.S.E., Ph.D., University of Pennsylvania.
- Dietrich, Margaret** (2003), Assistant Professor of Biology. B.S., University of Wisconsin - Madison; Ph.D., University of Minnesota - Twin Cities

## Directory

- Dimkoff, Gregg K.** (1975), Professor of Finance. B.S., Michigan State University; M.B.A., Saint Louis University; Ph.D., Michigan State University.
- Diven, Polly** (1994), Associate Professor of Political Science. B.A., Hamilton College; M.A.L.D., The Fletcher School of Law and Diplomacy, Tufts University; Ph.D., University of North Carolina at Chapel Hill.
- Dobson, Christopher** (2003), Assistant Professor of Biology. B.S., Oregon State University; M.S., Portland State University; D.A., Idaho State University.
- Dogru, Filiz** (2003), Assistant Professor of Mathematics. B.S., Ankara University; M.S., Brown University; M.S., Virginia Tech University; M.A., University of Toledo; Ph.D., Pennsylvania State University.
- Doumanian, Barbara** (1999), Assistant Professor of Education. B.A., M.A., Michigan State University; Ed.D., University of Cincinnati.
- Droste-Bielak, Emily** (1985), Associate Professor of Nursing. B.S.N., Wayne State University; M.S., University of Colorado; Ph.D., University of Michigan.
- Dueker, Gwenden** (2002), Assistant Professor of Psychology. B.A., Quincy University; M.S., Ph.D., Duke University.
- Dulimarta, Hansye** (2002), Assistant Professor of Computing and Information Systems. B.S., Institute of Technology Bandung, Indonesia; M.S., Ph.D., Michigan State University.
- Dunn, James P.** (1998), Associate Professor of Biology. B.S., University of Michigan; M.S., Ph.D., University of Kentucky.
- Dunne, Bruce** (2003), Assistant Professor of Engineering. B.S.E.E., M.S.E.E., University of Illinois.
- Dwelle, Ronald R.** (1969), Associate Professor of Writing. A.B., Augustana College; M.A., University of Kansas.
- Eick, David** (2004), Assistant Professor of French. B.A., Central College; M.A., Ph.D., University of Iowa.
- Earl, Catherine T.** (1999), Assistant Professor of Nursing. B.S.N., University of Michigan; M.S.N., Grand Valley State University; D.P.A., Western Michigan University.
- Edwards, Susan** (2000), Assistant Professor of Finance. B.S., Purdue University; M.B.A., Ph.D., Kent State University.
- Eggers, Jill** (2000), Associate Professor of Art and Design. B.F.A., Western Michigan University; M.F.A., Yale University.
- Eicke, Leigh** (2001), Assistant Professor of English. B.A., Trinity University; M.A., University of Maryland; Ph.D., University of Maryland.
- Ellenberger, Kurt J.** (1999), Assistant Professor of Music. B.A., University of Windsor; M.A., University of Northern Colorado; D.M.A., University of Texas at Austin.
- Eligon, Ann Marie** (1994), Associate Professor of Physics. B.S., Ph.D., The University of the West Indies.
- Ellis, Roger** (1975), Professor of Communications. B.A., M.A., University of Santa Clara; Ph.D., University of California, Berkeley.
- El-Said, Mostafa M.** (2004), Assistant Professor of Computing and Information Systems. B.E.E., M.E.E., Zigzag University; M.S., Ph.D., University of Louisville.

## Directory

**Estrada, Javier** (1992), Associate Professor of Physics. B.S., Universidad Nacional de Colombia; M.S., Ph.D., University of South Carolina.

**Fanning, Kurt** (2000), Associate Professor of Accounting. B.B.A., Hofstra University; B.S., Iowa State University; M.B.A., Pace University; Ph.D., University of Kansas; C.M.A., C.P.A.

**Farris, John** (1998), Assistant Professor of Engineering. B.S., M.S., Lehigh University; Ph.D., University of Rhode Island.

**Ferguson, Roger C.** (1998), Associate Professor of Computing and Information Systems. B.S., Michigan Technological University; M.S., Central Michigan University; Ph.D., Wayne State University.

**Fernandez-Levin, Rosa** (1990), Professor of Modern Languages. B.A., M.A., Ph.D., University of Colorado.

**Feurzeig, Lisa** (1998), Assistant Professor of Music. B.A., Harvard College; M.M., University of Maryland; Ph.D., University of Chicago.

**Fidalgo-Eick, Maria** (2003), Assistant Professor of Spanish. M.A., Ph.D., University of Iowa.

**Fishback, Paul** (1993), Associate Professor of Mathematics. B.A., Hamilton College; Ph.D., University of Wisconsin.

**Fisher, Joseph B.** (1996), Associate Professor of Education. B.S., M.Ed., Grand Valley State University; Ph.D., University of Kansas.

**Fisher, Timothy** (2000), Assistant Professor of Art and Design. B.A., and M.A., Central Washington University; M.F.A., University of Cincinnati.

**Fitzpatrick, Coeli** (2002), Assistant Professor of Philosophy. B.A., Regis University; M.A., Ph.D., Binghamton University.

**Flaschenriem, Barbara** (1998), Associate Professor of Classics. B.A., University of California at Santa Barbara; M.A., Ph.D., University of California at Berkeley.

**Fleischmann, Shirley T.** (1989), Professor of Engineering. B.S., M.S., Ph.D., University of Maryland.

**Ford, Milton E.** (1973), Professor of English. B.A., Oklahoma Baptist University; M. Div., Southern Baptist Theological Seminary; M.A., University of Missouri; Ph.D., Oklahoma State University.

**Fox, Laura** (2000), Assistant Professor of Spanish. B.A., The College of Wooster; M.A., Indiana University.

**Franciosi, Robert** (1988), Professor of English. B.A., New York University; M.A., Ph.D., University of Iowa.

**Frerichs, Catherine** (1997), Professor of Writing. B.A., St. Olaf College; M.A., The University of Chicago; D.A., University of Michigan.

**Friar, Margaret A.** (1989), Instructor of Mathematics. B.A., Grand Valley State University; M.A., Western Michigan University.

**Fuentes, Yvette** (2002), Assistant Professor of Spanish. B.A., Barry University; M.A., Ph.D., University of Miami.

**Furton, Douglas** (2002), Assistant Professor of Physics. B.E., M.S., Ph.D., University of Toledo.

**Gabrosek, John** (1999), Assistant Professor of Statistics. B.A., M.S., University of Akron; Ph.D., Iowa State University.

## Directory

- Gadhoun, Kh?dija** (2002), Assistant Professor of Spanish. B.A., Universit? de Tunis; M.A., Ph.D., Ohio State University.
- Galbraith, Gretchen** (1992), Associate Professor of History. B.A., Connecticut College; Ph.D., Rutgers University.
- Galen, Luke** (1999), Assistant Professor of Psychology. B.A., University of Nebraska; M.A., Ph.D., Wayne State University.
- Gardner, Mary Catherine** (1984), Associate Professor of Mathematics. B.S., M.S., Ed.D., Ball State University.
- Garey, Carol** (1965), Senior Librarian. B.A., A.M.L.S., University of Michigan.
- Garriott, Pamela** (2003), B.S., M.S., Indiana State University; Ph.D., Indiana University.
- Garrett, Ronald** (1991), Professor of Engineering. B.S.M.E., M.S.M.E., Purdue University; Ph.D., University of Cincinnati.
- Gasahl, Laurie** (1999), Instructor of Geography. B.S., Northern Michigan University; M.A., Western Michigan University.
- Geisel, Rick** (2002), Assistant Professor of Education. B.S., Liberty University; M.A., Aquinas College; J.D., Ph.D., Regent University.
- Gendler, Phyllis** (1982), Professor of Nursing. B.S.N., University of Michigan; M.N., Ph.D., Michigan State University.
- Gerbens, Dan** (2003), Associate Professor of Biomedical and Health Sciences. B.S., Calvin College, M.A., Ed.D., Western Michigan University.
- Giardina, Nancy M.** (1999), Professor of Movement Science. B.S., University of Rhode Island; M.A., Montclair State College; Ed.D., Columbia University.
- Giedeman, Daniel C.** (2001), Assistant Professor of Economics. B.A., M.S., Southern Illinois University; M.A., Ph.D., Washington University.
- Gilles, Roger** (1992), Associate Professor of Writing. B.A., Carnegie-Mellon University; M.F.A., Ph.D., University of Arizona.
- Giovannelli, Alessandro** (2001), Assistant Professor of Philosophy. Laurea, University of Florence; M.A., University of Maryland.
- Gipson, Karen** (1999), Assistant Professor of Physics. B.S., North Texas State University; M.S., University of North Texas; Ph.D., Washington State University.
- Glass, Stephen** (2001), Professor of Movement Science. B.S., North Dakota State University; M.A., Ball State University; Ph.D., Southern Illinois University.
- Godwin, Joseph** (1995), Professor of Accounting. B.S., Southeast Missouri State University; B.B.A., M.B.A., M.ACC., Ph.D., University of Wisconsin.
- Goldberg, Stephen R.** (1996), Professor of Accounting. B.Sc., DePaul University; M.B.A., University of Chicago; Ph.D., University of Wisconsin-Madison.
- Golden, Oliver John** (1998), Associate Professor of Mathematics. B.S., Michigan State University; M.S., University of Pennsylvania; Ph.D., Pennsylvania State University.
- Golembeski, Dan** (1999), Assistant Professor of Modern Languages. B.S.c.E., B.A., Oakland University; M.A., Ph.D., Indiana University.
- Golensky, Martha** (1995), Associate Professor of Social Work. B.A., State University of New York, Albany; M.A., University of Wisconsin; M.S.W., Hunter College; D.S.W., City University of New York.



## Directory

- Gomez, Natalia** (2000), Assistant Professor of Spanish. B.A., Western Michigan University; M.A., Arizona State University; Ph.D., Indiana University.
- Gondhalekar, Vijay** (2003), Assistant Professor of Finance. B.S., University of Bombay, India; M.B.A., University of Akron; Ph.D., University of Pittsburgh.
- Good, David J.** (1999), Professor of Marketing. B.S., Southwest Missouri State University; M.B.A., Central Missouri State University; Ph.D., University of Arkansas.
- Goode, James** (1986), Professor of History. B.S., Georgetown University; M.A., University of Massachusetts; Ph.D., Indiana University.
- Goossen, Linda H.** (1990), Associate Professor of Clinical Laboratory Science. B.S., Ohio State University; M.H.S., Grand Valley State University; Ph.D., Western Michigan University.
- Gordon, William** (2001), Assistant Professor of Dance. B.A., San Francisco State University; M.F.A., University of California, Los Angeles.
- Gracki, John** (1970), Professor of Chemistry. B.Ae.E., University of Detroit; Ph.D., Brown University.
- Graham, Douglas** (2003), Assistant Professor of Biomedical and Health Sciences. B.A., Denison University; M.A., University of Florida; Ph.D., Colorado State University.
- Grant, George Jr.** (1996), Associate Professor of Social Work. B.S.W., Marygrove College; M.S.W., Grand Valley State University; Ph.D., Western Michigan University.
- Grant, James** (1980), Professor of Education. B.A., Hope College; M.A., Western Michigan University; Ph.D., University of Michigan.
- Grant, Rita H.** (1980), Associate Professor of Accounting. B.A., Hope College; M.B.A., Michigan State University; C.P.A.
- Grapczynski, Cynthia A.** (1995), Assistant Professor of Occupational Therapy. B.S., Wayne State University; M.S., University of Wisconsin; Ed.D., Teachers College-Columbia University.
- Green, Gregory** (2000), Assistant Professor of Occupational Safety and Health. B.S., San Jose State University; M.S., University of Wisconsin-Whitewater.
- Green, Mary** (1996), Assistant Professor of Physical Therapy. B.A., LeMoyne College; M.S., Beaver College.
- Green-Smith, Diane** (2002), Assistant Professor of Social Work. B.A., Xavier University; M.S.W. Tulane University
- Greer, Gary** (2003), Assistant Professor of Biology. B.A., University of Northern Colorado; M.A., Humboldt State University; Ph.D., Ohio University.
- Griffin, Carol B.** (1996), Associate Professor of Biology and Natural Resources Management. B.S., North Dakota State University; M.S., Indiana University; M.S., Ph.D., State University of New York.
- Griggs, Frank T.** (1990), Associate Professor of Finance. B.A., B.S., M.B.A., University of Wyoming; Ph.D., Arizona State University.
- Grinstead, Linda Nicholson** (1978), Professor of Nursing. B.S., University of Wisconsin-Milwaukee; M.N., University of Florida; Ph.D., Michigan State University.
- Grissom, Scott B.** (1999), Associate Professor of Computing and Information Systems. B.E.D., Texas A & M University; M.S., Ph.D., Ohio State University.

## Directory

- Gross, Jennifer** (1998), Assistant Professor of Psychology. B.A., Oakland University; M.A., Ph.D., Wayne State University.
- Guevara, Julie A.** (1989), Professor of Social Work. B.S., Grand Valley State University; M.S.W., Western Michigan University; Ph.D., Michigan State University.
- Gupta, Vipin** (2003), Assistant Professor of Management. B.Com., Delhi University; M.B.A., Indian Institute of Management; M.A. and Ph.D., Wharton.
- Haidar, Salim** (1992), Associate Professor of Mathematics. B.S., St. Vincent College; M.S., Ph.D., Carnegie-Mellon University.
- Hall, Richard** (1983), Associate Professor of Management. B.S., M.A., Ph.D., University of Cincinnati.
- Hanna, Atef N.** (2001), Assistant Professor of Biomedical and Health Sciences. M.B.B.Ch, M.S., Cairo University; Ph.D., Ohio State University.
- Harper, Nancy** (1994), Professor of Communications. B.A., Emporia State University; M.A., University of Northern Iowa; Ph.D., University of Iowa.
- Harris, Richard** (1995), Professor of Accounting and Taxation; Holder, L. William Seidman Chair of Accounting. B.S., M.B.A., J.D., University of Maryland; LL.M., Georgetown University Law Center; C.P.A.
- Hatzel, Brian** (2002), Assistant Professor of Movement Science. B.S., University of Florida; M.S., Ball State University; Ph.D., University of Florida.
- Haven, Chris** (2002), Assistant Professor of Writing. B.A., M.A., University of Kansas; M.F.A., Southwest Texas State University; Ph.D., University of Houston.
- Hayes, Jane** (2003), Assistant Professor of Social Work. B.A., Seton Hill University; M.Ed., Worcester State University, M.S.W., Michigan State University.
- Haynes, Alphonso W.** (1987), Professor of Social Work. B.A., Long Island University; M.A., M.S., Ed.D., Columbia University.
- Hecht, Steven J.** (1999), Assistant Professor of Biomedical and Health Sciences. B.S., Emporia State University; Ph.D., Tufts University.
- Heidenreich, Karen** (2003), Assistant Professor of Mathematics. B.A., University of Northern Iowa; M.S., Ph.D., University of Notre Dame.
- Helgert, Joseph** (1988), Associate Professor of Communications. B.A., University of Wisconsin; M.A., University of Iowa; M.I.M., American Graduate School of International Management; Ph.D., Union Graduate School.
- Henderleiter-Aldrich, Julie** (2002), Assistant Professor of Chemistry. B.S., University of Wisconsin-Madison; Ph.D., University of Northern Colorado.
- Hendersen, Robert** (1994), Professor of Psychology. B.A., Reed College; Ph.D., University of Pennsylvania.
- Henderson-King, Donna H.** (1997), Assistant Professor of Psychology. B.A., Simon Fraser University; M.A., Ph.D., University of Michigan.
- Henderson-King, Eaaron I.** (1997), Associate Professor of Psychology. B.A., University of California at Santa Barbara; M.A., Ph.D., University of Michigan.
- Henke, Dellas R.** (1985), Associate Professor of Art and Design. B.S., State University of New York; M.F.A., M.A., University of Iowa.
- Herman, Daniel P.** (2001), Assistant Professor of Biomedical and Health Sciences. B.S., University of Iowa; Ph.D. Ohio University.

## Directory

- Herrera, Antonio** (1972), Professor of Education. B.A., Universidad Pedagógica y Tecnológica de Colombia; M.A., Ph.D., University of Oregon.
- Herrington, Deborah** (2003), Assistant Professor of Chemistry. B.S., Wilfrid Laurier University; M.S., University of Waterloo.
- Herzog, Thomas** (1970), Professor of Psychology. B.A., M.A., Ph.D., University of Michigan.
- Hessler, Angela** (2002), Assistant Professor of Geology. B.S., University of Notre Dame; Ph.D., Stanford University.
- Hill, Mary K.** (2003), Associate Librarian. B.A., M.S.L., Western Michigan University.
- Hipp, Sally** (2002), Assistant Professor of Education. B.S., M.A., Michigan State University; Ed.D., Western Michigan University.
- Hewitt, Avis G.** (2001), Assistant Professor of English. B.A., The College of Wooster; M.A., Ph.D., Ball State University.
- Hewitt, John D.** (1999), Professor of Criminal Justice. B.A., Western Washington State College; M.A., Ball State University; Ph.D., Washington State University.
- Hodge, John** (1977), Professor of Management. B.A., M.A., Ed.D., Western Michigan University; M.L.I.R., Michigan State University.
- Hodge, Jonathan** (2002), Assistant Professor of Mathematics. B.S., Calvin College; M.A., Ph.D., Western Michigan University.
- Hoffman, Mark C.** (1999), Assistant Professor of Public and Nonprofit Administration. B.A., College of Wooster; M.A., Ph.D., Cleveland State University.
- Holt, Brigitte** (2004), Assistant Professor of Anthropology. B.A., M.A., Southern Illinois University, Carbondale; Ph.D., University of Missouri, Columbia.
- Hong, Soon** (1987), Professor of Statistics. B.S., Sogang University; M.Ed., Yonsei University; M.S.T., University of Wisconsin; Ph.D., University of New Mexico.
- Hoogenboom, Barbara** (2000), Assistant Professor of Physical Therapy. B.S., Calvin College; M.S., Grand Valley State University.
- Hornik, Joseph G.** (2001), Instructor of Computing and Information Systems. B.S., M.S., Grand Valley State University.
- Hosterman, William** (2001), Assistant Professor of Art and Design. B.F.A., The Pennsylvania State University; M.F.A., Indiana University.
- Houston, James** (1999), Professor of Criminal Justice. B.S., M.S., Indiana State University; Ph.D., Portland State University.
- Hughes, Francis V.** (2002), Associate Professor of Criminal Justice. B.A., Aquinas College; M.S., Ph.D., Michigan State University.
- Huizenga, Paul A.** (1966), Associate Professor of Biology. A.B., Hope College; M.S., University of Michigan.
- Hull, Cindy** (1991), Associate Professor of Anthropology. B.A., Grand Valley State University; M.A., Ph.D., Wayne State University.
- Hunt, Jodee** (1995), Associate Professor of Biology. B.S., University of Arizona; M.S., San Diego State University; Ph.D., University of Kansas.
- Ihrman, David** (1995), Associate Professor of English. B.A., Kalamazoo College; M.A., Ph.D., University of New York at Binghamton.

## Directory

- Immergluck, Daniel** (2002), Assistant Professor of Public and Nonprofit Administration. B.S., Northwestern University; M.P.P. University of Michigan; Ph.D., University of Chicago at Chicago.
- Isely, Paul** (1997), Assistant Professor of Economics. B.S., University of Wisconsin-Madison; M.S., Ph.D., Purdue University.
- IsHak, Samir** (1968), Professor of Management. B. Comm., M.B.A., Ein Shams University; Dipl., Cairo University; M.P.A., M.A., Harvard University; Ph.D., Indiana University.
- Jack, Hugh** (1996), Associate Professor of Engineering. B.E.Sc.E., M.E.Sc.M., Ph.D., University of Western Ontario.
- Jack, Kristen** (1993), Visiting Instructor of Hospitality and Tourism Management. B.S., CHA, Grand Valley State University.
- Jackson, Millie** (1997), Associate Librarian. B.S., Central Michigan University; M.I.L.S., University of Michigan; Ph.D., Michigan State University.
- Jacquot, Joseph J.** (1999), Assistant Professor of Biology. B.S., M.S., Bowling Green State University; Ph.D., Miami University.
- Jelier, Richard W.** (1995), Associate Professor of Public and Nonprofit Administration. B.A., B.S., M.A., Ph.D., Michigan State University.
- Jellema, Jon** (1972), Associate Professor of English. B.A., Calvin College; M.A., Michigan State University.
- Jensen, Susan L.** (1999), Assistant Professor of Nursing. B.S., Grand Valley State University; M.S.N., Michigan State University; Ph.D., Western Michigan University.
- Jenson, Dylana** (2001), Distinguished Professor of Music.
- Jewell, Gayla** (1986), Assistant Professor of Nursing. B.S. West Virginia Wesleyan College; M.S., Ohio State University.
- Jiao, Lihong** (2004), Assistant Professor of Engineering. B.S., M.S., Nankai University; Ph.D., Pennsylvania State University.
- Jinn, Jann-Huei** (1991), Professor of Statistics. B.S., National Chengchi University; M.S., Ph.D., State University of New York at Albany.
- Joanisse, Richard I.** (1971), Associate Professor of Sociology. B.A., M.A., Michigan State University.
- Johnson, Brian** (1994), Associate Professor of Criminal Justice. B.A., University of Wisconsin; M.S., Michigan State University, M.L.I.R.; Ph.D., Michigan State University.
- Johnson, Jerry L.** (1997), Associate Professor of Social Work. M.S., Columbia Pacific University; M.S.W., Grand Valley State University; Ph.D., Western Michigan University.
- Johnson, Kenneth P.** (1969), Associate Professor of Computing and Information Systems. B.A., Franklin and Marshall College; M.A., University of Michigan; Ph.D., Western Michigan University.
- Johnson, Paul** (1986), Professor of Engineering. B.A., Houghton College; M.S., Ph.D., University of Notre Dame.
- Jones-Ridders, Catherine** (1994), Associate Professor of Business Law. B.S., M.B.A., Grand Valley State University; J.D., University of Notre Dame Law School.

## Directory

- Jorgensen, Paul C.** (1988), Professor of Computing and Information Systems. B.A., North Central College; M.A., University of Illinois; Ph.D., Arizona State University.
- Joseph, Edwin** (2001), Assistant Professor of Geography. B.S., M.S., University of Wisconsin-Madison.
- Joseph, Jann** (1998), Assistant Professor of Biology. B.Sc., M.S., University of West Indies St. Augustine; Ph.D., University of Wisconsin-Madison.
- Kantz, Katherine E.** (1999), Assistant Professor of Biology. B.A., University of California-Berkeley; Ph.D., Louisiana State University.
- Karpen, Mary E.** (1995), Associate Professor of Chemistry. B.S., Clarkson University; B.A., State University of New York; M.S., Ph.D., Case Western Reserve University.
- Kasman, Reva Sharon** (2002), Assistant Professor of Mathematics. B.S., York University; M.S., Ph.D., University of Illinois at Chicago.
- Keister, Ann Baddeley** (1997), Associate Professor of Art and Design. B.F.A., M.F.A., The University of Kansas.
- Kelleher, Frances A.** (1988), Professor of History. B.A., College of New Rochelle; M.A., Ph.D., New York University.
- Kieh, George Klay, Jr.** (2003), Professor of Political Science. B.A., University of Liberia; M.A., Ph.D., Northwestern University.
- Kierkus, Christopher** (2004), Assistant Professor of Criminal Justice. M.A., SUNY Albany; M.A., University of Western Ontario.
- Kilbourne, John** (2004), Associate Professor of Movement Science. B.A., California State University-Long Beach; M.A., UCLA; Ph.D., Ohio State University.
- Kimoto, Diane M.** (2002), Assistant Professor of Public and Nonprofit Administration. B.A., M.A., California State University at Long Beach; Ph.D., University of California at Los Angeles.
- Kindschi, P. Douglas** (1976), Professor of Mathematics and Philosophy. B.A., Houghton College; M.A., Ph.D., University of Wisconsin.
- King, Caryn M.** (1991), Professor of Education. B.A., Alfred University; M.A., Slippery Rock University; Ph.D., University of Pittsburgh.
- King, Erika** (1995), Professor of Political Science. A.B., Oberlin College; M.A., Ph.D., Northwestern University.
- Kingshott, Brian** (2003), Instructor of Criminal Justice. B.A., OPEN University; M.A., University of Exeter.
- Kipp, Brian** (2002), Assistant Professor of Biomedical and Health Sciences. B.S., Saginaw Valley State University; Ph.D., Wayne State University.
- Klein, Helen A.** (1998), Assistant Professor of Management. B.A., Wayne State University; M.B.A., Michigan State University; Ph.D., University of Michigan.
- Kline, Kay** (1988), Professor of Nursing. B.S.N., B.A., Nazareth College; M.S.N., Wayne State University; Ph.D., Case Western Reserve University.
- Klingler, Gary** (1990), Assistant Professor of Mathematics. B.A., Michigan State University; M.A., Northern Michigan University; Ph.D., Michigan State University.
- Koches, John** (2002), Associate Professor of Water Resources. B.S., Grand Valley State University; M.S., Miami University.

## Directory

- Kehrman, Rita** (1995), Senior Librarian. B.A., St. Andrews Presbyterian College; M.S.L.S., Wayne State University.
- Konecki, Loretta** (1986), Professor of Education. B.A. Albion College; M.A.T., Ph.D., University of Chicago.
- Kopperl, Sheldon J.** (1970), Professor of Biomedical and Health Sciences. B.S., Case Institute of Technology; Ph.D., University of Wisconsin.
- Kosalge, Parag** (2003), Assistant Professor of Management. Bachelor of Engineering, College of Engineering, Aurangabad, India; Ph.D., Indian Institute of Management, Bangalore, India.
- Koste, Lori** (1999), Assistant Professor of Management. B.A., University of Virginia; M.B.A., Clemson University; Ph.D., University of South Carolina.
- Kotman, Larry** (1985), Associate Professor of Computing and Information Systems. A.B., Calvin College; M.S., Ph.D., Purdue University.
- Kountz, Carol** (1998), Associate Professor of Writing. B.A., University of Michigan; M.A., Harvard University; Ph.D., University of New Hampshire.
- Kovacs, Dalila** (2003), Assistant Professor of Chemistry. B.S., Babes-Bolyai University; Ph.D., Michigan State University.
- Kruch, Mary Anna** (2003), Assistant Professor of English. B.A, M.A, Ph.D., Michigan State University.
- Kucsova, Simona** (2004), Instructor of Political Science. M.S., Charles University; M.A., The State University of New York at Stony Brook.
- Kumar, Ashok** (1992), Associate Professor of Management. B.Sc., Agra University; B.Tech., Indian Institute of Technology; M.S., University of Birmingham, U.K.; Ph.D., Purdue University.
- Kurmas, Zachary A.** (2004), Associate Professor of Computing and Information Systems. B.S./B.A., Grand Valley State University; M.S., Ph.D., Georgia Institute of Technology.
- Lai, Sufen** (1992), Associate Professor of English. B.A., Tunghai University; M.A., Ph.D., University of Illinois.
- Lancaster, Paula E.** (2000), Assistant Professor of Education. B.S., Western Illinois University; M.S., Northern Illinois University; Ph.D., The University of Kansas.
- Lancaster, Sean J. C.** (2000), Assistant Professor of Education. B.S., M.S., Kansas University; Ph.D., University of Kansas.
- Lane, Paul M.** (1998), Professor of Marketing; Holder, Esther Seidman Chair. B.A., Earlham College; M.B.A., Stetson University; Ph.D., Michigan State University.
- Lange, David K.** (2001), Instructor of Computing and Information Systems. B.S., University of Iowa; M.B.A., University of Phoenix.
- Larson, Donna** (1972), Professor of Nursing. B.S., California State University; M.S., University of California; Ph.D., Michigan State University.
- Larson, Harold** (1972), Professor of Engineering. B.A., California State University; M.S., Ph.D., California Institute of Technology.
- Leder, Sharon** (1994), Associate Professor of Nursing. B.S.N., M.S.N., Wayne State University; D.S.N., University of Alabama at Birmingham.
- Lee, Hyunsai** (1998), Associate Professor of Music. B.M., Seoul National University; M.M., D.M.A., Cleveland Institute of Music.

## Directory

**Leidig, Paul** (1991), Professor of Computing and Information Systems. B.S., Eastern Mennonite College; M.B.A., James Madison University; Ph.D., Virginia Commonwealth University.

**Lenters, Geoffrey** (2003), Assistant Professor of Physics. B.S., Calvin College; M.S., Ph.D., University of Alabama in Huntsville.

**Leonard, David A.** (1998), Assistant Professor of Chemistry. B.S., Bucknell University; Ph.D., Cornell University.

**Levenburg, Nancy** (2000), Assistant Professor of Marketing. B.S., Miami University; M.B.A., Western Michigan University; Ph.D., The Union Institute.

**Levin, Martin** (1994), Assistant Professor of Computing and Information Systems. B.S., Pennsylvania State University; M.S., New York University.

**Levitan, William** (1993), Associate Professor of Classics. B.A., Yale University; Ph.D., University of Texas.

**Libman, Karen** (1999), Associate Professor of Communications. B.F.A., Virginia Commonwealth University; M.F.A., Arizona State University.

**Lindquist, Stanton** (1974), Professor of Accounting. B.A., Luther College; M.A., University of Iowa; Ph.D., University of Missouri; C.P.A.

**Lioubimtseva, Elena** (2000), Assistant Professor of Geography. B.S., M.S., Ph.D., Moscow State University.

**Lockerd, Benjamin G. Jr.** (1986), Professor of English. B.S., University of Wyoming; M.A., University of Toronto; Ph.D., University of Connecticut.

**Loeffler, Ronald** (2004), Assistant Professor of Philosophy. M.A., University of London; M.A., Free University Berlin; Ph.D., Northwestern University.

**Lombardo, Michael** (1991), Professor of Biology. B.S., Ohio State University; M.S., Ph.D., Rutgers University.

**Long, Valeria** (2000), Assistant Librarian. B.A., Central Michigan University; M.L.I.S., Wayne State University.

**Longstreet, Chris** (1998), Visiting Instructor of Hospitality and Tourism Management. B.S. CHA, Grand Valley State University.

**Losey, Kay** (2004), Associate Professor of Writing. B.A., Michigan State University; M.A., Ph.D., University of California, Berkeley.

**Lou, Liang (Lianggang)** (2001), Assistant Professor of Psychology. B.S., Fudan University; M.A., Institute of Psychology, Chinese Academy of Science; Ph.D., University of California, San Diego.

**Lundskow, George** (1999), Assistant Professor of Sociology. B.A., Boston University; M.A., University of New Orleans; Ph.D., University of Kansas.

**Luttenton, Mark** (1989), Associate Professor of Biology. B.S., Central Michigan University; M.S., University of Wisconsin-LaCrosse; Ph.D., Bowling Green State University.

**MacDonald, Neil W.** (1994), Associate Professor of Biology. B.S., University of Michigan; M.S., Ph.D., Michigan State University.

**Mack, Faite R-P** (1972), Professor of Education. B.S., Indiana University; M.A., Roosevelt University; Ed. Spec., Michigan State University; Ph.D., University of Illinois.

## Directory

- Mack, Nancy** (2001), Associate Professor of Mathematics. B.S., M.A., University of Texas; Ph.D., University of Wisconsin-Madison.
- Mader, Cynthia** (1989), Associate Professor of Education. B.A., M.A., Aquinas; M.A., University of Michigan; M.A., Ph.D., Michigan State University.
- Magal, Simha** (2000), Assistant Professor of Management. Bachelor of Commerce, University of Delhi; M.B.A., Valdosta State College; Ph.D., University of Georgia.
- Mahave-Veglia, Pablo** (2003), Assistant Professor of Music. B.M., The Eastman School of Music; M.M., Indiana University; D.M.A., The University of Wisconsin-Madison.
- Mahon, Jennifer** (2001), Assistant Professor of Education. B.A., University of Dayton; M.A., University of New England, Armidale, New South Wales, Australia; M.Ed., Ph.D., Kent State University.
- Malaret, Dennis** (1995), Associate Professor of Sociology. B.S., University of Puerto Rico; M.A., Ph.D., Western Michigan University.
- Mapes, Lynn** (1968), Professor of History. B.A., Roosevelt University; M.A., Ph.D., University of Rochester.
- Margulis, Stephen** (1986), Professor of Management. B.A., The City College of New York; M.A., Clark University; Ph.D., University of Minnesota.
- Margulus, Lisabeth S.** (1999), Assistant Professor of Education. B.S., University of Missouri; M.A., Ed.D., Western Michigan University.
- Marlais, Helen** (1998), Associate Professor of Music. B.M., University of Toledo; M.F.A., Carnegie Mellon University; D.M., Northwestern University.
- Martin, Barry** (1994), Associate Professor of Music. B.M.E., University of Akron; M.S.M.E., University of Illinois.
- Martin, Jean** (1995), Associate Professor of Nursing. B.S.N., University of Michigan; M.S., Boston University; D.N.Sc., Rush University.
- Martin, Susan W.** (1988), Professor of Accounting. B.S., Central Michigan University; M.B.A., Ph.D., Michigan State University. C.P.A., C.M.A., C.I.A.
- Masko, Amy** (2003), Assistant Professor of English. B.S., Eastern Michigan University; M.Ed., Lesley University; Ph.D., University of Denver.
- Masselink, Linda** (2000), Associate Librarian. B.S., Grand Valley State University; A.M.L.S., University of Michigan.
- Mast, Myron** (1975), Professor of Public and Nonprofit Administration. B.A., Calvin College; M.A., Ph.D., University of Colorado.
- Matchett, Stephen** (1991), Associate Professor of Chemistry. B.S., University of Miami, Florida; Ph.D., Colorado State University.
- Matthews, Amy** (1998), Assistant Professor of Psychology. B.A., University of California at Santa Barbara; M.A., Ph.D., Binghamton University.
- Matthews, Patricia** (2001), Instructor of Biology. B.S., M.E., Grand Valley State University.
- Mattox, Stephen R.** (1998), Assistant Professor of Geology. B.S., Indiana University; M.S., Ph.D., Northern Illinois University.
- Mavima, Paul** (2001), Assistant Professor of Public and Nonprofit Administration. B.S., M.P.A., University of Zimbabwe; Ph.D., Florida State University.



## Directory

- Mayberry, Robert W.** (1971), Associate Professor of Communications. B.A., Swarthmore College; M.A., Cornell University.
- Mays, Jane** (2000), Instructor of Mathematics. B.S., M.S., Michigan State University.
- McBane, George** (2001), Associate Professor of Chemistry. B.S., North Carolina State University; Ph.D., Cornell University.
- McClinton, Regina** (2003), Assistant Professor of Biology. B.A., University of California - Riverside; Ph.D., University of California — Berkely.
- McCrea, Frances B.** (1988), Professor of Sociology. B.A., Grand Valley State University; M.A., Ph.D., Western Michigan University.
- McCrea, Linda D.** (1993), Associate Professor of Education. B.S., Eastern Michigan University; M.A., Ed.D., Western Michigan University.
- McFadden, Emily Jean** (1993), Professor of Social Work. B.A., Western Michigan University; M.S.W., University of Michigan.
- McGee, J. David** (1988), Associate Professor of Art and Design. B.S., University of Kansas; M.B.A., California State University at Long Beach; M.A., Ph.D., Indiana University.
- McGhee, Betty** (1987), Associate Professor of Psychology. B.A., University of South Carolina; M.Ed., University of Toledo; Ph.D., University of Chicago.
- McGuire, Hugh** (2003), Assistant Professor of Computing and Information Systems. M.S., Ph.D., Stanford University.
- McKendall, Marie A.** (1988), Professor of Management. B.B.A., M.B.A., Grand Valley State University; Ph.D., Michigan State University.
- McKenzie, Douglas G.** (2000), Associate Professor of Criminal Justice. B.S., M.A., Ph.D., Michigan State University; J.D., University of Houston Law Center.
- McLeod, Corinna** (2003), Assistant Professor of English. B.A., Univeristy of Tulsa; M.A., Ph.D., University of South Carolina, Columbia.
- Meesig, Robert T.** (2000), Assistant Professor of Criminal Justice. B.A., University of Rochester; M.A., Chapman College; M.S., Michigan State University.
- Mekik, Figen** (2000), Assistant Professor of Geology. B.S., M.S., Middle East Technical University; Ph.D., Northern Illinois University.
- Menon, Shaily** (1998), Associate Professor of Biology. B.Sc., M.Sc., Bombay University; M.S., University of South Carolina; Ph.D., Ohio State University.
- Markle, Anne W.** (1999), Associate Librarian. B.A., Hope College; M.S.L., Western Michigan University.
- Mielke, David E.** (1999), Professor of Accounting. B.A., Lawrence University; M.B.A., University of Chicago; Ph.D., University of Wisconsin.
- Miller, Blair E.** (1990), Associate Professor of Chemistry. B.A., Manchester College; Ph.D., Miami University.
- Miller, Jo** (1991), Associate Professor of English. B.A., University of Oregon; M.A., Colorado State University; Ph.D., University of Utah.
- Miller, Sandra L.** (1995), Associate Professor of Education. B.S., Western Michigan University; M.Ed., Ph.D., University of Pittsburgh.
- Mishra, Jitendra M.** (1972), Professor of Management. B.A., (Hons.) Delhi University; M.S., Northern Michigan University; M.B.A., Western Michigan University; F.Ph.S., Philosophical Society of England, London; Ph.D., Lucknow University.

## Directory

- Moes, Mark M.** (1991), Assistant Professor of Philosophy. B.A., University of Notre Dame; M.A., Aquinas Institute School of Theology; Ph.D., University of Notre Dame.
- Mohammadzadeh, Alireza** (1985), Assistant Professor of Engineering. B.S., Aryamer University; M.S., Ph.D., University of Michigan.
- Moiles, Roger J.** (2002), Instructor of Political Science. B.A., Saginaw Valley State University; M.A., Michigan State University.
- Monson, Ander** (2004), Assistant Professor of Writing. B.A., Knox College; M.A., Iowa State University; M.F.A., University of Alabama.
- Montagna, Douglas** (2003), Assistant Professor of History, B.A., Hamilton College, M.A., Northern Illinois University, M.B.A., SUNY Binghamton, Ph.D., Northern Illinois University.
- Moret, Zulema** (2004), Assistant Professor of Spanish. M.A., University of Buenos Aires; Ph.D., University of Basque country (Spain).
- Morgan, Roderick M.** (1999), Associate Professor of Biology. B.S., M.S., Central Michigan University; Ph.D., Virginia Commonwealth University.
- Morison, William** (2004), Assistant Professor of History. Ph.D., University of California Santa Barbara.
- Morris, Bradley** (2002), Assistant Professor of Psychology. B.A., M.S., Miami University; Ph.D., Ohio State University.
- Morrow, Deborah** (1991), Senior Librarian. B.A., Earlham College; M.S.L.I.S., University of Illinois.
- Morse, Deanna** (1979), Professor of Communications. B.S., Iowa State University; M.A., Goddard College.; M.F.A., School of the Art Institute of Chicago.
- Mothersell, William M.** (2002), Assistant Professor of Management. B.S., Master of Labor in Industrial Relations, Ph.D., Michigan State University.
- Motwani, Jaideep G.** (1990), Professor of Management. B.B.A., Bombay University; M.B.A., Sam Houston State University; Ph.D., University of North Texas.
- Mudde, Paul A.** (2002), Assistant Professor of Management. B.S., Calvin College; M.S., Purdue University.
- Mulder, Rodney** (1966), Professor of Sociology and Social Work. A.B., Calvin College; M.A., Michigan State University; M.S.W., Ph.D., Western Michigan University.
- Mullendore, Kristine** (1995), Associate Professor of Legal Studies. B.S., Michigan State University; J.D., Boston University.
- Murphy, Paul** (1999), Associate Professor of History. B.A., Hanover College; M.A., Ph.D., Indiana University.
- Murray, Diane** (1991), Associate Librarian. B.A., Hope College; M.S.L., Western Michigan University; M.M., Aquinas College.
- Nagelkerk, Jean** (1993), Professor of Nursing. B.S.N., Nazareth College; M.S.N., Wayne State University; Ph.D., University of Florida.
- Namaste, Nina** (2004), Assistant Professor of Spanish. B.A., St. Olaf College; M.A., Ph.D., Indiana University.
- Nandigam, Jagadeesh** (2003), Associate Professor of Computing and Information Systems. B.S., Sri. Venkateswara; B.S. Grambling State University; M.S., Ph.D., University of Louisiana at Lafayette.

## Directory

**Neal, William J.** (1971), Professor of Geology. B.S., University of Notre Dame; M.A., Ph.D., University of Missouri at Columbia.

**Nesterenko, Alexander** (1984), Associate Professor of Communications. B.A., M.A., Ph.D., University of Iowa.

**Nezlek, George S.** (2004), Associate Professor of Computing and Information Systems. B.A., Beloit College; M.B.A., De Paul University; Ph.D., University of Wisconsin.

**Ni, Peimin** (1992), Professor of Philosophy. B.A., M.A., Fudan University; Ph.D., The University of Connecticut.

**Nieuwkoop, Anthony** (1995), Associate Professor of Biomedical and Health Sciences. A.B., Hope College; Ph.D., University of Michigan.

**Nikitin, Alexey** (2001), Assistant Professor of Biology. M.S., Kiev State University; Ph.D., Bowling Green State University.

**Nikkel, Harvey** (1974), Professor of Chemistry. B.S., Southwestern State College; Ph.D., Purdue University.

**Nizielski, Steven E.** (2001), Associate Professor of Biomedical and Health Sciences. B.S., M.S., Ph.D., University of Minnesota.

**Nochera, Carmen L.** (1989), Associate Professor of Biomedical and Health Sciences. B.A., College of Notre Dame; R.D., M.A., Ph.D., University of Rhode Island.

**Norris, Charles E.** (1998), Associate Professor of Music. B.S., Indiana State University; M.S., Ed.D., University of Illinois.

**Northup, Melvin L.** (1972), Professor of Natural Resources Management. B.S., Parsons College; M.S., Purdue University; Ph.D., University of Missouri.

**Novotny, Karen S.** (1989), Associate Professor of Mathematics. B.S., Ph.D., Western Michigan University.

**O'Connor, M. Christine** (1974), Professor of Psychology. B.A., University of Connecticut; M.A., Ph.D., Michigan State University.

**O'Connor, Raymond Jr.** (1999), Associate Professor of Psychology. B.S., Valparaiso University; M.A., Ph.D., Bowling Green State University.

**Oliver, Keith** (2004), Assistant Professor of Physics. B.S., Utah State University; Ph.D., Ohio State University.

**O'Neill, Sean** (1991), Professor of History. B.A., University of California, Berkeley; M.S., Ph.D., University of California, Santa Barbara.

**Orosz, Joel** (2002), Distinguished Professor of Philanthropic Studies. B.A., Kalamazoo College; M.A., Ph.D., Case Western Reserve University.

**Osborn, William P.** (1988), Professor of English. B.A., University of California-San Diego; M.F.A., Bowling Green State University; Ph.D., State University of New York at Binghamton.

**Ostrow, Bruce** (2002), Assistant Professor of Biology. B.A., Boston University; Ph.D., Northwestern University.

**Ott, Michael R.** (2002), Assistant Professor of Sociology. B.A., Western Michigan University; M.Div., Princeton Theological Seminary; Ph.D., Western Michigan University.

**Ozga, Karen L.** (1990), Assistant Professor of Physical Therapy. B.S., Wayne State University; M.M.Sc., Emory University.

## Directory

- Otieno, Sango Bennett** (2003), Assistant Professor of Statistics. B.S., M.S., Egerton University; Ph.D., Virginia Polytechnic Institute and State University.
- Parker, Kelly A.** (1992), Associate Professor of Philosophy. B.A., Texas A & M University; M.A., Ph.D., Vanderbilt University.
- Parker, Patricia** (2000), Senior Librarian. B.A., Merrimack College; M.L.S., Simmons College.
- Paszek, Donald** (1984), Associate Professor of Psychology. B.A., University of Wisconsin-Milwaukee; M.A., Ph.D., University of Iowa.
- Patterson, Nancy** (2002), Assistant Professor of Education. B.S., Michigan State University; M.Ed., Grand Valley State University; Ph.D., Michigan State University.
- Pawloski, Bonita M.** (2004) Instructor of Radiation Therapy. B.S., University of Michigan.
- Payne, Michael** (1990), Professor of Public and Nonprofit Administration. B.S., University of Missouri-St. Louis; M.A., Ph.D., The Maxwell School, Syracuse University.
- Pazdernik, Charles F.** (2001), Assistant Professor of Classics. B.A., Cornell University; M.Phil., Oxford University; M.A., Ph.D., Princeton University.
- Pearson, Christen** (2000), Assistant Professor of English. B.M., University of Miami; M.A., Southern Illinois University; Ph.D., Indiana University.
- Pearson-Slaikue, Kimberly N.** (2003), Assistant Professor of Nursing. B.S.N., Alverno College; M.S.N., Marquette University.
- Peck, John** (1997), Professor of Physical Therapy. B.A., The Johns Hopkins University; B.S., University of Central Arkansas; M.S., Ph.D., University of Maryland.
- Pednekar-Magal, Vandana** (1999), Assistant Professor of Communications. M.A., Bowling Green State University; M.A., Bombay University.
- Penning, Timothy** (2001), Assistant Professor of Communications. B.A., Central Michigan University; M.A., Western Michigan University.
- Perrine, Toni** (1989), Associate Professor of Communications. B.A., M.A., University of Michigan; Ph.D., Northwestern University.
- Perry, Doris** (1987), Associate Professor of Social Work. B.A., Southern Illinois University; M.S.W., Washington University; Ph.D., University of Illinois.
- Persoon, James** (1984), Professor of English. B.S., Iowa State University; M.A., M.Phil., Ph.D., University of Kansas.
- Pestana, Mark S.** (1990), Associate Professor of Philosophy. B.A., Colby College; M.A., University of Kentucky; Ph.D., University of Chicago.
- Peterman, Teresa M.** (2001), Instructor of Computing and Information Systems. B.S., M.S., Central Michigan University.
- Peterson, Virginia** (2003), Assistant Professor of Geology. B.A., Grand Valley State University; M.S., Ph.D., University of Massachusetts.
- Philbin, John H.** (1997), Associate Professor of Communications. B.A., University of Iowa; M.F.A., Southern Illinois University at Carbondale.
- Phillips, Brian** (2000), Assistant Professor of Sociology. B.A., State University of New York, Utica; M.A., Rutgers University, Ph.D., State University of New York, Binghamton.

## Directory

- Plotkowski, Paul** (1991), Professor of Engineering. B.S., M.S., Ph.D., Oakland University.
- Pool, Ellen** (1983), Associate Professor of Music. B.M., M.M., University of Michigan.
- Pope, Jennifer** (2003), Assistant Professor of Marketing. B.A., College of Wooster; M.B.A., A.B.D., University of Texas-Pan American.
- Portko, Sandra** (1984), Professor of Psychology. B.A., Grand Valley State University; M.A., Ph.D., Wayne State University.
- Pozzi, Gabriela** (1994), Associate Professor of Spanish. B.A., McGill University; M.A., Ph.D., University of Pennsylvania.
- Pottorff, Donald** (1987), Professor of Education. B.S., M.S., Central Missouri State University; Ph.D., Michigan State University.
- Powell, Nancy** (2003), Associate Professor of Occupational Therapy. B.S., Ohio State University, M.F.A., The College of the San Francisco Art Institute, Ph.D., Ohio State University.
- Pratt, Rebecca** (2003), Assistant Professor of Biomedical and Health Sciences. B.S., Michigan State University.
- Prinsloo, Johannes H.** (2002), Professor of Criminal Justice. B.A., M.A., D.Litt et Phil., University of South Africa.
- Pritchard, Betty** (1998), Associate Professor of Communications. B.A., M.A.T., Oakland University; Ed.D., Western Michigan University.
- Pryor, Sherrill** (1995), Associate Professor of Education. B.S., M.A., Sp. In Arts, Ed.D., Eastern Michigan University.
- Qi, Min** (1994), Associate Professor of Chemistry. B.S., M.E., Beijing Polytechnic University; Ph.D., State University of New York.
- Rahman, M. M. Azizur** (2002), Assistant Professor of Engineering. B.S., M.S., Bangladesh University of Technology; Ph.D., University of Victoria.
- Rakovic, Milun** (2003), Assistant Professor of Physics. B.S., M.S., Ph.D., University of Belgrade.
- Ranger, Kim** (1990), Senior Librarian. B.A., Western Michigan University; M.I.L.S., University of Michigan.
- Rathbun, David** (1981), Professor of Communications. B.A., Wheaton College.
- Ray, Jeffrey L.** (1997), Associate Professor of Engineering. B.S.M.E., M.S.M.E., Tennessee Technological University; Ph.D., Vanderbilt University.
- Rayor, Diane** (1991), Associate Professor of Classics. B.A., Colorado College; Ph.D., University of California, Santa Cruz.
- Rediske, Richard** (2002), Professor of Water Resources. B.S., Bowling Green State University; M.S., University of Michigan; Ph.D., University of Michigan.
- Reffeor, Wendy S.** (1999), Assistant Professor of Engineering. B.S., Kettering University; M.S. Purdue University; Ph.D., Michigan State University.
- Reichert, Aviram** (2001), Associate Professor of Music. Study at Giva'ataim Conservatory, Israel; Artists Diploma, The Rubin Academy (Tel Aviv, Israel).
- Reick, Kay** (2001), Assistant Professor of Nursing. B.S.N., M.S., University of Michigan.

## Directory

- Reifel, John W.** (1971), Professor of Economics. B.A., University of Notre Dame; M.A., Ph.D., Michigan State University.
- Reinken, Barbara J.** (1996), Associate Professor of Education. B.S., Indiana University; M.S., University of Wisconsin; Ph.D., Michigan State University.
- Reischman, Diann** (1998), Assistant Professor of Statistics. B.S., Clarke College; M.S., University of Iowa; Ph.D., University of Missouri.
- Remenap, Randall** (2001), Instructor of Education. B.S., M.A., Ed.S., Central Michigan University.
- Remlinger, Kathryn A.** (1995), Associate Professor of English. B.A., M.A., Moorehead State University; Ph.D., Michigan Technological University.
- Reynolds, John** (2002), Assistant Professor of Computing and Information Systems. B.R.E., Th.B., A.A., Hannibal-LaGrange College; M.A., Criswell College; Ph.D., University of Northern Texas.
- Reynolds, Ross A.** (1990), Professor of Physics. B.S., Michigan State University; M.S., Ph.D., University of Oregon.
- Rhoads, Russell D.** (1994), Associate Professor of Anthropology. B.A., University of Oregon; M.A., Ph.D., University of Kentucky.
- Richards, Mark J.** (1999), Assistant Professor of Political Science. M.S., University of Oregon; B.S., M.A., Ph.D., University of Wisconsin.
- Richardson, Mary** (2002), Assistant Professor of Statistics. B.S., Southwest Missouri State University; M.A., Ph.D., University of Missouri.
- Richmond, Gary D.** (1968), Professor of Chemistry. B.A., Washington and Jefferson College; Ph.D., Ohio State University.
- Riemersma, Peter E.** (1999), Assistant Professor of Geology. B.S., University of Michigan; M.S., University of Utah; Ph.D., University of Wisconsin.
- Rigsby, Lisa** (2001), Assistant Librarian. B.A., Western Michigan University; M.L.S., Indiana University.
- Robbins, Donijo** (2001), Assistant Professor of Public and Nonprofit Administration. B.S., Central Michigan University; M.A., Ph.D., Rutgers University.
- Roberts, Kim Lynne** (2000), Assistant Professor of Communications. B.F.A., Kendall School of Art and Design; M.F.A., School of the Art Institute of Chicago.
- Robideaux, Douglas** (2001), Associate Professor of Marketing. B.A., M.B.A., Northeast Louisiana University; D.B.A., Louisiana Tech University.
- Rodriguez-Charbonier, Senez** (1992), Associate Professor of Psychology. B.A., Antillian College; M.A., Western Michigan University; M.A., Andrews University; Ph.D., Western Michigan University.
- Rogers, Karel** (1996), Professor of Biology. B.S., M.S., Ph.D., Michigan State University.
- Rogers, William** (1998), Assistant Professor of Psychology. B.A., University of Michigan; M.A., Ph.D., Michigan State University.
- Rogness, Neal** (1994), Associate Professor of Statistics. B.S., University of Minnesota; M.S., University of Houston; Ph.D., University of Northern Colorado.
- Roos, Barbara M.** (1978), Associate Professor of Communications. B.A., M.A., University of Michigan.

## Directory

- Rotzein, Andrea** (2001), Assistant Professor of Psychology. B.S., University of Florida; M.A., Ball State University; Ph.D., Texas A & M University.
- Rowe, Patricia** (1987), Associate Professor of Movement Science. B.S., M.A., Central Michigan University; Ph.D., Michigan State University.
- Rowe, Stephen C.** (1972), Professor of Philosophy. B.A., Colgate University; M.Th., A.M., Ph.D., University of Chicago.
- Royer, Daniel J.** (1995), Associate Professor of Writing. B.A., Washburn University; M.A., Kansas State University; Ph.D., University of Kansas.
- Rozema, Robert** (2004), Assistant Professor of English. B.A., Calvin College; M.A., Michigan State University; Ph.D., Western Michigan University.
- Rudolph, Bennett L.** (1973), Professor of Marketing. B.S., Roosevelt University; M.S., Ph.D., University of Illinois.
- Rueth, Heather** (2003), Assistant Professor of Biology. B.S., University of Wisconsin-Madison; Ph.D., Colorado State University.
- Ruetz III, Carl** (2002), Assistant Professor of Water Resources. B.S., Lake Superior State; M.S., University of Georgia; Ph.D., University of Minnesota.
- Ryan, Maureen** (1990), Assistant Professor of Nursing. B.S.N., St. Mary's College; M.S.N., Michigan State University.
- Rydel, Christine A.** (1970), Professor of Russian. B.A., Mundelein College; M.A., Ph.D., Indiana University.
- Rynbrandt, Linda** (1996), Associate Professor of Sociology. B.A., Grand Valley State University; M.A., Ph.D., Western Michigan University.
- Sa, Walter** (1999), Assistant Professor of Psychology. B.A., University of Western Ontario; M.A, Ph.D., University of Toronto.
- Salisbury, Erik** (2003), Assistant Professor of Engineering. B.S., Ph.D., Michigan Technological University.
- Sanchez, Carol** (1995) Associate Professor of Management. B.I.S., School for International Training; D.B.A., Southern Illinois University.
- Sannes, Christine R.** (1999), Assistant Professor of Education. B.S., M.S.E., University of Wisconsin; Ph.D., Marquette University.
- Sanford, James** (1980), Professor of Business Law. B.S., J.D., Indiana University; C.P.A.
- Schaertel, Stephanie** (1994), Associate Professor of Chemistry. B.A., Swarthmore College; M.S., Ph.D., Cornell University.
- Schafer, Patricia** (1998), Associate Professor of Nursing. B.S.N., M.N., Ph.D., University of Pittsburgh.
- Schaub, Mark F.** (1999), Associate Professor of Writing. B.A., Lakeland College; M.F.A., Wichita State University; Ph.D., Purdue University.
- Schaughency, Elizabeth** (1995), Professor of Psychology. B.S., University of Pittsburgh; M.S., Ph.D., University of Georgia.
- Schendel, Ellen** (2000), Assistant Professor of Writing. B.A., Birmingham Southern College; M.A., Florida State University; Ph.D., University of Louisville.
- Schichtel, B. Nan** (1995), Senior Librarian. B.A., M.S., Western Michigan University.

## Directory

- Schiller, Ellen** (2001), Assistant Professor of Education. B.S., M.Ed., Grand Valley State University; Ph.D., Michigan State University.
- Schlicker, Steven** (1991), Professor of Mathematics. B.A., Michigan State University; M.A., Ph.D., Northwestern University.
- Schmit, John A.** (2002), Assistant Professor of Communications. B.A., Prescott College; M.A., M.F.A., University of Iowa.
- Schneider, Barbara Kane** (1998), Associate Professor of English. B.A., M.Ed., University of Pittsburgh; Ph.D., Kent State University.
- Schoofs, Nancy** (2001), Associate Professor of Nursing. B.S.N., Olivet Nazarene University; M.S.N., Loyola University; Ph.D., The University of Iowa.
- Schott, Elaine** (1987), Professor of Social Work. B.S., Bluffton College; M.S.W., University of Michigan; Special Education Supervisor Certification, Grand Valley State University; Ph.D., Michigan State University.
- Schriemer, Dale** (1988), Associate Professor of Music. B.M., North Carolina School of the Arts; B.A., Michigan State University.
- Schroeder, Judy** (2003), Assistant Librarian. B.S., Baldwin-Wallace College; M.S.L.S., Case Western Reserve University.
- Schuster-Craig, John** (2001), Professor of Music. B.M., University of Louisville; M.A., University of North Carolina at Chapel Hill; Ph.D., University of Kentucky.
- Schutten, Mary** (2003), Associate Professor of Movement Science. B.A., Calvin College; M.A., California State University; P.E.D., Indiana University.
- Scott, James** (1968), Associate Professor of Movement Science. B.S., M.A., P.E.S., Central Michigan University.
- Scott, Linda D.** (1998), Associate Professor of Nursing. B.S.N., Michigan State University; M.S.N., Grand Valley State University; Ph.D., University of Michigan.
- Scripps, Jerry** (2001), Instructor of Computing and Information Systems. B.A., Taylor University; M.B.A., Boston College; M.S., Michigan State University.
- Seeger, Mary A.** (1965), Professor of Modern Languages. B.A., University of Minnesota; Ph.D., University of Wisconsin.
- Seeger, Wilhelm** (1965), Professor of German. A.B., M.A., University of Michigan; Ph.D., University of Wisconsin.
- Seley, Beverly** (1972), Professor of Art. B.S., B.F.A., M.F.A., Michigan State University.
- Shan, Patrick Fuliang**, (2003), Assistant Professor of History, B.A., Henan University, M.A., Liaoning University, M.A., McMaster University, Ph.D., McMaster University.
- Shands-Baab, Connie** (2001), Assistant Professor of Social Work. B.S.W., Saginaw Valley State University; M.S.W., New Mexico Highlands University.
- Shang, Ge Ling** (2001), Assistant Professor of Philosophy. B.A., Fudan University; M.A., Old Dominion University; Ph.D., Temple University.
- Shankman, Andrew** (1998), Assistant Professor of History. B.A., Northern Illinois University; Ph.D., Princeton University.
- Shapiro-Shapin, Carolyn G.** (1993), Associate Professor of History. B.A., Adelphi University; M.A., Ph.D., Yale University.



## Directory

- Sheffield, Alfred M.** (1997), Associate Professor of Communications. B.F.A., Illinois Wesleyan University; M.F.A., Northwestern University.
- Shinsky, John** (2001), Associate Professor of Education. B.A., M.A., Ph.D., Michigan State University.
- Shontz, John** (1974), Professor of Biology. B.S.Ed., Edinboro State College; M.A., Miami University; Ph.D., Duke University.
- Shontz, Nancy N.** (1985), Professor of Biology. A.B., Smith College; M.A., Duke University; Ph.D., Smith College.
- Shupe, Ellen I.** (1997), Assistant Professor of Psychology. B.S., Eckerd College; M.A., Ph.D., University of Illinois at Urbana-Champaign.
- Sicilian, Paul** (1987), Associate Professor of Economics. B.A., Tulane University; M.S., Ph.D., University of Illinois.
- Simons, Gerald** (1995), Associate Professor of Economics. B.Soc.Sci., University of Birmingham, England; M.A., Ph.D., University of Kansas.
- Singh, Harinder** (1995), Professor of Economics. M.A., DAV College, India; Ph.D., University of Illinois at Chicago.
- Sisco, William** (2001), Assistant Professor of Occupational Therapy. B.S., United States Air Force Academy; M.A., University of Colorado; M.S., Western Michigan University.
- Smart, Robert** (1996), Associate Professor of Chemistry. B.A., Albion College; Ph.D., Michigan State University.
- Smith, Christine** (1995), Associate Professor of Psychology. B.A., Indiana University; M.A., Ph.D., Loyola University.
- Smith, Curtis** (1998), Associate Professor of Chinese. B.A., University of Wisconsin-Madison; M.A., University of Hawaii; Ph.D., National Taiwan Normal University.
- Smith, Mack** (1994), Professor of English. B.A., M.A., University of Houston; Ph.D., Rice University.
- Smith, Regina M.** (2002), Assistant Professor of German. B.A., Washington University of St. Louis; M.A., Ph.D., University of Wisconsin-Madison.
- Smith, Robin L.** (2000), Assistant Professor of Social Work. B.S., Grand Valley State University; M.S.W., Grand Valley State University.
- Smither, James** (1990), Associate Professor of History. B.A., University of Chicago; M.A., Ph.D., Brown University.
- Snyder, Eric** (2002), Assistant Professor of Biology. B.S., Manchester College; M.S., Central Michigan University; Ph.D., Idaho State University.
- Soljan, Ivo** (1992), Associate Professor of English. B.A., Sarajevo University; M. Philosophy, Nottingham, England; Ph.D., Belgrade University.
- Soman, Sherril** (2000), Assistant Professor of Chemistry. B.Sc., Prairie View A & M University; Ph.D., Purdue University.
- Sopariwala, Parvez R.** (1992), Professor of Accounting. B.A., Bombay University; M.B.A., Bowling Green State University; Ph.D., Michigan State University.
- Sorensen, Jody M.** (1997), Associate Professor of Mathematics. B.A., St. Olaf College; M.A., Ph.D., Northwestern University.
- Sponholz, Jane K.** (2003), Assistant Professor of Public and Nonprofit Administration. B.A., Ramapo College; M.A., Ph.D., Rutgers University.

## Directory

- Stabler, Scott** (2004), Assistant Professor of History. M.A., University of Houston; Ph.D., Arizona State University.
- Standridge, Charles R.** (1999), Associate Professor of Engineering. B.S., Washington University; M.S., Ph.D., Purdue University.
- Stansbie, Paul** (2003), Assistant Professor of Hospitality and Tourism Management. B.S., Southern New Hampshire University; M.B.A., University of Nottingham.
- Stark, David.** (2001), Assistant Professor of History. B.A., Indiana University, M.A., Indiana University, Ph.D., Indiana University.
- Stark, Gary D.** (1998), Professor of History. B.A., Hamline University; M.A., Ph.D., The Johns Hopkins University.
- Staves, Mark** (1996), Associate Professor of Biology. B.S., M.S., Ph.D., University of Texas at Austin.
- Steele, Nancy M.** (1998), Assistant Professor of Nursing. B.S., B.A., M.S.N., Grand Valley State University; Ph.D., University of Michigan.
- Steffel, Jeff** (2003), Assistant Professor of Criminal Justice. B.S., Michigan State University; J.D., Thomas M. Cooley Law School.
- Steinman, Alan D.** (2002), Professor of Water Resources. B.S., University of Vermont; M.S., University of Rhode Island; Ph.D., Oregon State University.
- Stephens, Ronald** (2003), Associate Professor of Sociology. B.A., M.A., Wayne State University; M.A., Ph.D., Temple University.
- Stephenson, Paul** (1995), Associate Professor of Statistics. B.S., Bob Jones University; M.S., Ph.D., Clemson University.
- Sterian, Andrew** (1999), Assistant Professor of Engineering. B.A., University of Waterloo; M.S., Ph.D., University of Michigan.
- Stevenson, John** (2000), Associate Professor of Physical Therapy. B.A., Vassar College; M.S., The Pennsylvania State University; M.S., Central Michigan University; Ph.D., Indiana University.
- Stewart, Jennifer** (2001), Assistant Professor of Sociology. B.A., Michigan State University; M.A., Ph.D., University of South Carolina.
- Stieler, Kathryn** (2003), Assistant Professor of Music. B.M., Western Michigan University; M.M., Bowling Green State University.
- Stillerman, Joel P.** (2002), Assistant Professor of Sociology. B.A., Bennington College; M.A., Ph.D., New School for Social Research.
- Stoelzel, Richard** (2000), Associate Professor of Music. B.M., University of Southern Mississippi; M.M., University of Connecticut.
- Storey, Elizabeth** (1987), Assistant Professor of Education. B.A., M.Ed., Arizona State University.
- Strom, Kirsten** (2000), Assistant Professor of Art and Design. B.A., University of Illinois; M.A., the School of the Art Institute of Chicago; Ph.D., University of Iowa.
- Strickler, Timothy L.** (1980), Professor of Biomedical and Health Sciences. B.S., Pennsylvania University; Ph.D., University of Chicago.
- Subramanian, Ram** (1990), Professor of Management. B.S., University of Madras; A.C.A., Associate of the Institute of Chartered Accountants of India; M.S., Sam Houston State University; Ph.D., University of North Texas.

## Directory

**Sumner, Deborah** (2002), Assistant Professor of English. B.A., Grand Valley State University; M.A., Ph.D., Michigan State University.

**Sun, Huatong** (2004), Assistant Professor of Writing. B.A., M.A., Fudan University; M.S., Michigan Technological University; Ph.D., Rensselaer Polytechnic Institute.

**Sundaram, Sridhar** (2001), Associate Professor of Finance. B.Com. and M.Com., PSG College of Arts & Science, India; M.B.A. and D.B.A., Southern Illinois University.

**Sundstrom, Theodore** (1976), Professor of Mathematics. B.A., Western Michigan University; M.A., Ph.D., University of Massachusetts.

**Swanson, Jane F** (1989), Professor of Social Work. B.A., M.S.W., Ph.D., Michigan State University.

**Swartz, Mick** (1995), Associate Professor of Finance. B.S., M.A., Western Michigan University; M.A., Ph.D., University of Iowa.

**Swartzlander, Susan** (1990), Associate Professor of Honors. B.S., Bloomsburg State College; M.A., Ph.D., Pennsylvania State University.

**Swift, Maris** (2000), Assistant Professor of Business Law. B.S.W., Nazareth College; M.L.I.R., Michigan State University; J.D., Cooley Law School.

**Tafel, Heather Leigh** (2004), Instructor of Political Science. B.A., Eckerd College; A.M., University of Illinois at Urbana-Champaign.

**Tanis, David** (1991), Associate Professor of Chemistry. B.A., Calvin College; M.S., Case-Western University.

**Tao, Yonglei** (1990), Professor of Computing and Information Systems. B.S., Beijing University; M.S., North China Institute of Computing Technology; M.S., Ph.D., University of Iowa.

**Taylor, John C.** (2002), Associate Professor of Marketing. B.A., M.B.A., Ph.D., Michigan State University.

**Taylor, Peter** (1999), Assistant Professor of Communications. B.A., Grand Valley State University; M.F.A., Central Michigan University.

**Tefera, Akalu** (2000), Assistant Professor of Mathematics. B.Sc., M.Sc., Addis Ababa University; Ph.D., Temple University.

**Tendero, Antonio** (2000), Assistant Professor of English. B.A., University of Michigan; Ed.D., Columbia University.

**Therriault, Kim** (2000), Assistant Professor of Art and Design. B.A., The American University; M.A., State University of New York at Buffalo; Ph.D., The University of Virginia.

**Thibeault, Stephanie** (2003), Assistant Professor of Dance. B.F.A., Southwest Missouri State University; M.F.A., University of Maryland, College Park.

**Thomas, Lorelle** (1990), Associate Professor of Art and Design. B.A., Eastern Michigan University; M.F.A., Syracuse University.

**Thomasma, Linda** (2002), Assistant Professor of Biology. B.S., Grand Valley State University; M.S., Ph.D., Michigan Technological University.

**Thompson, Anthony W.** (1997), Associate Professor of Communications. B.S., University of Dallas; M.F.A., Washington University.

**Thorpe, Patrick A.** (1988), Associate Professor of Biology. B.S., Texas Lutheran College; M.S., Ph.D., University of Texas.

## Directory

- Thorsnes, Paul** (1995), Associate Professor of Economics. B.A., Pacific Lutheran University; Ph.D., University of Oregon.
- Tolman, Anton** (2000), Assistant Professor of Psychology. B.A., University of Denver; M.A., Ph.D., University of Oregon.
- Toot, Jane** (1991), Professor of Physical Therapy. B.S., University of Michigan; M.A., George Washington University; Ph.D., Wayne State University.
- Topper, Andrew** (1999), Assistant Professor of Education. B.S., Grand Valley State University; Ph.D., Michigan State University.
- Travis, Anthony** (1971), Professor of History. B.S., Loyola University of Chicago; M.A., Ph.D., Michigan State University.
- Trefftz, Christian** (2002), Assistant Professor of Computing and Information Systems. B.S., Universidad; M.S., Western Michigan University; Ph.D., Michigan State University.
- Trier, Terry M.** (1997), Associate Professor of Biology. B.S., Purdue University; Ph.D., Michigan State University.
- Tripp, Steven** (1990), Professor of History. B.A., University of California, Berkeley; M.A., University of California, Davis; Ph.D., Carnegie Mellon.
- Tucker, Veta Smith** (1995), Associate Professor of English and Coordinator of African/African-American Studies. B.A., M.A., Michigan State University; A.D., University of Michigan.
- Tusch, Guenter** (2001), Associate Professor of Computing and Information Systems. M.S., University of Hanover, Germany; Ph.D., Medical School Hanover.
- Tutt, Kevin** (2003), Assistant Professor of Music. B.S., M.M., Ph.D., The Pennsylvania State University.
- Tyson, Lois** (1989), Professor of English. B.A., Rutgers University; M.Ed., M.A., Ohio University; Ph.D., Ohio State University.
- Uglietta, John** (2004), Assistant Professor of Philosophy. A.B., University of Chicago; J.D., University of Michigan Law School; Ph.D., Johns Hopkins University.
- Underwood, Patricia** (1988), Professor of Nursing. B.S.N., Duke University; M.S., Boston University; Ph.D., University of Michigan.
- Underwood, Kathleen** (2003), Associate Professor of History, B.A., University of Colorado, M.A. and Ph.D., University of California at Los Angeles
- Uzarski, Don** (2002), Assistant Professor of Water Resources. B.S., Grand Valley State University; M.S., Central Michigan University; Ph.D., Michigan State University.
- Vail, Janet** (2002), Associate Professor of Water Resources. B.S., University of Michigan; M.A., University of California; Ph.D., Western Michigan University.
- VanAntwerp, Jill R.** (1999), Assistant Professor of English. B.A., M.A., Ph.D., Michigan State University.
- Vandenberg, Phyllis** (2000), Assistant Professor of Philosophy. B.A., Marquette University; M.A., Western Michigan University.
- Vanden Wyngaard, Julianne M.** (1965), Associate Professor of Music. B.F.A., University of Wisconsin-Milwaukee.
- Vander Broek, Laura** (1979), Associate Professor of English. B.A., Hope College; M.A., Teachers College, Columbia University.

## Directory

- VanderJagt, Donald** (1964), Professor of Mathematics. A.B., Hope College; M.S., Florida State University; Ph.D., Western Michigan University.
- Vandermeer, Rita** (1996), Associate Librarian. B.A., St. Andrews Presbyterian College; M.S.L.S., Wayne State University.
- VanderWerf, Marilyn C.** (2002), Assistant Professor of Nursing. B.S.N., Northern Illinois University; M.S.N., Grand Valley State University.
- Van Fleet, Eric** (1993), Professor of Occupational Safety and Health. B.S., M.S., Illinois State University; Ph.D., Michigan State University.
- Van Gent, Elona** (1994), Associate Professor of Art and Design. B.A., Hope College; M.F.A., Temple University.
- Van Iwaarden, Donna D.** (1993), Associate Professor of Public and Nonprofit Administration. B.A., M.P.H., Ph.D., University of Minnesota.
- Vaughn, Daniel** (1996), Assistant Professor of Physical Therapy. B.S., East Carolina University; M.S., Ola Grimsby Institute.
- Veazey, Richard E.** (1979), Associate Professor of Accounting. B.S., Ferris State College; M.B.A., Central Michigan University; Ph.D., Saint Louis University; C.P.A.
- Veeneman, Laurene** (2000), Assistant Librarian. B.S., Grand Valley State University; M.L.I.S., Wayne State University.
- Veenstra, Victoria** (2000), Assistant Professor of Communications. B.F.A., M.F.A., University of Michigan.
- Veltman, Rebecca** (2001), Assistant Professor of Nursing. B.S.N., Georgia State University; M.S.N., Grand Valley State University.
- Victor, Jerry** (1993), Instructor of Education. B.A., M.A., University of Michigan; Ed.D., Wayne State University.
- Videtich, Patricia E.** (1992), Professor of Geology. B.S., Grand Valley State University; M.Sc., Ph.D., Brown University.
- Vigna, Janet** (2002), Assistant Professor of Biology. B.S., University of Michigan; Ph.D., University of Iowa.
- Vrooman, Michael** (2003), Assistant Professor of Spanish. B.A., University of Toledo; M.A., Bowling Green State University; Ph.D., University of Massachusetts-Amherst.
- Waggoner, Kathryn** (1980), Senior Librarian. B.A., Ball State University; M.A.T., M.L.S., Indiana University.
- Walhof, Darren R.** (2003), Assistant Professor of Political Science. B.A., Calvin College; Ph.D., University of Minnesota.
- Walker, Bethany** (2004), Assistant Professor of History. M.A., University of Arizona; Ph.D., University of Toronto.
- Walker, Rebecca** (2001), Assistant Professor of Mathematics. B.A., William Smith College; M.A., Montclair State College; Ph.D., Western Michigan University.
- Wangdi, Yosay** (2002), Assistant Professor of History, M.A., and M. Phil., Jadavpur University, M.S., and Ph.D., University of Nevada.
- Wallar, Brad** (2003), Assistant Professor of Chemistry. B.S., University of Michigan — Flint; Ph.D., University of Minnesota.
- Wangdi, Yosay** (2003), Assistant Professor of History. Ph.D., University of Nevada, Reno.

## Directory

- Ward, Francis** (1995), Associate Professor of Health Professions. B.S., University of Nebraska; M.S.A., Central Michigan University; Ed.D., George Washington University.
- Watson, Robert** (2000), Assistant Professor of English. B.A., Princeton University; M.A., Ph.D., University of Wisconsin-Madison.
- Watts, Keith E.** (1996), Assistant Professor of Spanish. B.A., Eastern Mennonite College; M.A., University of Virginia; Ph.D., University of New Mexico.
- Weber, John C.** (1995), Associate Professor of Geology. B.S., M.S., Southern Illinois University; Ph.D., Northwestern University.
- Webster, Michael P.** (1988), Associate Professor of English. B.A., DePauw University; M.A., Boston University; M.A., Ph.D., Indiana University.
- Weibel, Deana** (2003), Assistant Professor of Anthropology. B.A., University of California, Irvine; M.A., Ph.D., University of California, San Diego.
- Weis, Richard** (1991), Associate Professor of Art and Design. B.F.A., Kansas City Art Institute; M.F.A., Indiana University.
- Welch, Cliff** (1990), Associate Professor of History. B.A., University of California; M.A., University of Maryland; Ph.D., Duke University.
- Wells, Clark P.** (1997), Associate Professor of Mathematics. B.S., University of Kentucky; M.S., Purdue University; Ph.D., University of Kentucky.
- Wells, Pamela J.** (1995), Associate Professor of Mathematics. B.S., University of Wisconsin; M.S., Purdue University; Ph.D., University of Kentucky.
- Wenner, Wendy** (1989), Professor of English. B.A., Carlton College; M.A.T., Northwestern University; Ph.D., Marquette University.
- Westerhof-Shultz, Jolanda** (1999), Assistant Professor of Education. B.A., Principia College; M.A., Washington University; Ph.D., Indiana University.
- Westra, Helen** (1995), Associate Professor of English. B.A., Calvin College; M.A., University of Michigan; Ph.D., University of Notre Dame.
- Whipps, Judy D.** (1999), Professor of Philosophy. B.A., Grand Valley State University; M.A., University of Chicago; Ph.D., The Union Institute.
- Whit, William** (1995), Associate Professor of Sociology. B.A., Bowdoin College; M.Div., Andover Newton Theological School; Ph.D., Boston University.
- White, Brian** (1990), Professor of English. B.A., M.A., Ph.D., University of Wisconsin-Madison.
- White, Jonathan** (1983), Professor of Criminal Justice. B.A., M.A., Western Michigan University; M.Div., Western Theological Seminary; Ph.D., Michigan State University.
- Whitehill, Sharon** (1970), Professor of English. B.A., Grand Valley State University; M.A., Ph.D., University of Illinois.
- Wietor, Beth** (2001), Assistant Professor of Nursing, B.S.N., Wayne State University; M.S.N., Andrews University.
- Willey, Thomas** (1999), Associate Professor of Finance. B.S.B.A., University of Kansas; M.B.A., University of Houston; D.B.A., Mississippi State University.
- Williams, Donald** (1969), Professor of Sociology. B.A., Western Michigan University; M.A., Michigan State University; Ph.D., Western Michigan University.

## Directory

**Williams, Keith** (2001), Assistant Professor of Psychology. B.A., New Mexico State University; M.A., Ph.D., University of Michigan.

**Williams, Sherie** (2001), Instructor of Education. B.S., Eastern Michigan University; M.A., Michigan State University; Ph.D., Western Michigan University.

**Wilson, Roger** (2001), Assistant Professor of Education. B.A., University of Western Ontario; B.Ed., Ontario Teacher Education College; M.Ed., Brock University; Ph.D., University of Calgary.

**Winchester, Randy** (2002), Assistant Professor of Chemistry. B.A., New College; Ph.D., University of Florida.

**Winegar, Roy** (2003), Assistant Professor, School of Communications, B.S., M.S., Grand Valley State University; Ph.D., Graduate School of Union Institute and University.

**Wittenbraker, Paul** (1997), Assistant Professor of Art and Design. B.A., Wabash College; M.A., Cranbrook Academy of Art.

**Witucki, Laurie** (2000), Assistant Professor of Chemistry. B.S., Cedar Crest College; M.A., Ph.D., Princeton University.

**Wolfe, Michael** (2000), Assistant Professor of Psychology. B.A., University of California; M.A., Ph.D., University of Colorado.

**Wolffe, Gregory S.** (1998), Associate Professor of Computing and Information Systems. B.S., Michigan State University; M.S., Ph.D., University of Wisconsin.

**Wolter, James F.** (1981), Professor of Marketing. B.A., Indiana University; M.S., Ball State University; M.B.A., Indiana University; Ph.D., Michigan State University.

**Wolterink, Thomas** (2000), Instructor of Management. B.A., Hope College; M.B.A., University of Michigan.

**Wong-Ligda, Ed** (1996), Professor of Art and Design. M.F.A., University of Tulsa.

**Wright, Diane** (1992), Associate Professor of Spanish. B.A., Aquinas College; M.A., Ph.D., Michigan State University.

**Wu, Shinian** (1998), Associate Professor of English. B.A., Xi'an Institute of Foreign Languages; M.A., Ph.D., Northern Arizona University.

**Xu, Xiaojuan (Xandra)** (1994), Associate Professor of Psychology. B.S., Beijing University; M.S., Ph.D., University of Michigan.

**Yalda, Christine** (2004), Assistant Professor of Criminal Justice. B.A., University of Michigan; Juris Doctor, Boston University Law School; M.S., Ph.D., Arizona State University.

**Yarlas, Aaron** (2001), Assistant Professor of Psychology. B.A., Rhode Island College; M.A., Ph.D., University of California, Los Angeles.

**Yeziarski, Ellen** (2003), Assistant Professor of Chemistry. B.S., University of Arizona; M.Ed., Northern Arizona University; Ph.D., Arizona State University.

**Yu, Yan** (1998), Assistant Professor of Sociology. B.A., M.A., Beijing University; Ph.D., Florida State University.

**Yu, Paul** (2003), Assistant Professor of Mathematics. B.S., University of Illinois at Urbana; M.S., Illinois State University.

**Yuhás, Michael** (1985), Professor of Accounting and Taxation. B.A., University of Notre Dame; J.D., Indiana University; LL.M., Georgetown University; LL.M., University of Miami; C.P.A.

## Directory

**Zaszlavik, Katalin** (2003), Assistant Professor of Art and Design. Diploma, Hungarian College of Applied Arts, M.A., Ph.D., University of Illinois.

**Zettle-Sterling, Renee** (2000), Assistant Professor of Art and Design. B.F.A., Indiana University of Pennsylvania; M.F.A., M.A., Edinboro University of Pennsylvania.

**Ziembo-Vogl, Joanne** (1995), Associate Professor of Criminal Justice. B.A., Saginaw Valley State University; M.S., Ph.D., Michigan State University.

### Professors and Administrative Emeriti

**Adamski, Joseph**, Associate Professor Emeritus of Computer Science and Information Systems. B.A., University of Connecticut; M.S., Rensselaer Polytechnic Institute.

**Andersen, Daniel**, Professor Emeritus of Physics. B.S., Union College; M.A., Columbia University.

**Atkinson, Richard**, Professor Emeritus of Chemistry. B.S., University of Chicago; M.A., Ph.D., Harvard University.

**Banta, Janet**, Associate Professor Emerita of Nursing. B.A., University of Michigan; M.N., Western Reserve University; M.Ed., Grand Valley State University.

**Batchelder, John**, Professor Emeritus of Political Science. A.B., Dartmouth College; M.A., Ph.D., University of Michigan.

**Bell, William**, Professor Emeritus of Biomedical and Health Sciences. B.S., M.S., University of Missouri at Kansas City; Ph.D., University of Michigan.

**Bevis, Frederick**, Associate Professor Emeritus of Natural Resources Management. B.S., M.S., University of Michigan.

**Bijkerk, Roelof**, Professor Emeritus of Psychology. Dr. Phil., Dr. Psych., Free University of Amsterdam.

**Blakey, James**, Associate Professor Emeritus of Psychology. B.S., Newark State College; M.A. Montclair State College; Ed.D., Rutgers University.

**Boand, Joan**, Associate Professor Emerita of Physical Education. B.S., M.A., Michigan State University.

**Bornhofen, John O.**, Professor Emeritus of Economics and Finance. B.S., M.S., Ph.D., University of Illinois.

**Callahan, Johnine L.**, Professor Emerita of Biomedical and Health Sciences, B.S. Eastern Illinois University; M.A., Western Michigan University; Ph.D., Bowling Green State University.

**Carpenter, Craig**, Professor Emeritus of Education. B.A., M.A., Michigan State University; Ed.D., University of Michigan.

**Chapman, Frederick**, Associate Professor Emeritus of Communications. B.A., Wayne State University; M.A., University of Detroit.

**Clarke, Robert**, Professor Emeritus of Political Science and Public Administration. B.A., DePaul University of Montana; Ph.D., Notre Dame University.

**Cooper, Robert**, Associate Professor Emeritus of Public Service. B.A., M.S., Michigan State University.

**Curry, Brian**, Professor Emeritus of Biomedical and Health Sciences. B.Sc., St. Luke's College, Exeter University; M.S., University of Massachusetts; Ph.D., Michigan State University.



## Directory

**Davis, Gilbert**, Professor Emeritus of English. B.A., M.A., Ph.D., Wayne State University.

**De Long, Greta**, Professor Emerita of Education. B.S., Eastern Michigan University; M.A., University of Michigan; Ph.D., Ohio State University.

**Densmore, Max, L.**, Professor Emeritus of Marketing. B.A., Michigan State University; M.B.A., Western Michigan University; Ph.D., Michigan State University.

**DeVries, Marvin**, Professor Emeritus of Economics and Business. B.S.E., M.B.A., Ph.D., University of Michigan.

**Edinger, Donald**, Professor Emeritus of Education. B.S., M.A., California State Polytechnic College; M.S., Oregon State University.

**Eitzen, Leslie**, Associate Professor Emerita of Music. B.M., Curtis Institute of Music; M.F.A., University of Iowa.

**Erard, Glen**, Associate Professor Emeritus of Social Work. B.A., M.S.W., University of Michigan; Ph.D., Smith College.

**Foote, Walter**, Associate Professor Emeritus of English. B.A., M.A., University of Illinois.

**Franklin, Ursula**, Professor Emerita of French. B.A., M.A., Ph.D., Michigan State University.

**Frase, H. Weldon**, Professor Emeritus of Psychology. B.S., University of Wisconsin; M.A., Northwestern University; Ed.D., Michigan State University.

**French, Joyce A.**, Associate Professor Emerita of Nursing. B.S.N., Michigan State University; M.S.N., Wayne State University; Ph.D., Michigan State University.

**Gonce, Richard**, Professor Emeritus of Economics. B.B.A., M.B.A., Ph.D., University of Wisconsin.

**Grimm, Lucille**, Associate Professor Emerita of Nursing. B.S.N., Michigan State University; M.S.N., Sp.C.N.Ad., Wayne State University; Ed.D., Western Michigan University.

**Grishke, Paul**, Associate Professor Emeritus of Music. B.A., M.A., Michigan State University.

**Hall, Donald**, Professor Emeritus of Physics. B.S., M.S., Michigan State University.

**Harper, Earl**, Professor Emeritus of Management. B.S., M.S., M.B.A., Sp.A., Western Michigan University; Ph.D., Texas Technological University.

**Harpold, Judith C.**, Professor Emerita of Education. B.A., M.A., Michigan State University.

**Hendrix, Thomas**, Professor Emeritus of Geology. B.S., Franklin and Marshall College; M.S., Ph.D., University of Wisconsin.

**Hills, Arthur C.**, Associate Professor Emeritus of Music. B.M., M.M., University of Michigan.

**Horan, Mary**, Professor Emerita of Nursing. B.S.N., Mercy College of Detroit; M.S.N., Wayne State University; Ph.D., University of Michigan.

**Huisman, David**, Professor Emeritus of English. A.B., Calvin College; M.A., Ph.D., University of Michigan.

**Insalaco, Carl**, Professor Emeritus of Psychology. B.A., University of Arizona; Ph.D., Florida State University.

## Directory

- Jackson, Thomas**, Professor Emeritus of Education. B.S., Tennessee State University; M.A., Eastern Michigan University; Ph.D., University of Michigan.
- Johnson, Jacqueline**, Professor Emerita of Sociology. B.A., Macalester College; M.S., Ph.D., Purdue University.
- Jones, Constance**, Professor Emerita of English. B.S., Western Michigan University; M.A., Michigan State University.
- Jones, Curtis**, Professor Emeritus of Sociology. B.A., M.A., Western Michigan University; Ph.D., Michigan State University.
- Junn, Robert**, Professor Emeritus of Political Science. B.A., Korea University; M.A., University of Tennessee; Ph.D., University of Illinois.
- Kim, Katherine**, Professor Emerita of Nursing. B.S., Hartwick College; M.Ed., University of Minnesota; M.S.N., Ph.D., University of Illinois.
- Klein, Bruce**, Professor Emeritus of Computer Science and Information Systems. B.S., City College of New York; M.S., Trinity College.
- Klein, Donald**, Professor Emeritus of Accounting. B.S., Rockhurst College; M.B.A., University of Detroit; D.B.A., Michigan State University; C.M.A., C.P.A.
- Klein, Georgianna**, Associate Professor Emerita of Mathematics and Statistics. B.A., Berea College; M.S., Purdue University; Ph.D., Michigan State University.
- Knop, Charles P.**, Professor Emeritus of Chemistry. B.S., Aquinas College; Ph.D., Michigan State University.
- Kovats, Daniel**, Associate Professor Emeritus of Music. B.M., M.M., University of Michigan.
- Larson, Lars**, Professor Emeritus of Management. B.S., M.B.A., Ph.D., University of Illinois, Urbana.
- Leeling, Norman**, Professor Emeritus of Biology. B.S., M.S., Oregon State University; Ph.D., University of Wisconsin.
- Lefebvre, Richard**, Professor Emeritus of Geology. B.S., University of Michigan; M.S., University of Kansas; Ph.D., Northwestern University.
- Lubbers, Arend**, President Emeritus. B.A., Hope College; M.A., Rutgers University; Litt.D., Central College; D.S., University of Sarajevo; L.H.D., Hope College; D.S., Academy of Economics, Krakow; HonDUniv., Kingston.
- MacDonald, George**, Professor Emeritus of Physical Education and Recreation. B.S., Bowling Green State University; M.A., University of Michigan; Ed.D., State University of New York.
- Merrill, Dorothy**, Professor Emerita of Health Sciences. B.S., Bridgewater State College; A.M., Ph.D., University of Michigan.
- Muraski, Virginia**, Professor Emerita of Mathematics and Computer Science. A.B., B.S., Jacksonville State College; M.A.T., Michigan State University; M.A., University of Illinois; Ph.D., Michigan State University.
- Muskovitz, Rosalyn**, Professor Emerita of Art and Design. B.A., Oakland University; M.A., Michigan State University; M.F.A., Kent State University.
- Niemeyer, Glenn**, Provost and Vice President for Academic Affairs Emeritus. A.B., Calvin College; M.A., Ph.D., Michigan State University; L.H.D., Grand Valley State University.

## Directory

**Osmun, Gregory**, Associate Professor Emeritus of Education. B.A., M.A., Michigan State University; Ed.D., University of Michigan.

**Ostroot, Nathalie M.**, Professor Emerita of Sociology. B.A., M.A., Ph.D., University of Chicago.

**Pare, Eileen**, Associate Professor Emerita of Chemistry. B.A., Rosary College; M.S., University of Illinois; Ph.D., University of Windsor.

**Parise, Anthony**, Professor Emeritus of English. B.S., University of Wisconsin; M.A., Northwestern University; Ph.D., University of Wisconsin.

**Peterson, William**, Professor Emeritus of Economics. A.B., Calvin College; M.B.A., Ph.D., University of Michigan.

**Poitras, Ronald**, Associate Professor Emeritus of Geography and Urban Planning. B.A., California State University/Northridge; M.U.P., University of Oregon.

**Pratt, Philip**, Professor Emeritus of Mathematics. B.A., M.A., Ph.D., Michigan State University.

**Preston, Joseph P.**, Professor Emeritus of History. B.A., Park College; M.S., University of Wisconsin; Ph.D., University of Missouri.

**Rivera-Muniz, Pedro**, Associate Professor Emeritus of Mathematics and Statistics. B.A., M.A., Syracuse University.

**Rucks, Doris**, Associate Professor Emerita of Sociology. B.S., Hampton University; M.S.W., Columbia University; Ph.D., Michigan State University.

**Salazar, Laura**, Professor Emerita of Communications. B.S., Wisconsin State University; M.A., Kent State University; Ph.D., University of Michigan.

**Shedd, Joan**, Assistant Professor Emerita of Nursing. B.S., Eastern Mennonite College; M.S.N., University of Colorado.

**Shroyer, Jan**, Associate Professor Emerita of Mathematics. B.S., Knox College; M.A.T., Ph.D., Michigan State University.

**Simone, Roberta**, Professor Emerita of English. B.S., Northern Illinois University; M.A., Bowling Green University; Ph.D., University of Illinois.

**Snyder, Wayne**, Professor Emeritus of Economics. B.A., University of Southern California; M.P.A., Ph.D., Harvard University.

**Strickland, James**, Professor Emeritus of Physics. B.S., Franklin and Marshall College; Ph.D., Massachusetts Institute of Technology.

**Ten Brink, Norm**, Professor Emeritus of Geology. B.S., University of Michigan; M.S., Franklin and Marshall College; Ph.D., University of Washington.

**Ten Eyck, Allan**, Professor Emeritus of Education. A.B., Aquinas College; A.M., Ed.D., University of Michigan.

**Terry, M. Nancy**, Senior Librarian. A.B., A.M.L.S., University of Michigan.

**Tevebaugh, John**, Professor Emeritus of History. A.B., M.A., Ph.D., University of Illinois.

**Van Steeland, Ronald**, Vice President for Finance and Administration Emeritus. B.A., Michigan State University; L.H.D., Grand Valley State University.

**Ward, Ronald**, Director Emeritus of the Annis Water Resources Institute. Sc.D., John Hopkins University.

## Directory

**Wasserman, Irving**, Associate Professor Emeritus of Philosophy. B.S., Rutgers University; M.A., Indiana University.

**Wasserman, Loretta**, Professor Emerita of English. B.A., M.A., University of Minnesota.

**Williams, Sr., Donald**, Dean Emeritus. B.S., Eastern Michigan University; M.A., West Virginia University.

**Wiltse, Ralph**, Associate Professor Emeritus of Mathematics and Computer Science. B.S., Central Michigan University; M.S., Wayne State University.

**Wissink, John**, Associate Professor Emeritus of Education. B.A., Calvin College; M.A., Western Michigan University; Ph.D., University of Arizona.

**Yackish, Thomas**, Associate Professor Emeritus of Engineering. B.S., Purdue University; M.S., University of Illinois.

**Ylvisaker, Ruth**, Professor Emeritus of Social Work. B.S.W., University of Wisconsin; M.S.W., University of Wisconsin; Ph.D., University of Minnesota

## Administrative Staff

### President

**Mark A. Murray**. B.A., M.L.I.R., Michigan State University.

### Charter Schools

**Edward D. Richardson**, Director. B.A., Olivet College; M.A., Eastern Michigan University.

**Kristin Middendorf**, Coordinator of Charter Schools. B.S., Grand Valley State University.

### Academic and Student Affairs

**Gayle R. Davis**, Provost and Vice President for Academic Affairs. B.A., Muskingum College; M.A., Ph.D., Michigan State University.

**John A. Gracki**, Associate Vice President for Academic Affairs. B.Ae.E., University of Detroit; Ph.D., Brown University.

**Susan W. Martin**, Associate Vice President for Academic Affairs. B.S., Central Michigan University; M.B.A., Ph.D., Michigan State University. C.P.A., C.M.A., C.I.A.

### Institutional Analysis

**Philip Batty**, Director. B.A., University of Illinois; M.A., Tulane University.

**R. Bruce Tweddale**, Senior Analyst. B.A., M.A., Michigan State University.

### Seidman College of Business

**H. James Williams**, Dean of the Seidman College of Business. B.S., North Carolina Central University; M.B.A., University of Wisconsin; Ph.D., University of Georgia; LL.M., J.D., Georgetown University Law Center.

**Kathy Gulembo**, Assistant Dean and Undergraduate Program Director. B.S., Michigan State University; M.B.A., Grand Valley State University

## Directory

**Stephen Goldberg**, Chair of the Department of Accounting and Taxation. B.Sc., DePaul University; M.B.A., University of Chicago; Ph.D., University of Wisconsin at Madison.

**Harinder Singh**, Chair of the Department of Economics. M.A., DAV College, India; Ph.D., University of Illinois at Chicago.

**Laurence Blose**, Chair of the Department of Finance. B.S., M.B.A., Gannon University; Ph.D., University of Texas at Austin.

**Jaideep Motwani**, Chair of the Department of Management. B.B.A., Bombay University; M.B.A., Sam Houston State University; Ph.D., University of North Texas.

**Suzanne Benet**, Chair of the Department of Marketing. B.S., Jacksonville State University; Ph.D., University of North Carolina.

**Claudia Bajema**, Director of Graduate Business Programs. B.S., M.B.A., Grand Valley State University.

**Leigh Brownley**, Student Services Coordinator. B.S., B.A., Central Michigan University.

### Center for Entrepreneurship

**Thomas V. Schwarz**, Director. B.S., M.B.A, D.B.A., Florida State University.

### Family Owned Business Institute

**Thomas V. Schwarz**, Director. B.S., M.B.A, D.B.A., Florida State University.

**Shorouq AlMallah**, Resource Manager. B.A., M.I.S., Indiana University.

### Michigan Small Business Development Center

**Carol Lopucki**, State Director. B.A., Michigan State University; M.A., Central Michigan University.

**Tracy Amid**, Special Projects Manager. B.A., Calvin College.

**Anna Bier**, Technology Resource Counselor. B.A., Virginia Polytechnic and State University; M.S., Texas A & M University.

**Martin Dober**, Technology Resources Counselor. B.S., Kettering University; M.B.A., Harvard University.

**Sienna Mavima**, Information Manager. B.A., University of Zimbabwe; M.I.S.D., Florida State University.

**Sally Mulder**, Finance Manager. B.A., Calvin College.

**William Walker**, Technology Resource Counselor. B.S.M.E.T., Lake Superior State University; M.B.A., University of Toledo. 7

**Jill Wallace**, Training and Marketing Manager. B.A., Albion College; M.M., Aquinas College.

### Small Business Development Center

**Nancy Boese**, Regional Director. B.B.A., Davenport College; M.B.A., Western Michigan University.

**Mary Sue Cary**, Technology Resource Counselor. B.A., Michigan State University; J.D., University of Pittsburgh.

**Jeanne Ferro**, Business Counselor. B.A., Grand Valley State University.

**David Sayers**, Senior Business Counselor. B.A., Kalamazoo College; M.B.A., Grand Valley State University.

## Directory

**Dante Villarreal**, Business Counselor. B.B.A., M.B.A., Grand Valley State University.

### College of Community and Public Services

**Rodney Mulder**, Dean of the College of Community and Public Services. B.A., Calvin College; M.A., Michigan State University; M.S.W., Ph.D., Western Michigan University.

Director of School of Social Work.

**James Edwards**, MSW Field Education Director. B.S., Aquinas College; M.S.W., Western Michigan University.

**Julia Guevara**, Director, B.S.W. Program. B.S., Grand Valley State University; M.S.W., Western Michigan University; Ph.D., Michigan State University.

**David Lehker**, BSW Field Education Director. B.S., Grand Valley State University; M.S.W., Western Michigan University.

**Lois Owens**, Director of Social Work Recruitment. M.S.W., University of Michigan.

**Elaine Schott**, Director, M.S.W. Program. B.S., Bluffton College; M.S.W., University of Michigan; Special Education Supervisor Certification, Grand Valley State University; Ph.D., Michigan State University.

**Danny Balfour**, Director of the School of Public and Nonprofit Administration. B.A., Michigan State University; Ph.D., Florida State University.

**Terry Fisk**, Director of School of Criminal Justice. B.S., Eastern Kentucky University; M.P.A., D.P.A., Western Michigan University.

**Jennifer McCaul**, Student Services Coordinator, School of Criminal Justice. B.S., Bowling Green State University.

**Williamson Wallace**, Director of Criminal Justice Training. B.S., University of North Carolina-Charlotte; J.D., Thomas M. Cooley Law School.

**Allison Adams**, Chair of the Department of Hospitality and Tourism Management. B.S., M.B.A., Central Michigan University.

**Patricia Nanzer**, Assistant Director for Administration and Special Projects. B.S., Grand Valley State University.

**Donna Van Iwaarden**, Director of Center for Philanthropy. B.A., M.P.H., Ph.D., University of Minnesota.

**Margaret Sellers Walker**, Associate Director of Center for Philanthropy. B.A., Wayne State University; M.P.A., Western Michigan University.

### College of Education

**Elaine Collins**, Dean of the College of Education. B.A., University of California, Los Angeles; M.A., University of California, Davis; Ph.D., Ohio State University.

**Jacquelyn Melin**, Director of Student Information and Services Center. B.A., Michigan State University; M.A., Western Michigan University.

**David Bair**, Unit Head for Foundations and Technology. B.A., The College of Wooster; Ed.D., University of Michigan.

**Linda McCrea**, Unit Head for Curriculum and Instruction. B.S., Eastern Michigan University; M.A., Ed.D., Western Michigan University.

**John Shinsky**, Unit Head for Leadership and Human Services. B.A., M.A., Ph.D., Michigan State University.

## Directory

**Nancy Dausman**, Associate Director, Student Information and Services Center. B.A., M.A., Michigan State University.

**Glenda Eikenberry**, Associate Director, Administrative Services. B.S., M.P.A. Grand Valley State University.

**Barbara Fournier**, Director, Administrative Services. B.A., M.A., Michigan State University.

**Amy Moore**, Assistant Director, Community Outreach. B.S., Michigan State University; M.Ed., Grand Valley State University.

**Thomas Owens**, Field Placement Coordinator. B.A., M.A., Michigan State University.

**Clayton Pelon**, Assistant Director, Community Outreach. B.A., M.A., Michigan State University.

**Elyse Reese**, Field Placement Coordinator. B.S., Northern Michigan University; M.A., Michigan State University.

**April Smith**, Assistant Director, Student Information and Services Center. B.A., University of Maryland Eastern Shore; M.Ed., Grand Valley State University.

**Margaret Vande Velde**, Associate Director, Student Information and Services Center. B.S., Michigan State University; M.A., Western Michigan University.

### College of Liberal Arts and Sciences

**Frederick Antczak**, Dean of College of Liberal Arts and Sciences. B.A., University of Notre Dame; M.A., Ph.D., University of Chicago.

**Julianne Vanden Wyngaard**, Interim Associate Dean, Arts and Humanities. B.F.A., University of Wisconsin-Milwaukee.

**Neal Rogness**, Interim Associate Dean, Science and Mathematics. B.S., University of Minnesota; M.S., University of Houston; Ph.D., University of Northern Colorado.

**Gary Stark**, Interim Associate Dean, Social Sciences. B.A., Hamline University; M.A., Ph.D., The Johns Hopkins University.

**Janet Brashler**, Interim Chair of the Department of Anthropology. B.A., Northwestern University; M.A., Ph.D., Michigan State University.

**J. David McGee**, Chair of the Department of Art and Design. B.S., University of Kansas; M.B.A., California State University at Long Beach; M.A., Ph.D., Indiana University.

**Shaily Menon**, Chair of the Department of Biology. B.Sc., M.Sc., Bombay University; M.S., University of South Carolina; Ph.D., Ohio State University.

**Anthony Nieuwkoop**, Chair of the Department of Biomedical and Health Sciences. A.B., Hope College; Ph.D., University of Michigan.

**Harvey Nikkel**, Chair of the Department of Chemistry. B.S., Southwestern State College; Ph.D., Purdue University.

**William Levitan**, Chair of the Department of Classics. B.A., Yale University; Ph.D., University of Texas.

**Alex Nesterenko**, Director of the School of Communications. B.A., M.A., Ph.D., University of Iowa.

**Jo Miller**, Chair of the Department of English. B.A., University of Oregon; M.A., Colorado State University; Ph.D., University of Utah.

## Directory

**Jeroen Wagendorp**, Chair of the Department of Geography and Planning. B.S., Aquinas College; M.A., Western Michigan University; Ph.D., University of Oklahoma.

**Kevin Cole**, Chair of the Department of Geology. B.S., M.S., University of Washington; Ph.D., University of Arizona.

**James Smither**, Chair of the Department of History. B.A., University of Chicago; M.A., Ph.D., Brown University.

**Steven Schlicker**, Chair of the Department of Mathematics. B.A., Michigan State University; M.A., Ph.D., Northwestern University.

**Gabriela Pozzi**, Chair of the Department of Modern Languages. B.A., McGill University; M.A., Ph.D., University of Pennsylvania.

**Nancy Giardina**, Chair of the Department of Movement Science. B.S., University of Rhode Island; M.A., Montclair State College; Ed.D., Columbia University.

**John Schuster-Craig**, Chair of the Department of Music. B.M., University of Louisville; M.A., University of North Carolina at Chapel Hill; Ph.D., University of Kentucky.

**Kelly Parker**, Chair of the Department of Philosophy. B.A., Texas A & M University; M.A., Ph.D., Vanderbilt University.

**Ross Reynolds**, Chair of the Department of Physics. B.S., Michigan State University; M.S., Ph.D., University of Oregon.

**John Constantelos**, Chair of the Department of Political Science. B.A., Tufts University; M.A., The Johns Hopkins University; M.S., Tufts University; Ph.D., Duke University.

**Robert Hendersen**, Chair of the Department of Psychology. B.A., Reed College; Ph.D., University of Pennsylvania.

**Mary deYoung**, Chair of the Department of Sociology. B.S., Grand Valley State University; M.A., University of Chicago; Ph.D., Western Michigan University

**Paul Stephenson**, Chair of the Department of Statistics. B.S., Bob Jones University; M.S., Ph.D., Clemson University.

Chair of the Department of Writing.

**Sandra Bacon**, Director of Laboratory Support, Chemistry Department. A.B., University of Rochester; M.S., Michigan State University.

**Paul Collins**, Technical Director. B.F.A., University of Michigan.

**Joe Cross**, Accompanist.

**Akiko Flanders**, Laboratory Preparation Coordinator. B.S., Ferris State University; M.S., Western Michigan University

**Jill Hamilton**, Facilities and Operations Manager/Designer. B.A., Butler University; M.A., University of Cincinnati.

**Diane Laughlin**, Laboratory Supervisor, Biology. B.S., Michigan Technological University.

**Inara Lazdins**, Laboratory Supervisor, Holland Center. B.S., Pennsylvania State University; M.S., Ohio State University; Ph.D., Johns Hopkins University.

**Henry Matthews**, Director of Galleries and Collections. B.F.A., Alma College; M.A., Wayne State University.



## Directory

**Aaron Perry**, Laboratory Supervisor, Chemistry. B.S., Central Michigan University.

**David Shultz**, Laboratory Supervisor, Modern Languages and Literatures. B.A., Principia College; M.A., Berklee School of Music, Webster University.

**Valerie Staelzel**, Concert/Arts Information Coordinator. B.M., Saint Mary's College of Notre Dame.

**Karel Swanson**, Program Advisor. B.A., Grand Valley State University.

**Scott Vanderberg**, Communication Facilities Specialist. B.S., Ferris State University.

**James Visser**, Laboratory Supervisor, Art & Design. B.A., Michigan State University.

**Gregory C. Wilson**, Laboratory Supervisor, Geology Department. B.S., Grand Valley State University; M.S., Southern Illinois University.

### College of Liberal Arts and Sciences Advising Centers

**Caroline Cascini**, Student Services Coordinator, Psychology. B.A., Grand Valley State University; M.A., Central Michigan University.

**Robert Freidhoff**, Program Coordinator, Science & Mathematics Advising, Resource & Transition Center. B.S., Grand Valley State University.

**Janet Robinson**, Student Services Coordinator, Arts and Humanities Advising Center. B.B.A., Davenport College; M.P.A., Grand Valley State University.

**Elizabeth Schaner**, Student Services Coordinator, Science & Mathematics Advising, Resource & Transition Center. B.A., Aquinas College.

### Regional Math and Science Center

**Karen Meyers**, Assistant Director. B.S., Michigan State University; M.A., Michigan State University.

**Mary Ann Sheline**, Director. B.S., Chatham College; M.A., Carnegie-Mellon University; Ed.S., University of Nebraska-Kearney.

### Robert B. Annis Water Resources Institute

**Alan Steinman**, Director. B.S., University of Vermont; M.S., University of Rhode Island; Ph.D., Oregon State University.

**Bopaiah Biddanda**, Assistant Research Scientist. B.Sc., St. Joseph's College; M.Sc., Karnatak University; Ph.D., University of Minnesota.

**Xuefeng Chu**, Assistant Research Scientist. B.S., Inter Mongolia Agricultural University; M.S., China University; Ph.D., University of California at Davis.

**Jean Conzelmann**, Research Assistant I. B.B.A., Saginaw Valley State University; B.S., Grand Valley State University.

**Rodney Denning**, Research Associate I. B.S., Michigan State University; M.A., Western Michigan University.

**Anthony Fiore, Jr.**, Fleet Captain.

**John Koches**, Associate Research Scientist. B.S., Grand Valley State University; M.S., Miami University.

**Lori Nemeth**, Research Assistant II. B.S., Colorado State University.

**James O'Keefe**, Research Assistant II. B.S., Towson State University.

**Richard Rediske**, Senior Research Scientist. B.S., Bowling Green State University; M.S., Ph.D., University of Michigan.

## Directory

**Carl Ruetz III**, Assistant Research Scientist. B.S., Lake Superior State University; M.S., University of Georgia; Ph.D., University of Minnesota.

**Nichol Stout**, Research Assistant I. B.S., University of Michigan.

**Kurt Thompson**, Research Associate I. B.S., Grand Valley State University.

**Donald Uzarski**, Assistant Research Scientist. B.S., Grand Valley State University; M.S., Central Michigan University; Ph.D., Michigan State University.

**Janet Vail**, Associate Research Scientist. B.S., University of Michigan; M.A., University of California; Ph.D., Western Michigan University.

### **Padnos College of Engineering and Computing**

**Paul Plotkowski**, Dean, College of Engineering and Computing.

Director of School of Engineering. B.S., M.S., Ph.D., Oakland University.

**Paul Leidig**, Chair of the Department of Computer Science and Information Systems. B.S., Eastern Mennonite College; M.B.A., James Madison University; Ph.D. Virginia Commonwealth University.

**Robert Bero**, Laboratory Supervisor,

**Ronald Grew**, Laboratory Supervisor, Padnos School of Engineering. B.A., Baker College.

**Carl Strebel**, Laboratory Supervisor, Computer Science and Information Systems. B.S., Michigan State University.

### **College of Health Professions**

**Jane Toot**, Dean of the College of Health Professions. B.S., University of Michigan; M.A., George Washington University; Ph.D., Wayne State University.

**Christopher Lewis**, Student Services Coordinator, College of Health Professions. B.A., Western Michigan University; M.S., Miami University.

### **Kirkhof College of Nursing**

**Phyllis Gendler**, Dean of the Kirkhof College of Nursing. B.S.N., University of Michigan; M.N., Ph.D., Michigan State University.

**Susan Baker-Clark**, Student Services Coordinator. B.S.N., University of Iowa.

**Andrea Bostrom**, Associate Dean, Academic Programs. B.S., University of Michigan; M.A., Western Michigan University; Ph.D., University of Illinois at Chicago.

**Cynthia Coviak**, Director of Nursing Research and Faculty Development. B.S.N., Michigan State University; M.S.N., Grand Valley State University; Ph.D., University of Michigan.

**Mary Koenen**, Family Nurse Practitioner. B.A., University of Michigan; M.S.N., University of Minnesota.

**Monica Lyons**, Family Nurse Practitioner. A.D.N., Grand Rapids Community College; B.S.N., M.S., University of Michigan.

**Jean Martin**, Director of Graduate Program, Director of R.N./B.S.N. completion and M.S.N. Program. B.S.N., University of Michigan; M.S., Boston University; D.N.Sc., Rush University.

**Wanda Moerland**, Student Services Coordinator. B.S.N., Grand Valley State University.

## Directory

**Michael Pagel**, Kirkhof College of Nursing Systems Coordinator. B.S., DeVry Institute of Technology.

**Ronald Perkins**, Kirkhof College of Nursing Learning Resource Coordinator. B.S.N., Grand Valley State University.

**Pamela Ronning**, Standardized Patient Program Coordinator. B.S.N., M.P.A., Grand Valley State University.

**Patricia Schafer**, Associate Dean, Community and Clinical Services. B.S.N., M.N., Ph.D., University of Pittsburgh.

### College of University-wide Interdisciplinary Initiatives

**Wendy Wenner**, Dean, College of University-wide Interdisciplinary Initiatives. B.A., Carleton College; M.A.T., Northwestern University; Ph.D., Marquette University.

**Marie McKendall**, Assistant Dean of General Education. B.A., Macalester College; M.S., Ph.D., Purdue University.

**Judy Whipps**, Coordinator of Liberal Studies. B.A., Grand Valley State University; M.A., University of Chicago; Ph.D., The Union Institute.

### Barbara H. Padnos International Center

Director of Padnos International Center.

**Rebecca Hambleton**, Director of Study Aboard and International Partnerships. B.S., M.Ed., Grand Valley State University.

**Meaghann Myers**, Coordinator of Program Services and Outreach. B.A., Grand Valley State University.

**Elizabeth Rossmiller**, Coordinator of Global Programs. B.A., University of Chicago; M.Ed., Harvard University.

**Katherine Stoetzner**, Director of International Student and Scholar Services. B.A., Kalamazoo College.

### Honors College

**Guiyou Huang**, Director. B.A., Qufu Teachers University; M.A., Peking University; Ph.D., Texas A&M University.

### Robert and Mary Pew Faculty Teaching and Learning Center

**Catherine Frerichs**, Director. B.A., St. Olaf College; M.A., University of Chicago; D.A., University of Michigan.

### Graduate Studies and Grants Administration

**Priscilla Kimboko**, Dean of Graduate Studies and Grants Administration. B.A., Ph.D., Portland State University.

**Melissa Adair**, Marketing and Logistics Coordinator. B.S., Ferris State University.

**Judith Shea**, Grant Finance and Contracts Manager. B.A., Aquinas College; M.A., University of Michigan.

**Maureen Ziegler**, Autism Training and Intervention Specialist. B.S., M.S., Slippery Rock University; Ed.Spec., Eastern Michigan University.

### University Libraries

**Robert Beasecker**, Interim Dean of University Libraries. A.B., Hillsdale College; A.M.L.S., University of Michigan.

## Directory

**Peter Armstrong**, Library Cataloging Manager. B.A., Grand Valley State University.

**Jeffrey Daniels**, Periodicals Cataloging Manager. B.S., Grand Valley State University.

**Mary Morgan**, Information Technology Specialist. B.S., Jordan College Energy Institute.

**Linda Woods**, Library Reference Department Manager. B.Ed., University of Toledo.

### Research and Development Center

**Priscilla Kimboko**, Director. B.A., Ph.D., Portland State University.

### Academic Services

**Robert Fletcher**, Vice Provost and Dean of Academic Services. B.S., M.S., Northern Illinois University.

### Admissions

**Jodi Chycinski**, Director of Admissions. B.B.A., Davenport College; M.B.A., Western Michigan University.

**Nechell Bonds**, Associate Director of Admissions. B.S., Ferris State University.

**James Crawley**, Associate Director of Admissions. B.A., Alma College; M.A., Central Michigan University.

**Robert Drake**, Admissions Counselor. B.S., Grand Valley State University.

**Michelle Gurley**, Associate Director of Admissions. B.A., Western Michigan University; M.P.A., Wayne State University.

**E. Chris Hendree**, Assistant Director of Admissions. B.A., Taylor University; M.A., Webster University.

**Wallace Holder**, Admissions Counselor. B.A., Grand Valley State University.

**Tracey James-Heer**, Associate Director of Admissions. B.A., Grand Valley State University; M.A., Michigan State University.

**Michael Lopez**, Associate Director of Admissions. B.A., Grand Valley State University.

**Melanie Retberg**, Assistant Director of Admissions. B.S., Grand Valley State University.

**Bonnie Ulmer-DeGraves**, Associate Director of Admissions. B.S., M.B.A., Grand Valley State University.

### Continuing Education

**Patricia Lipetzky**, Dean of Continuing Education. B.S., College of Saint Francis; M.S., Ph.D., University of Minnesota.

**Brian Cole**, Associate Dean. M.Ed., Western Maryland College; M.A., Central Michigan University; Ph.D., University of Maryland.

**Simone Jonaitis**, Assistant Dean of Continuing Education. B.A., University of Michigan; M.A., Western Michigan University.

**Martha Litherland**, Coordinator of Northern Michigan Programs. B.S., Miami University; M.Ed., Bowling Green State University; Ph.D., Michigan State University.

**Eric Packer**, Director of Distance Education. A.A., Grand Rapids Junior College; B.S., Ferris State University; M.Ed., Wayne State University.

## Directory

**Judy Palmer**, Coordinator, Grand Forum. B.A., Northwestern University.

**Melissa Peraino**, Coordinator of Special Projects. B.A., Alma College; M.A., Ball State University.

**Diane Phelps**, Coordinator of Professional and Corporate Services. B.A., Michigan State University; M.M., Aquinas College.

**Claudia Wojciakowski**, Director, Community Outreach. B.S., M.A., Ph.D., Michigan State University.

### Financial Aid Office

**Kenneth Fridsma**, Director of Financial Aid. B.S., Calvin College; M.A., Michigan State University.

**Stephanie Forest**, Financial Aid Technical Specialist. B.S., Grand Valley State University.

**Joseph Gore**, Financial Aid Counselor. B.A., East Carolina University; M.Ed., Grand Valley State University

**Tiffany Jones**, Financial Aid Counselor. B.S., Grand Valley State University; M.S., Illinois State University.

**Sheila Klemm**, Assistant Director of Financial Aid. B.A., Grand Valley State University.

**JoAnn Litton**, Assistant Director of Financial Aid. B.A., Ball State University; M.A., Bowling Green University.

**Victoria Powers**, Assistant Director of Financial Aid. B.A., Grand Valley State University.

**Christine F. Scott**, Associate Director of Financial Aid. B.S., M.B.A., Grand Valley State University.

**Vida Srinivasa**, Assistant Director of Financial Aid. B.E., Bangalore University; M.S., Grand Valley State University

**Bonnie Visser**, Assistant Director of Financial Aid.

### Information Technology

**Susan Korzinek**, Director of Information Technology. B.S., Grand Valley State University.

**Daniel Barricklow**, Senior Network Systems Manager. B.S., Grand Valley State University.

**Sheryl Barricklow**, Academic Systems Coordinator. B.S., Grand Valley State University.

**Yvonne Bird**, Systems Analyst. A.S., Davenport College.

**Rose Blakeslee**, Systems Analyst. A.S., B.B.A., Davenport College.

**Cornelius Bosman**, Telecommunications Manager.

**Karen Burchard**, Computing Education Consultant. B.S., Grand Valley State University.

**David Chapman**, AV Systems Coordinator. B.A., Michigan State University.

**Mary Darrow**, Systems Analyst. B.S., B.A., Central Michigan University; M.B.A., Saginaw Valley State University.

## Directory

**Glenna Decker**, Instructional Design Specialist. B.S., Eastern Michigan University; M.Ed., Grand Valley State University.

**Karen Denby**, Network Systems Administrator.

**Jayne Dissette**, Interim Academic Systems Supervisor. B.S., Grand Valley State University.

**Richard Fedder**, Network Systems Engineer. B.S., Central Michigan University.

**Janet Felker**, Telephone Business Manager.

**William Fisher**, Technical Support Manager. B.S., Grand Valley State University.

**Benjamin Freitag**, Network Systems Engineer. B.B.A., Western Michigan University.

**Michael Grannan**, Systems Analyst. B.S., Lawrence Technological University; M.A., Wayne State University.

**Heather Hardy**, Technology Supply Coordinator. B.A., Western Michigan University; M.P.A., Grand Valley State University.

**Nancy Hoffman**, Systems Analyst. B.S., Grand Valley State University.

**Robert Holcomb**, Network Systems Engineer. B.A., Central Michigan University.

**Susan Johnson**, Systems Analyst. B.S., Bemidji State University.

**Kimberly Kenward**, Instructional Design Specialist. B.A., Aquinas College; M.I.L.S., University of Michigan.

**John Klein**, Academic Systems Manager. B.S., M.S., Grand Valley State University.

**Jason Kunnen**, Senior Network Systems Engineer. B.B.A., B.S., Grand Valley State University.

**Michael Leahy**, Systems Analyst. B.S., M.S., Virginia Polytechnic Institute and State University.

**Edward Lindeman**, Administrative Programming Manager. B.S., Ferris State University.

**James McPherson**, Network Analyst. B.S., Lake Superior State University.

**Thomas Norman**, Systems Analyst. B.A., Alma College.

**Pamela Potter**, Administrative Computing Project Coordinator. B.S., Grand Valley State University.

**Kenneth Radlick**, Systems Analyst. B.S., University of Michigan.

**David Reed**, Network Systems Engineer. B.S., Grand Valley State University.

**Mary Reimink**, Systems Analyst. B.S., Ferris State University.

**Thomas Reisterer**, Systems Analyst.

**John Schlinz**, Systems Analyst. B.S., Davenport College.

**Joy Seeley**, Network Systems Engineer. B.S., Grand Valley State University.

**Elizabeth Thompson**, Computer Operations Supervisor. B.S., Grand Valley State University.

**John Wezeman**, Academic Systems Coordinator. B.S., Calvin College.

**Allen Whipps**, Systems Analyst. B.S.B.A., Aquinas College.

## Records

**Lynn Blue**, Registrar. B.S., M.P.A., Grand Valley State University.

## Directory

**Elyse Glass**, Assistant Registrar. B.A., State University of New York at Stony Brook.

**Christy Mayo**, Assistant Registrar. B.S.B.A., Auburn University; M.A., University of Phoenix.

**Mary Medendorp**, Associate Registrar.

**Marcia Stoutjesdyk**, Assistant Registrar. A.A., Grand Rapids Community College; B.B.A., Davenport University.

**Karen VanTimmeren**, Assistant Registrar.

**William Widmaier**, Associate Registrar. B.A., Grand Valley State University; M.A., Ball State University.

## Academic Resources and Special Programs

**Mary A. Seeger**, Dean of Academic Resources and Special Programs. B.A., University of Minnesota; Ph.D., University of Wisconsin.

**K. John Miko**, Associate Dean. B.S., Ball State University; M.A., Western Michigan University.

**Heath Alexander**, Associate Director of the TRIO Upward Bound Program. B.S., Grand Valley State University.

**Damon Arnold**, Director of Academic Advising for Athletic Programs. B.A., M.A., California State University at Chico; M.S., University of Idaho; Ph.D., Washington State University.

**Cassonya Carter Pugh**, Program Advisor, Educational Connections. B.S., M.Ed., Grand Valley State University.

**Jacqueline Hill**, Director of Educational Support Program. B.A., Michigan State University; M.Ed., California State University.

**Leijhi Koval**, Assistant Director of Rise Above It Program. B.S., M.Ed., Grand Valley State University.

**Ann LeJeune**, Director of Muskegon Partnership Program. A.A., Muskegon Community College; B.B.A., M.Ed., Grand Valley State University.

**Sarah Keranen-Lopez**, Director of Educational Connections. B.M., University of Miami; M.P.A., Grand Valley State University.

**Muriel Lutes**, Associate Director of Ronald E. McNair Scholars Program. B.Ph., Grand Valley State University; M.A, M.S.W., Western Michigan University.

**Danielle Palmer**, Coordinator of TRIO Instruction and Activities. B.A., Grand Valley State University.

**Robert Ross**, Associate Director of Upward Bound Program. B.A., Cornerstone College.

**Jeffrey Sykes**, Assistive Technology Coordinator. B.S., Grand Valley State University.

**Arneada Smith Alexander**, Director of TRIO/Upward Bound Program, TRIO/Upward Bound Math and Science Program/McNair Scholars Program. B.A., Western Michigan University; M.P.A., Grand Valley State University.

**Joyce Van Baak**, Director of Tutoring and Academic Orientation. B.S., M.A., Oakland University.

**Kathleen Vander Veen**, Director of Office of Academic Support. B.S., M.Ed., Grand Valley State University.

## Directory

**Karen Visscher**, Program Advisor, Educational Support Program. B.A., Hope College; M.A., Columbia University.

**Sulari White**, Director of EXCEL Program. B.A., Calvin College.

**Santiago Zapata**, Program Advisor, Educational Connections. B.A., Saginaw Valley State University.

### Student Services

**H. Bart Merkle**, Vice Provost and Dean of Students. B.A., Hope College; M.A., Ed.D., Western Michigan University.

**Steven Lipnicki**, Student Services Coordinator. B.S., State University of New York College at Oneonta; M.A., Michigan State University.

**Diana Pace**, Associate Dean of Students. B.A., Duke University; M.A., Ph.D., University of North Dakota.

**Virginia Randall**, Associate Dean of Student Services. B.A., M.B.A., Grand Valley State University.

### ALERT

**Nancy Harper**, Director of ALERT. B.A., Emporia State University; M.A., University of Northern Iowa; Ph.D., University of Iowa.

### Career Services

**Christopher Plouff**, Interim Director of Career Services. B.S., M.S., Michigan Technological University.

**Carol Coffey**, Career Services Systems Coordinator.

**Gina DeLapa**, Assistant Director of Career Services. B.A., Michigan State University; M.A., University of San Diego.

**Ginger Lange**, Associate Director of Career Services. B.S., M.A., Michigan State University.

**Susan Simmerman**, Assistant Director of Career Services. B.B.A., Grand Valley State University; M.S., Eastern Michigan University.

### Children's Center

**Mary Ann Krause**, Director, Children's Center. B.S., Western Michigan University; M.Ed., Grand Valley State University.

### Counseling and Career Development Center

**Barbara Palombi**, Director of the Counseling and Career Development Center. B.A., Luther College; M.A., Pacific Lutheran University; Ph.D., Michigan State University.

**Betty Gilmore**, Psychologist. M.A.; Psy.D., California School of Professional Psychology.

**Wayne Kinzie**, Psychologist and Assistant Director of Counseling. B.A., Bridgewater College; Ph.D., University of Georgia.

**Pamela Miller**, Psychologist and Assistant Director of Counseling and Career Development Center. B.S., Michigan State University; M.S.W., Washington University; Ph.D., Georgia State University.

**Harriet Singleton**, Senior Counselor. B.A., M.A., Michigan State University.



## Directory

**Mary Thiel**, Psychologist. B.A., M.A., Ed.D., Western Michigan University.

**John Zaugra**, Senior Counselor. B.S., Southern Illinois University; M.S., Illinois State University; M.A., Roosevelt University; Ed.D., University of Montana.

### Health, Recreation and Wellness

**Brenda Reeves**, Director of Health, Recreation and Wellness. B.A., M.Ed., Bowling Green State University; Ph.D., University of Toledo.

**Robert Gildersleeve**, Associate Director of Health, Recreation and Wellness. B.B.A., M.S., Eastern Michigan University.

**Laura Kennett**, Wellness Coordinator. B.S., Central Michigan University; M.S., Michigan State University.

### Housing and Health Services

**Andrew Beachnau**, Director of Housing and Health Services. B.A., Alma College; M.Ed., Grand Valley State University; Ph.D., Michigan State University.

**Sandra Dennison**, Housing Area Coordinator. B.A., Central Michigan University; M.A., New Mexico State University.

**Abigail Forbes**, Assistant Director of Housing. B.A., M.A., Michigan State University.

**Nykia Gaines**, Living Center Director. B.S., Grand Valley State University.

**Scott Korb**, Housing Area Coordinator. B.S., Grand Valley State University.

**Colleen Lindsay**, Living Center Director. B.S., M.A., Michigan State University.

**Michael Maesch**, Living Center Director. B.S., Ball State University.

**Nicanor Mansilla**, Living Center Director. B.A., Western Michigan University.

**Susan Mendoza-Jones**, Assistant Director of Housing. B.A., M.A., Michigan State University.

**Brenda Mitchner**, Associate Director of Housing. B.S., M.P.A., Grand Valley State University.

**Dawn Schavey**, Living Center Director. B.S., Grand Valley State University.

**Carly Southworth**, Living Center Director. B.A., M.S.W., University of Michigan.

**Natalie Wagner**, Living Center Director. B.S., Eastern Illinois University; M.Ed., Grand Valley State University.

**Janet Walls**, Associate Director of Housing. B.S., Western Michigan University; M.A., Central Michigan University.

**William Washington**, Housing Area Coordinator. B.S., M.Ed., Grand Valley State University.

### Multicultural Affairs

**Oliver Woods**, Dean of Multicultural Affairs. B.S., M.P.A., University of Wyoming.

**Constance Dang**, Assistant Director of Multicultural Center. B.S., Grand Valley State University.

**Eduardo Sanchez-Rojas**, Assistant Director of Multicultural Center. B.S., Southern Illinois University at Carbondale.

## Directory

**Bobby Springer**, Associate Director of Multicultural Center. B.A., University of North Carolina; M.A., Western Michigan University.

### Student Life and Event Services

**Robert Stoll**, Director of Student Life and Event Services. B.S., M.A., Northern Michigan University.

**Heather Bloom**, Assistant Director of Student Life. B.A., Westminster College; M.Ed., Grand Valley State University.

**Michelle Burke**, Associate Director of Student Life. B.A., Florida State University; M.A., University of South Carolina.

**Chad Garland**, Assistant Director of Student Life. B.A., Ohio Wesleyan University; M.Ed., Grand Valley State University.

**Aaron Haight**, Assistant Director of Student Life. B.A.A., Central Michigan University.

**Frederick Mooney**, Assistant Director of Events Services. B.S., Eastern Michigan University.

**LeaAnn Tibbe**, Special Events Coordinator. B.A., Grand Valley State University.

### Women's Center

**Marlene Kowalski-Braun**, Director of Women's Center. B.S., Central Michigan University; M.A., Ball State University.

### University Relations

**Matthew E. McLogan**, Vice President for University Relations. B.A., M.A., Western Michigan University.

### News and Information Services

**Mary Eileen Lyon**, Assistant Vice President. B.A., University of Georgia.

**Brian Bowe**, Communications Specialist. B.A., Grand Valley State University.

**Michele Coffill**, Communications Specialist. B.A., Michigan State University; M.A., Delta State University.

**Bernadine Tucker**, Photography Services Manager. B.A., Grand Valley State University.

**Nancy Willey**, Communications Specialist. B.S., Grand Valley State University.

### Public Broadcasting: WGUV/WGVK-TV, WGUV-AM/FM

**Michael T. Walenta**, General Manager for WGUV Public Broadcasting. B.S., M.S., Central Michigan University.

**Rob Byrd**, Producer-Director, WGUV. B.S., Ferris State University.

**Stephen Chappell**, Underwriting Representative/Grants Writer, WGUV. B.A., Hope College.

**Barbara Christl**, Business and Information Manager, WGUV. B.S., DePaul University.

**Carolyn Corbin**, Program Manager, WGUV. B.S., Iowa State University; M.Ed., LaVerne University.

## Directory

**Linda Davis**, Director of Educational Services, WGVU. B.S., Michigan State University.

**Charles Furman**, Assistant General Manager. B.A., College of Wooster; M.A., Pennsylvania State University.

**Michael Haifley**, Development Manager, WGVU. B.A., Louisiana State University.

**Pamela Holtz**, Promotion and Marketing Manager, WGVU. B.B.A., Davenport University.

**Louise Honea**, Underwriting Representative, WGVU. A.A., Richland College.

**Linda Kennedy**, Membership Coordinator, WGVU.

**Gary Kesler**, Special Events Coordinator, WGVU. B.S., University of Dubuque.

**Ken Kolbe**, Assistant General Manager, WGVU. B.A., Central Michigan University.

**Phil Lane**, Production Manager. WGVU. B.A., Indiana University.

**Robert Lumbert**, Director of Engineering, WGVU. B.S., Ferris State University.

**Fred Martino**, News and Public Affairs Manager. B.S., Ithaca College.

**David Moore**, Producer-Announcer, WGVU.

**Richard Nelson**, Sales Manager, WGVU. B.S., University of Wisconsin-Madison.

**David Oliver**, Engineering Supervisor. WGVU, A.A., University of Laverne.

**Edward Spier, Jr.**, Traffic Supervisor, WGVU. B.S., Grand Valley State University.

**Mark Tobin**, Broadcast/Graphic Designer, WGVU. B.A., Kendall College of Art and Design.

**James VanderMaas**, Producer-Director, WGVU. B.A.A., Central Michigan University.

## University Development

**Maribeth Wardrop**, Vice President for University Development. B.A.G.E., M.M., Aquinas College.

### Alumni Relations

**Christopher Barbee**, Director of Alumni Relations. B.S., Grand Valley State University.

**Kent Fisher**, Associate Director of Alumni Relations. B.A., Grand Valley State University.

**Kimberly Schmidt**, Assistant Director of Alumni Relations. B.A., Grand Valley State University.

### Development Office

**Karen Loth**, Assistant Vice President for Development. B.A., Michigan State University; M.A., Western Michigan University.

**Todd Buchta**, Director of Development Services. B.A., Brown University; M.S., University of Michigan.

**Mary Collin**, Coordinator of Prospect Research. B.S., Mount Olive College; M.S., Western Michigan University.

**Nora English**, Coordinator of Special Events and Donor Relations. B.B.A., Davenport University.

## Directory

**John Heerspink**, Director of Gift Planning. B.A., Calvin College; M.M., University of Michigan.

**Diane Purgiel**, Assistant Director of Foundations and Corporations. B.A., Western Michigan University.

**Nikoletta Sobkowski**, Director of Annual Giving. B.A., Michigan State University; M.A.L.S., Dominican University; M.A., University.

**Patricia Waring**, Community Relations Coordinator. B.S., Western Michigan University.

### Planning and Equity

**Patricia Oldt**, Vice President for Planning and Equity. B.A., University of Oklahoma; M.A., Western Michigan University; Ph.D. Michigan State University.

### Affirmative Action

**Patricia Oldt**, Interim Director of Affirmative Action. B.A., University of Oklahoma; M.A., Western Michigan University; Ph.D. Michigan State University

### Hauenstein Center for Presidential Studies

**Gleaves Whitney**, Director. B.A., Colorado State University; M.A., University of Michigan.

### Institutional Marketing

**Rhonda Lubberts**, Assistant Vice President for Institutional Marketing. B.A., Calvin College.

**Kathleen Adams**, University Communications Manager. B.S., Michigan State University.

**Jennifer Allard**, Recruitment Communications Manager. B.A., Michigan State University.

**Jacqueline Cuppy**, Art and Design Manager. B.F.A., Grand Valley State University.

**Michelle Hatczel**, Marketing Assistant. B.B.A., Grand Valley State University.

**Dave Poortvliet**, Web Manager. B.S., Grand Valley State University.

**Robby Tjahaja**, Web Developer. B.B.A., Grand Valley State University.

**Dustin Tinney**, Web Developer. B.S., Grand Valley State University.

**Christopher Yurchenko**, Design Assistant. B.F.A., Grand Valley State University.

### University Counsel

**Thomas A. Butcher**, University Counsel. B.S., Ferris State University; J.D., Cooley Law School.

**Patricia Smith**, Associate University Counsel. B.S., Belmont College; J.D., Marquette University.

### Finance and Administration

**Timothy O. Schad**, Vice President for Finance and Administration. B.A., B.E., Dartmouth College; M.B.A., Harvard Business School, Arts D. Kendall College of Art and Design.

### Athletics

**Tim Selgo**, Director of Athletics. B.Ed., M.Ed., University of Toledo.

## Directory

**Lou Andreadis**, Assistant Track Coach. B.S., Butler University.

**Damon Arnold**, Director of Academic Advising for Athletic Programs. B.A., M.A., California State University; M.S., University of Idaho; Ph.D., Washington State University.

**Jerry Baltes**, Head Track, Field and Cross Country Coach. B.S., Butler University.

**Steve Brockelbank**, Assistant Football Coach. B.S., Eastern Michigan University; M.Ed., Spring Arbor College.

**David DiIanni**, Head Women's Soccer Coach. B.A., Spring Arbor University

**Kelly Foster**, Assistant Swim Coach and Assistant Coordinator of Aquatics. B.S., Grand Valley State University.

**Jeremy Gold**, Assistant Football Coach. B.A.A., Central Michigan University.

**Katharine Harmon**, Fieldhouse Assistant Manager. B.S., Northern Michigan University; M.A., Central Michigan University.

**Todd Jager**, Head Athletic Trainer. B.A., University of Michigan; M.A., Western Michigan University.

**Jason Johnson**, Assistant Women's Volleyball Coach. B.S., Grand Valley State University.

**Todd Kolster**, Assistant Football Coach. B.A., Hope College; M.Ed., Grand Valley State University.

**Shaina Lane**, Assistant Athletic Trainer. B.S., Grand Valley State University; M.Ed., Auburn University.

**Douglas Lipinski**, Athletics Marketing and Promotions Director. B.S., M.P.A., Grand Valley State University.

**Steven Lyon**, Head Baseball Coach. B.S., Wayne State University; Master's, Ohio State University.

**Charles Martin**, Head Football Coach. B.A., Millikin University; M.A., Mankato State University.

**Matthew Middleton**, Assistant Football Coach. B.A., Louisiana Tech University.

**Matthew Mitchell**, Assistant Football Coach. B.S., Cornell College.

**Dewey Newsome**, Swimming Coach and Coordinator of Aquatics. B.S., Kent State University.

**Timothy Nott**, Assistant Director of Athletics for Sports Information. B.A., Central Michigan University.

**Matthew Pawlowski**, Assistant Football Coach. B.S., Montana State University; M.S., St. Cloud State University.

**Dawn Plitzuweit**, Head Women's Basketball Coach. B.S., Michigan Technological University.

**Deanne Scanlon**, Head Women's Volleyball Coach. B.S., Eastern Kentucky University.

**Marc Scharphorn**, Assistant Director of Athletics. B.S., Grand Valley State University.

**Lori Stinson**, Head Women's Golf Coach. B.S., Indiana University.

**Michael Stodola**, Fieldhouse Building Manager. B.S., Ferris State College.

## Directory

**Lisa Sweany**, Associate Director of Athletics. B.S., Tri-State University; M.S., Ball State University.

**Richard Wesley**, Head Men's Basketball Coach. B.S., Central Michigan University.

**Michael Williams**, Assistant Women's Basketball Coach. B.S., University of Wisconsin at Stevens Point.

**Douglas Woods**, Head Women's Softball Coach. B.S., University of Toledo; M.Ed., Grand Valley State University.

### Business and Finance

**James Bachmeier**, Associate Vice President for Business and Finance. B.B.A., Black Hills State University; M.B.A., Chadron State College.

**Pamela Achtyes**, Controller. B.S., Calvin College; M.B.A., Grand Valley State University.

**Martin Ashcraft**, Client Services Manager. B.S.B.A., Central Michigan University.

**Christopher Boerma**, Bookstore Systems Coordinator.

**Ester Burns**, Senior Buyer. A.A., Delta College.

**Karen Chavez**, Student Accounts Manager. B.B.A., Western Michigan University.

**Michael Doxey**, Director of Business Services, B.B.A., Western Michigan University; M.P.A., Grand Valley State University.

**Melinda Earley**, Client Services Manager. B.S., Grand Valley State University.

**Norman Glaab**, Assistant Bookstore Manager. B.S., Slippery Rock University.

**Paul Grisdale**, Payroll Manager. B.A., John Carroll University.

**Lynn Krupansky**, Business Operations Coordinator.

**David Lemmen**, Accountant. B.B.A., Davenport University.

**Brenda Lindberg**, Assistant Controller. B.S., B.A., Central Michigan University.

**Christine McKay**, Accountant. B.A., Michigan State University.

**Jeffrey Musser**, Director of Budgets and Financial Analysis. B.S., Ferris State University; M.B.A., Grand Valley State University.

**Jerrold Nickels**, Bookstore Manager. B.A., Aquinas College.

**Amy Oosting**, Assistant Bookstore Manager. B.S., Central Michigan University.

**Star Raymond**, Assistant Director of Budgets and Financial Analysis. B.B.A., Grand Valley State University.

**Valerie Rhodes-Sorrelle**, Buying Specialist. B.S., Ferris State University; M.P.A., Grand Valley State University; C.P.M., A.P.P.

**Jennifer Schick**, Senior Accountant. B.B.A., Western Michigan University.

**Kip Smalligan**, Buyer. B.A., Calvin College.

**Terri Suess**, Senior Accountant. B.B.A., Western Michigan University.

**Brian VanDoeselaar**, Assistant Controller. B.S., Aquinas College; M.B.A., Grand Valley State University.

**Marjo VanHeulen**, Billings and Loan Supervisor. B.S., Ferris State University.

**David VanderSloot**, Director of Conference Planning and Hospitality Services. B.S., Johnson and Wales University Charleston.

## Directory

**Susan Votsch**, Collections Coordinator. B.A., Baker College.

**Douglas Wentworth**, Associate Bookstore Manager.

**April Williams**, Assistant Bookstore Manager. B.B.A., Western Michigan University.

**Martha Wilson**, Accountant. A.A., A.A., Grand Rapids Community College; B.B.A., Grand Valley State University.

**Cynthia Winowiecki**, Client Services Manager.

**Kathleen Wright**, Client Services Manager. B.A., Aquinas College.

## Facilities Planning

**James Moyer**, Assistant Vice President for Facilities Planning. B.ARCH., Howard University.

**Robert Brown**, Assistant Director of Facilities Planning. B.Architecture, University of Miami.

**Jessica Ebels**, Facilities Space Analyst. B.S., Ferris State University.

**James Flanders**, Project Manager. B.S., Ferris State University.

**Raymond VandenBerg**, Project Manager.

## Facilities Services

**Timothy Thimmesch**, Assistant Vice President for Facilities Services. B.S., Kansas Newman College.

**David Cox**, Safety Manager. B.S., Grand Valley State University.

**David Feenstra**, Assistant Maintenance Supervisor.

**Debra Kiley**, Facilities Services Supervisor. A.S., Ferris State University.

**Steven Leeser**, Facilities Services Supervisor. B.M.E., University of Michigan; M.M.E., Michigan State University; M.S., Central Michigan University.

**Madonna Markus**, Manager of Facilities Budgets and Special Projects. B.S., Grand Valley State University.

**Gloria Myaard**, Facilities Services Supervisor.

**Terry Pahl**, Facilities Engineer. B.S., Western Michigan University and Calvin College.

**John C. Scherff**, Maintenance Supervisor.

**Steven Snell**, Arborist. B.S., Michigan State University.

**Kenneth Stanton**, Facilities Services Supervisor. B.A., Spring Arbor College.

## Human Resources

**D. Scott Richardson**, Associate Vice President for Human Resources. B.S., M.S.A., Central Michigan University.

**Ruthanne Griffin**, Assistant Benefits Manager and eHR Project Manager. B.B.A., Grand Valley State University.

**Sue Lindrup**, Employment Representative. B.B.A., Grand Valley State University.

**Stephanie Matthews Smith**, Human Resources Representative. B.S., Western Michigan University.

**Margaret McCrystal**, Director of Staff Relations. B.S., University of Miami; M.A., Central Michigan University; J.D., Thomas M. Cooley Law School.

## Directory

**Mary Warner**, Director of Benefit Services. B.A., Spring Arbor College, CEBS.

**Linda Yuhás**, Director of Compensation and Employment Services. B.A., Indiana University; M.P.A., Grand Valley State University.

### **Meadows Golf Club**

**Terry Sack**, General Manager, Meadows Golf Club. B.S., Ferris State College; M.B.A., Grand Valley State University.

**Ronald Dahlin**, Golf Course Superintendent. B.S., M.S., Colorado State University.

**Beth Neumeier**, Food and Beverage Manager.

**Donald Underwood**, Golf Professional. B.S., Ferris State University; P.G.A. Class "A" certification.

### **Michigan Alternative and Renewable Energy Center**

**Imad Mahawili**, Director. B.S., Ph.D., University of London.

**George Cutro**, MAREC Systems Engineering Manager. B.S.E.E., Western Michigan University.

### **Pew Campus and Regional Centers - Operations**

**Lisa Haynes**, Director of Operations, Pew Campus and Regional Centers. B.S., Grand Valley State University.

**Erin Lich**, Manager of Operations, Pew Campus and Regional Centers. B.A., Grand Valley State University.

**William Lucksted**, Manager of Operations, Pew Campus and Regional Centers. B.S., Grand Valley State University.

**Timothy Peraino**, Manager of Operations, Pew Campus and Regional Centers. B.A., Alma College; M.S., Indiana University.

**Ronald Villanueva**, Manager of Operations, Pew Campus and Regional Centers. B.B.A., Grand Valley State University.

### **Pew Campus and Regional Centers - Security**

**Allen D. Wygant**, Director of Security.

**Page Neve**, Manager of Security and Public Safety.

### **Public Safety Services**

**Barbara Bergers**, Director of Public Safety Services. B.S., Wayne State University.

### **Van Andel Global Trade Center**

**Jeffrey Meyer**, Executive Director. B.S., Bowling Green State University; M.B.A., Wright State University.

**Lindsey Gorsline**, Global Resource Specialist. B.A., Grand Valley State University.

**Sonja Woodruff**, Associate Director of Van Andel Global Trade Center. B.S., Mankato State University.

### **West Michigan Science and Technology Initiative**

**Matthew Dugener**, Executive Director. B.S., Central Michigan University; M.A., Michigan State University.



## Campus Security

### Campus Security Information—Grand Valley State

Grand Valley State University, a community of approximately 21,400 people, consists of a 1,112-acre campus in Allendale, a 34-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, certified 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.

Allendale Campus Statistics—2001			
19,762 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	
Manslaughter	0	0	
Sex Offense—Forcible	3	0	.0002
Sex Offense—Nonforcible	0	0	
Robbery	0	0	
Aggravated Assault	0	0	
Arson	0	0	
Burglary	2	0	.0001
Larceny	134	13	.0068
Motor Vehicle Theft	1	0	.0001
Liquor Law Incidents <sup>†</sup>	107	227	.0054
Drug Abuse Incidents	24	29	.0012
Weapon Possessions	1	1	.0001
Total Incidents	272		
Total Arrests		270	

<sup>†</sup>Six additional referrals of Liquor Law incidents were submitted for judicial referral without prosecution

2002			
20,407 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	
Manslaughter	0	0	
Sex Offense <sup>§</sup> —Forcible	9	3	.0004
Sex Offense—Nonforcible	0	0	
Robbery	1	3	.0005

Campus Security

Aggravated Assault	0	0	
Arson	0	0	
Burglary	2	0	.0001
Larceny	158	35	.0077
Motor Vehicle Theft	0	0	
Liquor Law Incidents	87	170	.0043
Drug Abuse Incidents	20	28	.0010
Weapon Possessions	0	0	
Total Incidents	277		
Total Arrests		239	

§3 incidents reported to Public Safety were determined to be false reports

2003			
21,429 Students	Incidents Reported	Arrests	Crime Rate
Murder	0	0	
Manslaughter	0	0	
Sex Offense <sup>§</sup> —Forcible	7	0	.003
Sex Offense—Nonforcible	0	0	
Robbery	0	0	
Aggravated Assault	1	2	.0001
Arson	0	0	
Burglary	4	3	.0002
Larceny	130	30	.0061
Motor Vehicle Theft	2	1	.0001
Liquor Law Incidents*	148	281	.0069
Drug Abuse Incidents	26	34	.0012
Weapon Possessions	0	0	
Total Incidents	318		
Total Arrests		351	

\* 5 additional referrals of Liquor Law incidents were submitted for judicial referral without prosecution.

Pew Grand Rapids Campus Statistics—2001			
7,850 Students	Incidents Reported	Arrests	Crime Rate
Murder			
Manslaughter			
Sex Offense—Forcible	1	0	.0001
Sex Offense—Nonforcible			
Robbery			
Aggravated Assault			
Arson			
Burglary			
Larceny	11	1	.0014
Motor Vehicle Theft			
Liquor Law Incidents			
Drug Abuse Incidents	1	1	.0001
Weapon Possessions			
Total Incidents	13		
Total Arrests		2	

**Campus Security**

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	2002		
8,291 Students	Incidents Reported	Arrests	Crime Rate
Murder			
Manslaughter			
Sex Offense—Forcible			
Sex Offense—Nonforcible			
Robbery			
Aggravated Assault			
Arson			
Burglary			
Larceny	23	0	.0028
Motor Vehicle Theft			
Liquor Law Incidents			
Drug Abuse Incidents			
Weapon Possessions			
Total Incidents	23		
Total Arrests		0	
<hr/>			
	2003		
9,581 Students	Incidents Reported	Arrests	Crime Rate
Murder			
Manslaughter			
Sex Offense—Forcible			
Sex Offense—Nonforcible			
Robbery			
Aggravated Assault			
Arson			
Burglary			
Larceny	23	1	.0024
Motor Vehicle Theft	1	0	.0001
Liquor Law Incidents			
Drug Abuse Incidents	1	2	.0001
Weapon Possessions			
Total Incidents	25		
Total Arrests		3	
<hr/>			
Meijer Campus in Holland Statistics—2001			
1,069 Students	Incidents Reported	Arrests	Crime Rate
Murder			
Manslaughter			
Sex Offense—Forcible			
Sex Offense—Nonforcible			
Robbery			
Aggravated Assault			
Arson			
Burglary			
Larceny	1	0	.0009
Motor Vehicle Theft			
Liquor Law Incidents			
Drug Abuse Incidents			
Weapon Possessions			
Total Incidents	1		
Total Arrests		0	

Campus Security

2002			
1,118 Students No incidents reported	Incidents Reported	Arrests	Crime Rate
2003			
996 Students No incidents reported	Incidents Reported	Arrests	Crime Rate
Muskegon Campus—2001			
383 Students	Incidents Reported	Arrests	Crime Rate
Murder			
Manslaughter			
Sex Offense—Forcible	1	0	.0026
Sex Offense—Nonforcible			
Robbery			
Aggravated Assault			
Arson			
Burglary			
Larceny	7	0	.0183
Motor Vehicle Theft			
Liquor Law Incidents	0	0	
Drug Abuse Incidents			
Weapon Possessions			
Total Incidents	8		
Total Arrests		0	
2002			
487 Students	Incidents Reported	Arrests	Crime Rate
Murder			
Manslaughter			
Sex Offense—Forcible			
Sex Offense—Nonforcible			
Robbery			
Aggravated Assault			
Arson			
Burglary			
Larceny	1	0	.0021
Motor Vehicle Theft			
Liquor Law Incidents			
Drug Abuse Incidents			
Weapon Possessions			
Total Incidents	1		
Total Arrests		0	
2003			
425 Students	Incidents Reported	Arrests	Crime Rate
Murder			
Manslaughter			
Sex Offense—Forcible			
Sex Offense—Nonforcible			
Robbery			
Aggravated Assault			

## Campus Security

Arson			
Burglary			
Larceny	1	0	.0024
Motor Vehicle Theft			
Liquor Law Incidents			
Drug Abuse Incidents			
Weapon Possessions			
Total Incidents	1		
Total Arrests		0	

Traverse City Campus Statistics—2001			
266	Incidents		Crime
Students	Reported	Arrests	Rate
No incidents reported			
2002			
273	Incidents		Crime
Students	Reported	Arrests	Rate
No incidents reported			
2003			
288	Incidents		Crime
Students	Reported	Arrests	Rate
No incidents reported			

Note: None of the above statistics involved hate crimes (see FBI Definitions of Crime Categories, below).

## 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.

## Campus Security

**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

Victims of sexual offenses (forcible or nonforcible) have the option of notifying the proper law enforcement authorities, including campus and local police. They also have the option to be assisted by campus personnel in notifying these law enforcement authorities if they choose to do so.

### Options for Victims

**Option 1:** Victims of sexual offenses should call the emergency 911 phone number as soon as possible to reach the appropriate police department.

To protect important physical evidence, victims should not shower, bathe, brush their teeth, or change clothing prior to going to the hospital. A change of clothes will be needed to wear home from the hospital. If possible, the student should maintain the scene exactly as it was at the occurrence of the assault.

Evidence necessary for medical and/or forensic evaluation and court testimony can be collected only at the hospital. For physical evidence to be useful, it is best collected within 12–24 hours and not later than five days after the assault. The collection of medical evidence does not presume that charges will be filed against the assailant. Hospital protocol also involves testing for pregnancy and sexually transmitted diseases.

The victim should expect that the following individuals may be notified that an assault has occurred: The Director of Public Safety Services, Public Safety Services personnel, the Dean of Students, and if applicable the Director of Housing. The university Counseling Center will notify the victim about ongoing counseling options, referrals for legal assistance, and other support services that are available through the Counseling Center, the Women's Center, and/or the YWCA Sexual Assault Center. The University will notify the victim that it will change his/her academic and living situations after an alleged sex offense and of the options for those changes, if the victim requests changes and they are reasonably available.

**Option 2:** Campus Judicial system. Victims of sexual assaults that occur on university property may file a Judicial Referral with the Coordinator of the University Judiciary.

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.

The accused student and the victim may each have one advisor at the hearing. If the accused student admits the charges, the victim is entitled to a copy of the written sanction. The victim or the accused student may appeal the decision and/or the sanction.

Sanctions for students found responsible through the University Judicial process for committing sex offenses 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.

### 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 enrollment, on-campus resident programs, and first-year orientation classes. Most of the programs are sponsored by the Counseling Center, the Housing and Residence Life Office, the Women's Center, or Public Safety Services.

The Grand Valley 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.

## **Campus Security**

### **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 certified 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 GVSU 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. The housing department employs campus safety personnel to assist in resident areas by enforcing Grand Valley Housing rules and regulations, and providing general assistance to residents and guests.

### **Policies and Procedures**

Approximately 1,550 faculty and staff and 21,400 students work and study at Grand Valley. More than 4,800 students live in housing on the Allendale Campus. Students and employees have access to campus facilities; however, access to housing facilities is limited to students and their guests (see Housing Handbook). Access to resident housing facilities by university personnel is on an "as needed" basis. 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 GVSU 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

## Campus Security

centers housing 1,082 students and the Ravine, Laker Village, and Grand Valley apartments, which accommodate 1,518 students. Secchia Hall and Pew Campus Housing 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. Security personnel and other employees are assigned to campus housing facilities. Student employees and full- and part-time staff are trained to provide support services for residents; they are also responsible for the operation of buildings and the enforcement of university regulations.

Student housing entrances on the Allendale campus are locked from 10 p.m. to 10 a.m. This applies to all living units except the Ravine, Laker Village and Grand Valley apartments, where residents are responsible for locking their own doors. Secchia 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 Fieldhouse, living centers, classrooms, or other unsecured areas.

The information in this brochure is accurate as of the date of printing. This brochure 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 331-3255  
University Judicial 331-3585  
Counseling Center 331-3266  
GVSU Women's Center 331-2748  
Assault Center (616) 776-7273  
Center for Women in Transition (616) 392-2829



## Campus Security

### 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. However, these penalties do not include jail.

- 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.
- b. Second offense—a fine of not more than \$200.00. 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. 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. 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

## **Campus Security**

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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